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Kindorf® Modular Metal Framing and Support System

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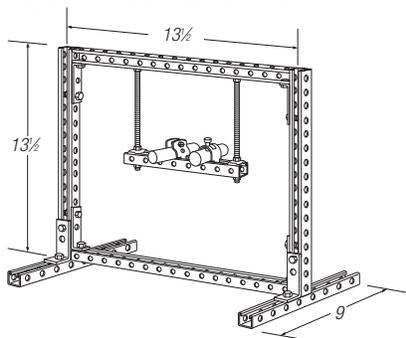
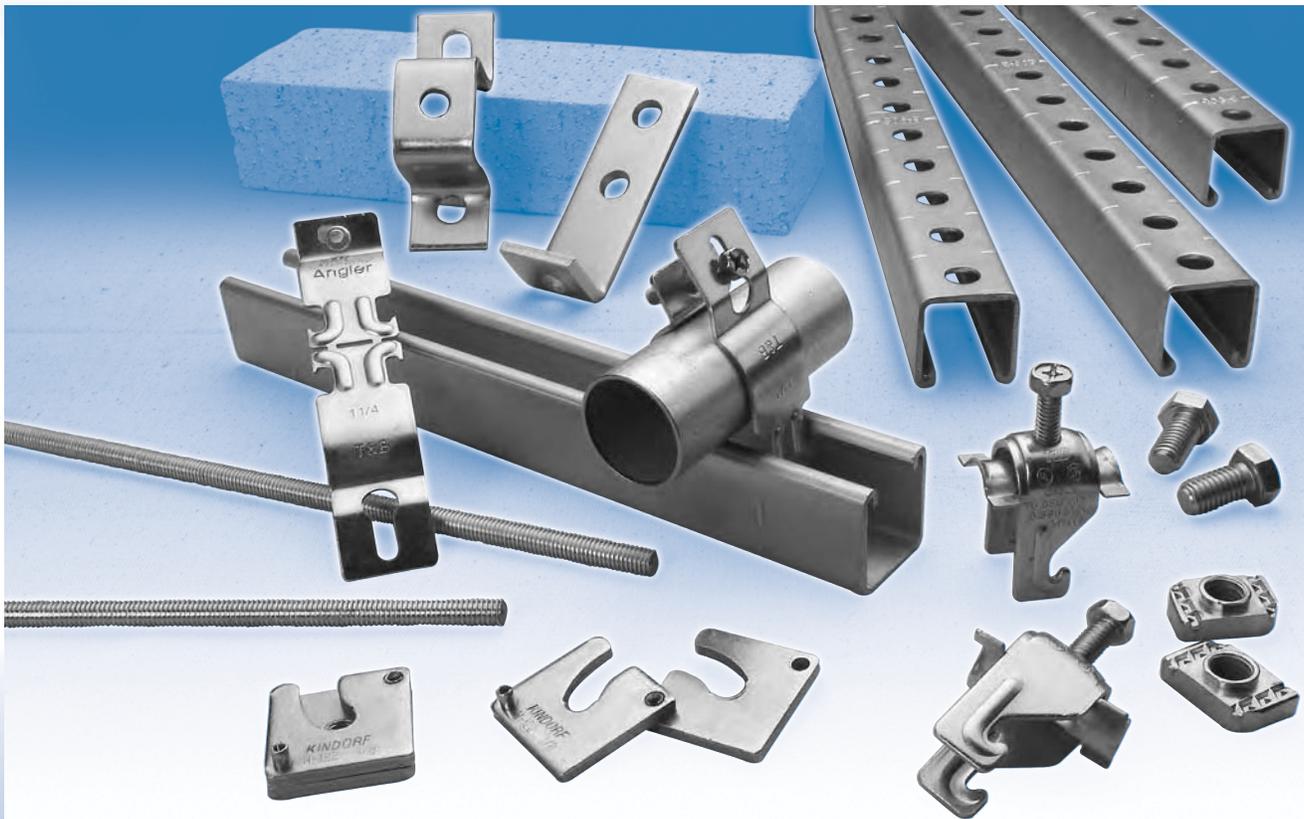
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# Kindorf®

## Modular Metal Framing — Overview

Kindorf® Modular Metal Framing and Support System



1 1/2" wide x 1 1/2" deep  
1/8" continuous open slot  
10 ft. and 20 ft. lengths



### Kindorf® Channel

The Kindorf® Channel System is designed so that the maximum number of support and framing applications can be constructed with a minimum amount of labor and pieces.

### Uniqueness in Design

The 1 1/2" dimension in the channel, hole spacing and fittings means all parts fit together, no matter where they're used, or at what angle. This modular dimension provides maximum flexibility in field applications, and results in saving inventory and labor dollars. The Kindorf® channel exclusive Galv-Krom® finish provides superior corrosion protection for all threaded components, channel and fittings. Through a two-part process, the coating is applied on all finished parts after fabrication — there is no exposed surface where corrosion can start.

### Strength

Even though the Kindorf® channel is slightly smaller in dimensions, it supports the same weight as 1 1/4" channel.

### Compatibility with 1 1/2" Strut

The Kindorf® System is designed so that most accessories are compatible with 1 1/2" strut. Conduit and pipe straps will work equally well with 1 1/2" and 1 1/4" strut. In addition, 98% of 1 1/2" accessories are interchangeable with Kindorf® channel. Angle fittings can adapt easily to the open side of any 1 1/2" strut and the unique parallelogram nuts provide secure attachment to both types of strut.

### Full Line of Support Products

The Kindorf® channel system's many advantages are extended into a broad product offering including beam clamps, concrete inserts, lighting supports, cable cleats and a variety of threaded components. This system is available in the largest selection of finishes and materials, including green coated, aluminum, stainless steel and non-metallic. This, combined with a nationwide network of distributors and service centers, makes the Kindorf® system a single source for supported metal-framing needs.

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### Why Kindorf® 1½" Channel Saves You Labor Dollars

#### Kindorf® Channel's 1½" is Much More than a Cross-Section Dimension

The 1½" with Kindorf® channel is truly a modular dimension. The channel height, width and prepunched hole spacings are all 1½". The angle fittings and the bolt holes in the angle fittings are all 1½" dimensions. Scribe marks are located at 1½" intervals to mark the midpoint between holes and every 6" on the side for easy measurement.

Jobsite adaptability and structural integrity are the key factors in making strut channel an economical solution to metal framing needs. Kindorf® channel, with its 1½" modular dimensions, enables the installer to do more work with fewer pieces and less labor dollars.

#### Here's What the Modular Dimension Can Do for You

Using a 1½" channel with hole spacings on 1½" centers requires numerous fittings and, in many cases, limits the joint fastening to the open side of the channel. Field drilling and welding, plus the need for extra fittings, become the rule rather than the exception. With constant 1½" dimensions throughout the system, many structural joints can be made with a minimum of fittings. Consider the following:

#### 1. The Entire Section Can be Used.

You are not limited to using only the open-slot side because holes line up on channel and fittings. Using the scribe marks ensures the fittings will work and a straight cut is made.

#### 2. Considerable Field Drilling and Welding Eliminated.

The holes are already there and they are usable. Back-to-back, side-to-back, side-to-side — all combinations that can be made using B-995 Kindorf® channel.

#### 3. Field Cutting and Layout Made Simple.

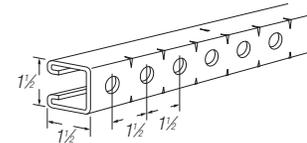
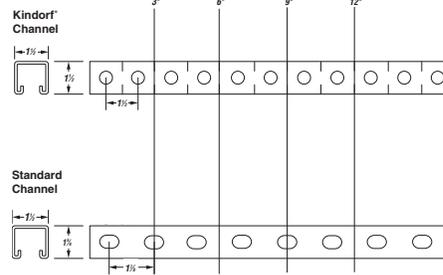
8 scribe marks = 1 ft. Simply count the marks and cut. Position of holes ensures balanced support for trapezes on every piece, thus keeping waste to an absolute minimum.

#### 4. Modular Fittings Fasten to Bolt Side or Slot Side — Unique Stud Nut.

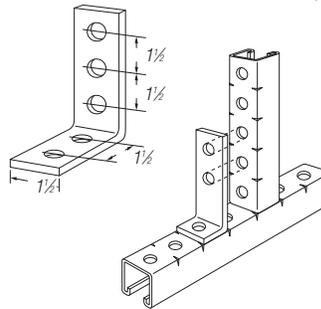
Kindorf® framing fittings are engineered for versatile use — to meet the greatest number of framing combinations with maximum rigidity and security. Fittings may be fastened to the channel on either the bolt-hole side or the slot side.

The matching 1½" dimensions of channel bolt holes and fitting bolt holes provide a fast alignment and quick bolting. Fastening on the slot side provides infinite placement of the nut to match bolting requirements. Either way results in simple "building block" erection and permits multiple application of fittings. With the B-911SN Stud Nut, blind fastening of angles and fixtures is eliminated.

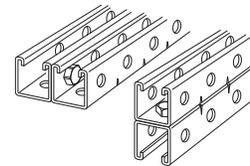
#### Cuts come where they should:



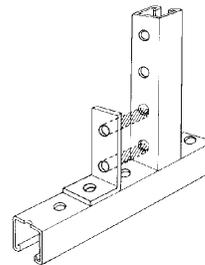
Channel with bolt holes 1/8" dia. holes on 1/2" centers for 1/2" bolts.



Kindorf® 1½" All holes line up — all the time.

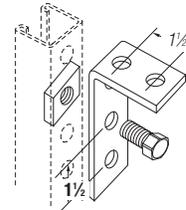


Holes in fittings also line up.



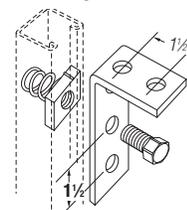
1/2" Strut 1/8" holes cause misalignment.

#### Fastening on bolt-hole side.

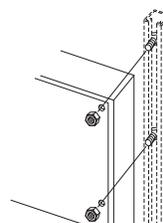


Clamping nut or hex head nut may be used for attachment and security of fittings to either side of channel.

#### Fastening on slot side.



Spring nut holds in position without support. Inserts easily in channel and sets automatically — cannot rotate.



Stud nut saves time, reduces labor — like having an extra pair of hands.



## Modular Metal Framing — Overview

Let the Modular 1½" Dimension Work for You by Saving Labor and Inventory Dollars!

### Why Kindorf® 1½" Channel Saves You Inventory Dollars

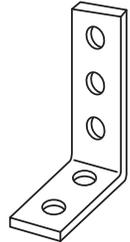
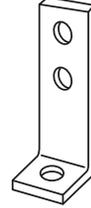
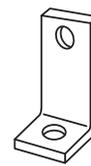
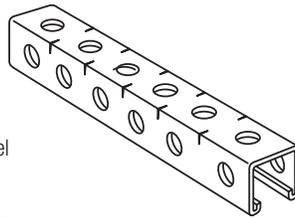
#### Fewer Pieces Do More Work.

By making equal use of the back of the channel, the sides of the channel (B-995 see **page C-13**) and the open slot, your options are increased. Combine this with three simple fittings that are 1½" wide and have 1½" hole layout, and you have the simplest and most versatile channel system on the market today.

By stocking a single-channel system and only three angle fittings, a multitude of jobs can be done.

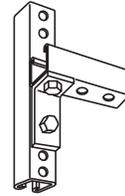
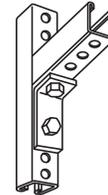
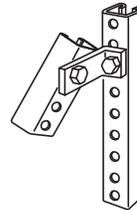
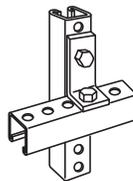
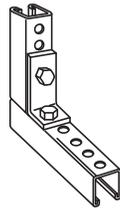
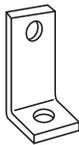
With fewer pieces doing more work, ordering efficiency is increased and investment dollars are decreased.

*Any way you look at it — Kindorf® strut can save you money.*

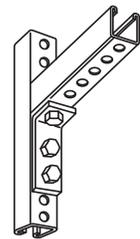
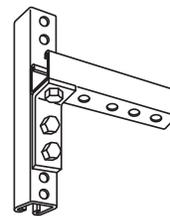
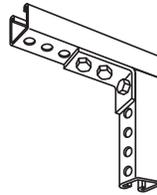
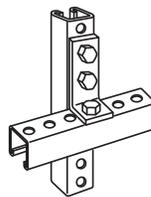
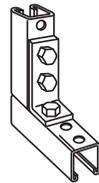
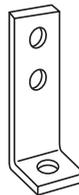


*By simply stocking B-995 prepunched channel and three angle fittings, a great number of joints can be made.*

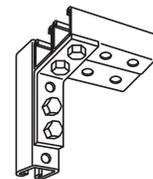
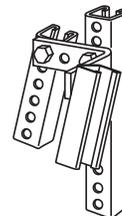
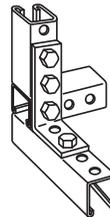
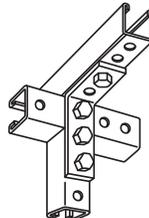
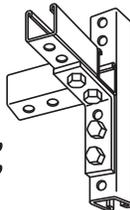
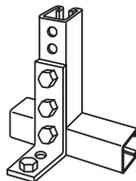
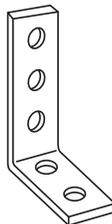
#### One Kindorf® B-915 Two-Hole Connector Will Do:



#### One Kindorf® B-916 Three-Hole Connector Will Do:



#### One Kindorf® B-917 Five-Hole Connector Will Do:



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### Galv-Krom® Electro-Galvanized Finish

#### Hexavalent Galv-Krom® Is OSHA Safe.



Over the past several months, there have been many questions about hexavalent chromium in the metal framing industry. Many of these questions relate to the changes made by OSHA. In 2006, the Occupational Safety and Health Administration (OSHA) published a revised standard which includes changes related to occupational exposure to hexavalent chromium (Cr VI). The revised standard was promulgated on February 28, 2006 with the compliance provisions taking effect on November 27, 2006 for most businesses. Cr VI can be found in many metal framing products, such as the hexavalent version of Galv-Krom® finish for Kindorf® channel.

- **Occupational Exposure Limit** — The changes related to Cr VI address the occupational exposure limit. Previously, this level was 52 micrograms per cubic meter (g/m<sup>3</sup>) of air. This limit has now been reduced to 5 g/m<sup>3</sup> of air. Additionally, an “action level” has also been established at 2.5 g/m<sup>3</sup> of air. If exposure to Cr VI exceeds these levels, comprehensive exposure-control efforts must be implemented to protect workers.
- **OSHA Testing for Galv-Krom® Finish** — Thomas & Betts conducted documented third-party testing for the Cr VI occupational exposure of a typical worker when fabricating Galv-Krom® products. A certified industrial hygienist conducted the testing. The testing was done over one full work day following the OSHA protocol, with air sampling being performed to produce an 8-hour time-weighted average exposure for the affected worker. The TWA result was .00001 micrograms of Cr VI per cubic meter of air (g/m<sup>3</sup>). This level is significantly below the 2.5 g/m<sup>3</sup> in the OSHA standard.
- **Hexavalent Galv-Krom® Finish Is OSHA Safe** — Based on this testing, activities such as normal handling, cutting, grinding and welding of Galv-Krom® products are within the OSHA requirements related to occupational exposure to hexavalent chromium.
- **Certified Industrial Hygienist Report Available** — The test report certified by an independent industrial hygienist on this occupational exposure testing is available to Thomas & Betts customers who require such documentation. This testing was conducted to the OSHA ID-215 ion chromatography method for analytical air sampling and meets the latest OSHA requirements. The findings are reported by a Certified Industrial Hygienist (CIH) and are recognized by OSHA as suitable for questions regarding occupational exposure to hexavalent chromium. For more details on this report, contact Thomas & Betts Technical Services at 888.862.3289.



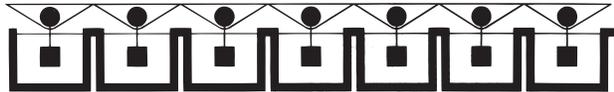
#### New Trivalent Galv-Krom® Finish Is RoHS Compliant



In 2007, Thomas & Betts introduced the new and improved trivalent Galv-Krom® finish. Galv-Krom® finish is a combination of .5 mils electro-plated zinc and a gold trivalent chromium finish.

- **Gold Trivalent Chromium Finish** — The new Galv-Krom® finish features a trivalent chromium formulation that provides all the features and protection of hexavalent chromium (CR VI) without the use of this chemical. hexavalent chromium is a substance that is restricted by some standards such as the European Union directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS).
- **RoHS Compliant** — One great feature for the new Trivalent Chromium formulation is RoHS compliance. Because hexavalent chromium is a substance that is restricted by RoHS, moving away from a hexavalent formulation to the new trivalent formulation will make the performance of Galv-Krom® coating available to customers affected by RoHS and other standards like RoHS around the world.
- **Trivalent Galv-Krom® Finish Is OSHA Safe** — As mentioned previously, the hexavalent formulation of the Galv-Krom® finish was safe with regard to the revised 2006 OSHA standard. This new trivalent formulation of the Galv-Krom® finish does not contain any hexavalent chromium and therefore does not fall under the scope of the OSHA standard. As a result, the new Trivalent Galv-Krom® finish, just like the Hexavalent Galv-Krom® finish, is OSHA compliant.
- **ASTM B633 Specification** — The improved Galv-Krom® finish is applied in compliance with ASTM B633 coating, the same standard as used previously. This standard outlines electro-deposited coatings of zinc on steel.

### Galv-Krom® Electro-Galvanized Finish (continued)



| Soak | Degreasing Chemical                              | Electro Cleaner   | Rinse                    | Sulfuric Acid Bath  | Rinse                    | Zinc Tank                                    | Rinse                           |
|------|--|---|--------------------------|---|--------------------------|--|---------------------------------|
|      | Solution removes bulk of oil and grease buildup. | Metal is negatively charged to remove minute surface particles. | Live, clear water rinse. | Prepares the metal by etching the surface for the zinc application. | Live, clear water rinse. | Electrically applies the zinc metal coating. | Chemically treated rinse water. |



| Rinse                    | Chromate Prep                                 | Chromate Dip  | Rinse                    | Dryer  |
|--------------------------|---|---|--------------------------|--|
| Live, clear water rinse. | Polishing agent to prepare part for chromate. | A gold trivalent chromium conversion coat is applied to the zinc. | Live, clear water rinse. | Forced hot air is circulated around the strut until dry. |

### Kindorf® Galv-Krom® Finish Outperforms the Competition

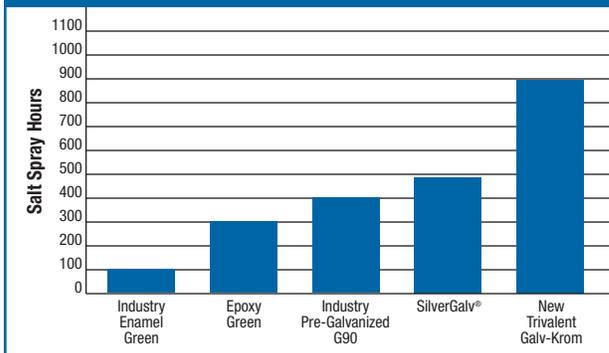


The new and improved Galv-Krom® finish provides many benefits. First, it provides continued safety within OSHA guidelines. Second, the trivalent formulation provides RoHs compliance. But most important of all, the new Kindorf® Galv-Krom® finish provides a level of performance unmatched by the competition.

- Superior Corrosion Protection** — One hallmark of the Galv-Krom® finish is the superior corrosion protection it provides. In the ASTM B117 salt spray test, the new Galv-Krom® finish provided improved protection to the previous Hexavalent formulation, and substantially more protection than painted finishes or G-90 Pre-Galvanized (see chart at right). This outstanding corrosion protection means more versatile installations and more service life for Galv-Krom® finished products
- Strong Abrasion Resistance** — The Galv-Krom® finish won't chip or peel like a green-painted strut product. It stands up to rough handling

- Clean Finish** — For pre-galvanized finishes, the zinc finish is applied before the strut is manufactured. That means all the oil and grime collected while the steel is formed into strut remains on the strut for the customer. Because Galv-Krom® finish is applied after fabrication, the oils and grime collected during the manufacturing process are thoroughly cleaned off during plating. This creates a finished product that leaves no residue on your hands when handling
- Paintable Surface** — The new Galv-Krom® finish uses nano technology to provide a nonporous and non-crystalline surface. Not only does this feature provide enhanced corrosion protection, but also provides an excellent bond for the paint of your choice
- No More White Rust** — With pre-galvanized strut, a common quality headache is the formation of white rust on the zinc finish. With Galv-Krom® finish, the trivalent chromium finish is applied over the zinc, to seal in the zinc beneath and stop the formation of white rust
- Great Electrical Conductivity** — Unlike paint or enamel, the Galv-Krom® surface offers a minimum of electrical resistance so that electrical applications are easily grounded when grounding is needed

**Metal Framing Channel Finish**  
Corrosion Resistant Testing, ASTM B117





## Finishes

### 1. Galv-Krom®

Commonly referred to as “gold,” the Galv-Krom® finish is a combination of .5 mils electro-plated zinc and a gold trivalent chromium finish, offering superior rust protection and excellent electrical conductivity.

### 2. SilverGalv® (Suffix EG)

Often referred to as “zinc plated” or “electroplated zinc,” the SilverGalv® finish applies .5 mils of zinc and a clear conversion coat. Electro-galvanizing is available for channel as well as small fittings, hardware and threaded products.

### 3. Pre-galvanized Steel (Suffix PG)

In addition to the standard Galv-Krom® finish, all Kindorf® channels are available in pre-galvanized steel. This material is identical to the standard steel except for its ASTM G-90 zinc coating. This coating is applied at the steel mill prior to the channel fabrication.

### 4. Green Coated (Suffix GR)

Green urethane powder resins are applied electrostatically to the steel after fabrication. Once the material is completely covered with the powdered-form urethane, it proceeds through a 400° baking process for ten minutes, creating a chemical bond. This results in a minimum of 1.5 mil thickness of urethane coating providing excellent resistance to chipping or peeling.

### 5. Hot-Dipped Galvanized (Suffix HD)

The material is zinc coated after fabrication providing total product protection on all surfaces. The fabricated channel or fitting is suspended and then dipped into tanks of hot zinc for a prolonged period, creating a coherent bond. The result is superior corrosion resistance as compared to pre-galvanized material. Hot-dipped galvanizing is not recommended for threaded products, considering the zinc coating thickness will often disrupt the threads.

Kindorf® hot-dipped galvanized channel is in conformance with ASTM Specifications A-123 (formerly A-386) and A-153.

Kindorf® channels maintain a minimum 1.5 ounces of zinc per square foot of steel or 2.5 mils (ASTM A-123, Thickness Grade 65). This finish is also referred to as “Hot-dipped galvanized after fabrication.”

### 6. PVC Coated (Prefix P)

A polyvinyl chloride (PVC) plastic coating is fused to the channel, fitting or accessory after fabrication by immersing the part in fluidized PVC tanks. The fused-melt mixed powder PVC coating thickness is 15 mils (.015”) plus or minus five mils. PVC material is a thermoplastic and will soften in high temperatures. An inherent weakness with PVC coatings occurs when field alterations are applied, such as cutting or drilling. These acts disrupt the sealed PVC product and warrant field touch-up. Thomas & Betts cannot be held responsible for field-altered PVC coated products.

## Materials

### 1. Standard Steel

The standard Kindorf® Channel is made from high-quality ASTM A570 Grade 40 carbon steel sheet. These sections are cold formed into a unique and modular profile by an efficient roll forming process. Additionally, the process “cold works” the steel to give it greater mechanical properties.

### 2. Extruded Aluminum (Suffix AL)

For more corrosive environments, T&B also offers extruded aluminum channel sections. These section are nearly identical to their steel counterparts. Aluminum channel is made from 6063 Aluminum and heat treated to a T-6 specification.

### 3. Non-Metallic (Suffix N)

Kindorf® channels are also available in fiberglass-reinforced polyester and vinyl ester. These products are pultruded into shapes similar to steel channels. They offer a high degree of corrosion protection and are very lightweight.

### 4. Stainless Steel (Suffix SS)

For the most corrosive environments, T&B offers Type 304 Stainless Steel channel sections and accessories. Type 316 stainless available upon request. Contact your local sales rep. These products are identical to their carbon steel counterparts except for a much greater corrosion resistance.

## Warning

Load tables, charts and design criteria provided in this catalog are intended as guides only. Selection of proper product, installation intervals, erection and placement are the responsibility of the user.

Kindorf® products are intended to be used for the support and bracing of fixtures, cable, pipe and conduit. Improper use or installation may result in injury to persons or damage to property.

Material and finish specifications are subject to change without notice.

### Channels

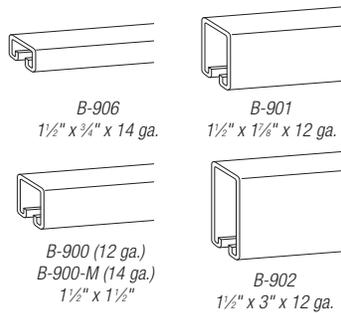
Kindorf® channel is a rugged, heavy-gage structural-quality steel channel preformed in a "U" shape with a continuous open slot the entire length. The turned-in edges serve as retaining points for the nuts and bolts assembly of fittings to the channel. The shape of the channel permits infinite adjustability of the clamping nut simply by gliding it along the channel to the desired position. Spring-tensioned nuts are generally used for positioning overhead or in vertical channel installations. A stud nut (with spring) is provided for easy mounting of cabinets and equipment.

Channel Nuts are specially shaped as parallelograms with biting edges so that when tightened with normal pressure on the bolt, the nut clamps the sides of the channel together in a secure connection, which reinforces the rigidity of the channel itself. The nut rests on the "lips" of the channel slot.

### Steel Channels

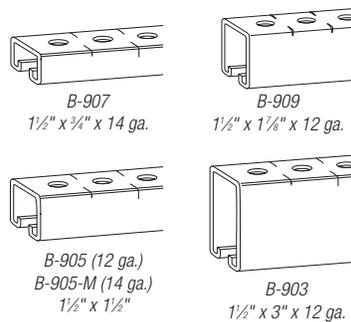
- Galv-Krom® finish
- 10 ft. and 20 ft. lengths

#### Solid Base



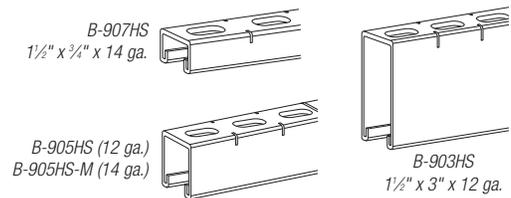
#### Bolt Hole Base

- ⅝" diameter bolt holes on 1½" centers ¾" from end



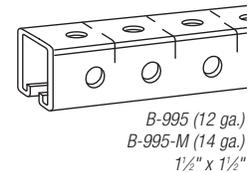
#### Half-Slot Base

- ⅝" x ⅞" slots on 1½" centers ¾" from end

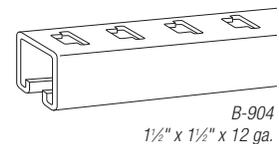


#### Bolt Hole Base

- Bolt holes on 3 sides, ⅝" diameter on 1½" centers ¾" from end



#### T-Slot Base

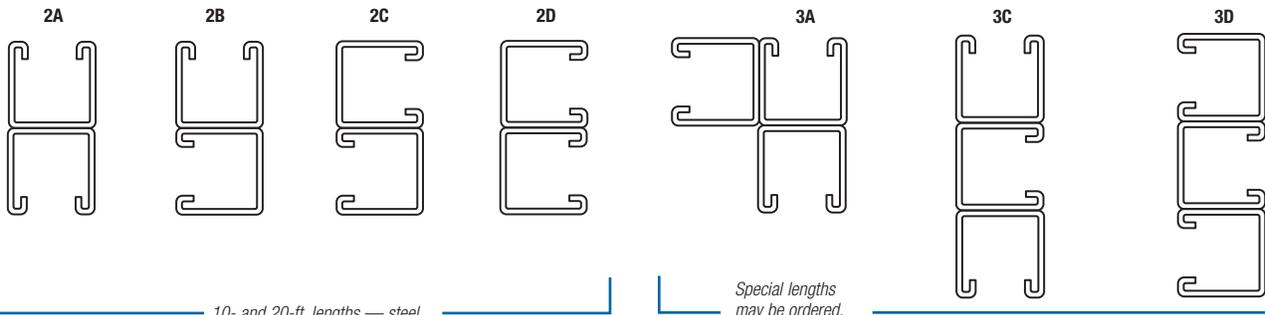


### Kindorf® Channels — Welded Combinations

All Kindorf® channels are available in a variety of combinations — some are shown below.

#### How To Order

Add the suffix designation of the desired combination to the regular channel catalog number. (Example: Two B-900 channels back to back are ordered as B-900-2A.)

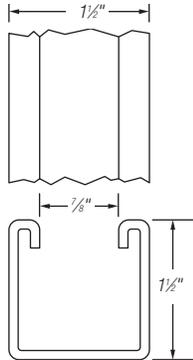




### Channels (continued)

#### B-900 Channel — 1½" x 1½"

Connection by means of continuous slot.



#### Properties of Section

| CAT. NO. | SECTIONAL AREA | MATERIAL THICKNESS | LBS/FT. |
|----------|----------------|--------------------|---------|
| B-900    | 0.345          | 0.104              | 1.206   |
| B-900-M  | 0.217          | 0.074              | 0.74    |

| X-X AXIS |       |       | Y-Y AXIS |       |       |
|----------|-------|-------|----------|-------|-------|
| I        | S     | R     | I        | S     | R     |
| 0.101    | 0.123 | 0.535 | 0.129    | 0.175 | 0.603 |
| 0.018    | 0.041 | 0.272 | 0.077    | 0.105 | 0.559 |



| CAT. NO.      | DESCRIPTION | MATERIAL |
|---------------|-------------|----------|
| B 900 10      | Galv-Krom®  | 12 ga.   |
| B-900-20      | Galv-Krom®  | 12 ga.   |
| B-900-M-10    | Galv-Krom®  | 14 ga.   |
| B-900-M-20    | Galv-Krom®  | 14 ga.   |
| B-900-10-EG   | SilverGalv® | 12 ga.   |
| B-900-20-EG   | SilverGalv® | 12 ga.   |
| B-900-M-10-EG | SilverGalv® | 14 ga.   |
| B-900-M-20-EG | SilverGalv® | 14 ga.   |

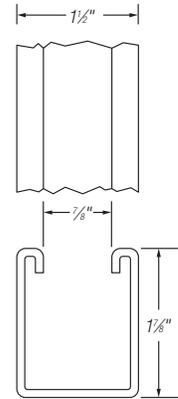
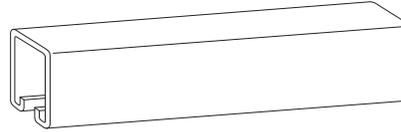
Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings. 196#/C ft. B-900, 162#/C ft. B-900-M, 107#/C ft.

| CAT. NO.   | DESCRIPTION           | JOINER | END CAPS |
|------------|-----------------------|--------|----------|
| B-900      | 12 ga. Galv-Krom®     | —      | —        |
| B-900-M    | 14 ga. Galv-Krom®     | —      | —        |
| B-900-10GR | Green powder coated   | —      | —        |
| B-900-20GR | Green powder coated   | G978   | —        |
| B-900-10PG | Pre-galvanized        | G978A  | G967     |
| B-900-20PG | Pre-galvanized        | G1503S | —        |
| B-900-10HD | Hot-dipped galvanized | —      | —        |
| B-900-20HD | Hot-dipped galvanized | —      | —        |

Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings. 196#/C ft. B-900, 162#/C ft. B-900-M, 107#/C ft.

#### B-901 Channel — 1½" x 1⅞"

For heavier load requirements.  
Connection by means of continuous slot.



#### Properties of Section

| CAT. NO. | SECTIONAL AREA | MATERIAL THICKNESS | LBS/FT. |
|----------|----------------|--------------------|---------|
| B-901    | 0.595          | 0.104              | 2.028   |

| X-X AXIS |       |       | Y-Y AXIS |       |       |
|----------|-------|-------|----------|-------|-------|
| I        | S     | R     | I        | S     | R     |
| 0.263    | 0.251 | 0.665 | 0.238    | 0.309 | 0.632 |



| CAT. NO.    | DESCRIPTION | MATERIAL |
|-------------|-------------|----------|
| B-901-10    | Galv-Krom®  | 12 ga.   |
| B-901-20    | Galv-Krom®  | 12 ga.   |
| B-901-10-EG | SilverGalv® | 12 ga.   |
| B-901-20-EG | SilverGalv® | 12 ga.   |

Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings. 196#/C ft.

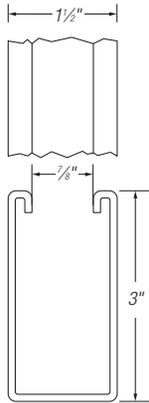
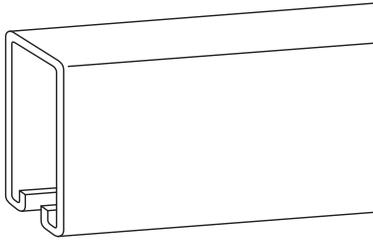
| CAT. NO. | DESCRIPTION           | JOINER | END CAPS |
|----------|-----------------------|--------|----------|
| B-901    | 12 ga. Galv-Krom®     | G978C  | G-966    |
| B-901HD  | Hot-dipped galvanized | —      | —        |

Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings. 196#/C ft.

### Channels (continued)

#### B-902 Channel — 1½" x 3"

Connection by means of continuous slot.



#### Properties of Section

| CAT. NO. | SECTIONAL AREA | MATERIAL THICKNESS | LBS/FT. |
|----------|----------------|--------------------|---------|
| B-902    | 0.837          | 0.104              | 2.825   |

| X-X AXIS |       |       | Y-Y AXIS |       |       |
|----------|-------|-------|----------|-------|-------|
| I        | S     | R     | I        | S     | R     |
| 0.909    | 0.552 | 1.042 | 0.363    | 0.471 | 0.658 |

| CAT. NO.    | DESCRIPTION | MATERIAL |
|-------------|-------------|----------|
| B 902 10    | Galv-Krom®  | 12 ga.   |
| B-902-20    | Galv-Krom®  | 12 ga.   |
| B-902-10-EG | SilverGalv® | 12 ga.   |
| B-902-20-EG | SilverGalv® | 12 ga.   |

Use H-113-B bolts and B-910-1/2 steel nuts for mounting fittings.  
285#/C ft.

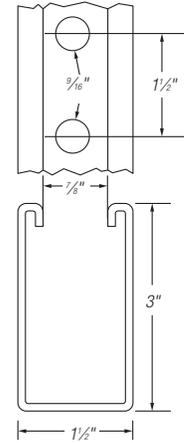
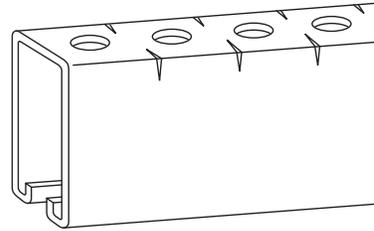


| CAT. NO.   | DESCRIPTION           | JOINER  | END CAP |
|------------|-----------------------|---------|---------|
| B-902-10   | 12 ga. Galv-Krom®     | —       | —       |
| B-902-20   | 12 ga. Galv-Krom®     | G978-D  | G957    |
| B-902-10HD | Hot-dipped galvanized | G-3003S | —       |
| B-902-20HD | Hot-dipped galvanized | —       | —       |

Use H-113-B bolts and B-910-1/2 steel nuts for mounting fittings.  
285#/C ft.

#### B-903 Channel — 1½" x 3"

Connection by means of continuous slot or 9/16" holes on 1½" centers.



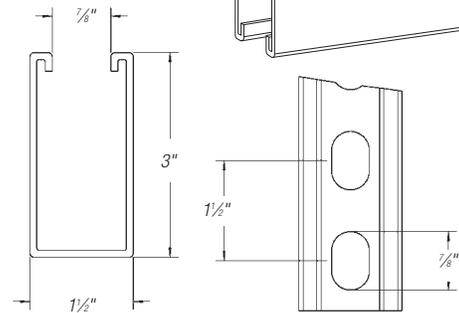
| CAT. NO.    | DESCRIPTION | MATERIAL |
|-------------|-------------|----------|
| B-903-10    | Galv-Krom®  | 12 ga.   |
| B-903-20    | Galv-Krom®  | 12 ga.   |
| B-903-10-EG | SilverGalv® | 12 ga.   |
| B-903-20-EG | SilverGalv® | 12 ga.   |

Use H-113-B bolts and B-910-1/2 steel nuts for mounting fittings.  
277#/C ft.

| CAT. NO. | DESCRIPTION           | JOINER | END CAP |
|----------|-----------------------|--------|---------|
| B-903    | 12 ga. Galv-Krom®     | G978-D | —       |
| B-903HD  | Hot-Dipped Galvanized | G3003S | —       |

Use H-113-B bolts and B-910-1/2 steel nuts for mounting fittings.  
277#/C ft.

#### B-903H Channel — 1½" x 3"



| CAT. NO.      | DESCRIPTION | MATERIAL |
|---------------|-------------|----------|
| B 903HS 10    | Galv-Krom®  | 12 ga.   |
| B-903HS-20    | Galv-Krom®  | 12 ga.   |
| B-903HS-10-EG | SilverGalv® | 12 ga.   |
| B-903HS-20-EG | SilverGalv® | 12 ga.   |

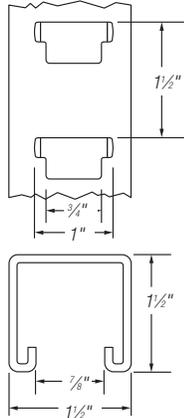
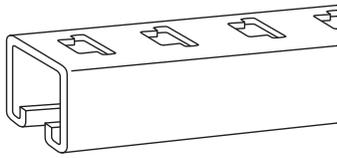
Use H-113-B bolts and B-910-1/2 steel nuts for mounting fittings.  
277#/C ft.



### Channels (continued)

#### B-904 Channel — 1½" x 1½"

Connection by means of continuous slot or T-slots on 1½" centers in base side of channel.

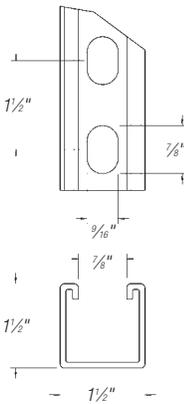
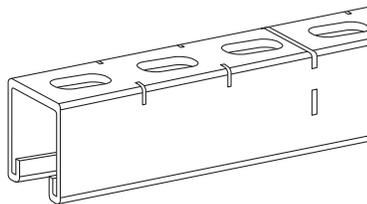


| CAT. NO. | DESCRIPTION           |
|----------|-----------------------|
| B-904 10 | 12 ga. Galv-Krom®     |
| B-904HD  | Hot-Dipped Galvanized |

For attachment to continuous slot use H-113-B bolts and B-910-1/2 steel nuts.

For attachment to T-slots use F-739 brackets 155#/C ft.

#### B-905HS Channel — 1½" x 1½"



| CAT. NO.        | DESCRIPTION | MATERIAL |
|-----------------|-------------|----------|
| B 905HS 10      | Galv-Krom®  | 12 ga.   |
| B-905HS-20      | Galv-Krom®  | 12 ga.   |
| B-905HS-M-10    | Galv-Krom®  | 14 ga.   |
| B-905HS-M-20    | Galv-Krom®  | 14 ga.   |
| B-905HS-10-EG   | SilverGalv® | 12 ga.   |
| B-905HS-20-EG   | SilverGalv® | 12 ga.   |
| B-905HS-M-10-EG | SilverGalv® | 14 ga.   |
| B-905HS-M-20-EG | SilverGalv® | 14 ga.   |

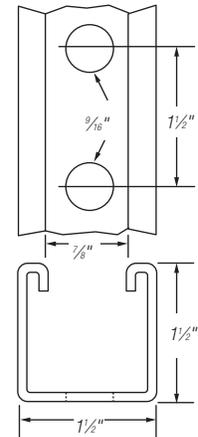
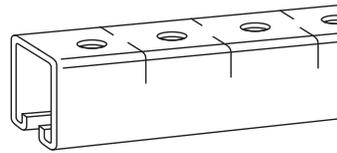
Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings.

Scribe marks designate midpoint between holes for accurate field cutting.

B-905, 158#/C ft. B-905-M, 102#/C ft.

#### B-905 Channel — 1½" x 1½"

Connections by means of continuous slot or 9/16" holes on 1½" centers that match holes in B-900 series fittings.



| CAT. NO.      | DESCRIPTION | MATERIAL |
|---------------|-------------|----------|
| B 905 10      | Galv-Krom®  | 12 ga.   |
| B-905-20      | Galv-Krom®  | 12 ga.   |
| B-905-M-10    | Galv-Krom®  | 14 ga.   |
| B-905-M-20    | Galv-Krom®  | 14 ga.   |
| B-905-10-EG   | SilverGalv® | 12 ga.   |
| B-905-20-EG   | SilverGalv® | 12 ga.   |
| B-905-M-10-EG | SilverGalv® | 14 ga.   |
| B-905-M-20-EG | SilverGalv® | 14 ga.   |

Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings.

Scribe marks designate midpoint between holes for accurate field cutting.

B-905, 158#/C ft. B-905-M, 102#/C ft.

| CAT. NO.   | DESCRIPTION           | JOINER | END CAP |
|------------|-----------------------|--------|---------|
| B-905      | 12 ga. Galv-Krom®     | —      | —       |
| B-905-M    | 14 ga. Galv-Krom®     | —      | —       |
| B-905-10GR | Green Coated          | —      | —       |
| B-905-20GR | Green Coated          | —      | —       |
| B-905-10PG | Pre-Galvanized        | —      | —       |
| B-905-20PG | Pre-Galvanized        | —      | —       |
| B-905-10HD | Hot-Dipped Galvanized | —      | —       |
| B-905-20HD | Hot-Dipped Galvanized | —      | —       |

Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings.

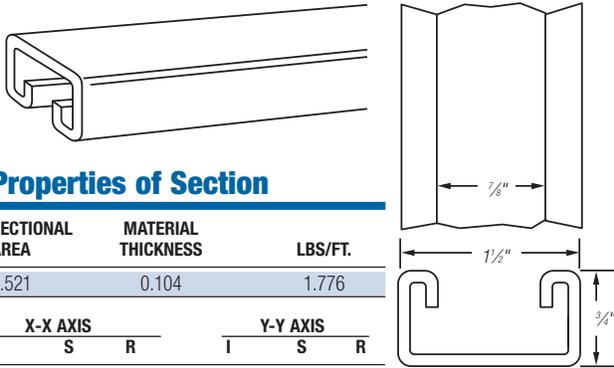
Scribe marks designate midpoint between holes for accurate field cutting.

B-905, 158#/C ft. B-905-M, 102#/C ft.

### Channels (continued)

#### B-906 Channel — 1½" x ¾"

Connection by means of continuous slot.



#### Properties of Section

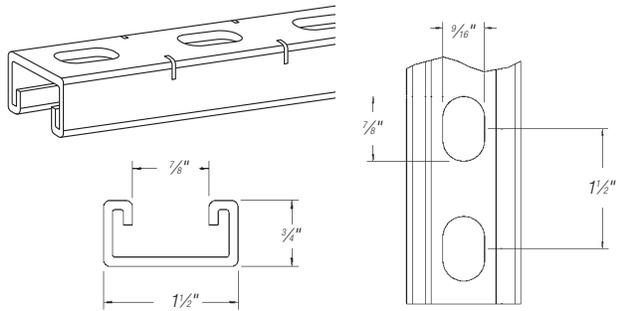
| SECTIONAL AREA | MATERIAL THICKNESS | LBS/FT.  |     |       |       |
|----------------|--------------------|----------|-----|-------|-------|
| 0.521          | 0.104              | 1.776    |     |       |       |
| X-X AXIS       |                    | Y-Y AXIS |     |       |       |
| I              | S                  | R        | I   | S     | R     |
| 0.155          | 0.179              | 0.545    | 0.2 | 0.259 | 0.619 |



| CAT. NO.           | DESCRIPTION | MATERIAL |
|--------------------|-------------|----------|
| <b>B 906 10</b>    | Galv-Krom®  | 14 ga.   |
| <b>B-906-20</b>    | Galv-Krom®  | 14 ga.   |
| <b>B-906-10-EG</b> | SilverGalv® | 14 ga.   |
| <b>B-906-20-EG</b> | SilverGalv® | 14 ga.   |

Use H-113-A bolts and B-910-1/2 or B-912-1/2 steel nuts for mounting fittings.  
Steel 75#/C. ft.

#### B-907HS Channel — 1½" x ¾"

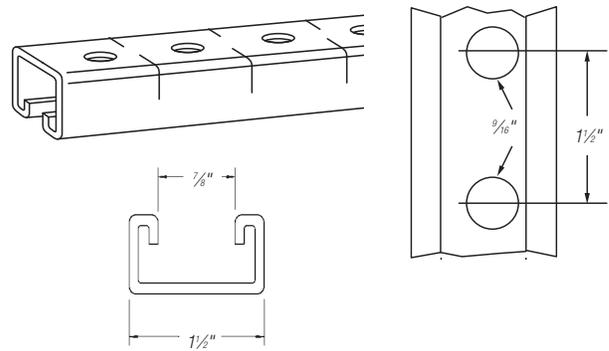


| CAT. NO.             | DESCRIPTION | MATERIAL |
|----------------------|-------------|----------|
| <b>B 907HS 10</b>    | Galv-Krom®  | 14 ga.   |
| <b>B-907HS-20</b>    | Galv-Krom®  | 14 ga.   |
| <b>B-907HS-10-EG</b> | SilverGalv® | 14 ga.   |
| <b>B-907HS-20-EG</b> | SilverGalv® | 14 ga.   |

Use H-113-A bolts and B-910-1/2 or B-912-1/2 steel nuts for mounting fittings.  
Holes on B-900 series fittings match channel holes.  
Scribe marks on steel channel designate midpoint between holes for accurate field cutting.  
Steel 71#/C. ft.

#### B-907 Channel — 1½" x ¾"

Connection by means of continuous slot or 5/16" holes on 1½" centers.



| CAT. NO.           | DESCRIPTION | MATERIAL |
|--------------------|-------------|----------|
| <b>B-907-10</b>    | Galv-Krom®  | 14 ga.   |
| <b>B-907-20</b>    | Galv-Krom®  | 14 ga.   |
| <b>B-907-10-EG</b> | SilverGalv® | 14 ga.   |
| <b>B-907-20-EG</b> | SilverGalv® | 14 ga.   |

Use H-113-A bolts and B-910-1/2 or B-912-1/2 steel nuts for mounting fittings.  
Holes on B-900 series fittings match channel holes.  
Scribe marks on steel channel designate midpoint between holes for accurate field cutting.  
Steel 71#/C. ft.



| CAT. NO.          | DESCRIPTION           | JOINER |
|-------------------|-----------------------|--------|
| <b>B-907</b>      | 14 ga. Galv-Krom      | B948   |
| <b>B-907-10GR</b> | Green Coated          | B948   |
| <b>B-907-20GR</b> | Green Coated          | B948   |
| <b>B-907-10PG</b> | Pre-Galvanized        | B948   |
| <b>B-907-20PG</b> | Pre-Galvanized        | B948   |
| <b>B-907-10HD</b> | Hot-Dipped Galvanized | B948   |
| <b>B-907-20HD</b> | Hot-Dipped Galvanized | B948   |

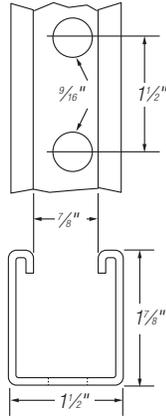
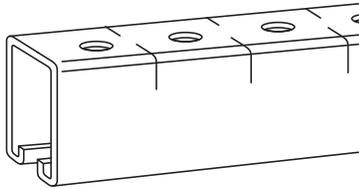
Use H-113-A bolts and B-910-1/2 or B-912-1/2 steel nuts for mounting fittings.  
Holes on B-900 series fittings match channel holes.  
Scribe marks on steel channel designate midpoint between holes for accurate field cutting.  
Steel 71#/C. ft.



### Channels (continued)

#### B-909 Channel — 1½" x 1⅞"

For heavier load requirements. Connection by means of continuous slot or ⅜" holes on 1½" centers.



| CAT. NO.           | DESCRIPTION | MATERIAL |
|--------------------|-------------|----------|
| <b>B 909 10</b>    | Galv-Krom®  | 12 ga.   |
| <b>B-909-20</b>    | Galv-Krom®  | 12 ga.   |
| <b>B-909-10-EG</b> | SilverGalv® | 12 ga.   |
| <b>B-909-20-EG</b> | SilverGalv® | 12 ga.   |

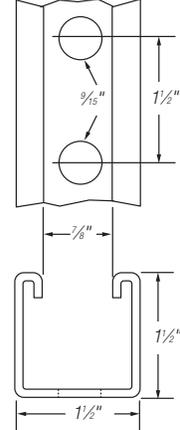
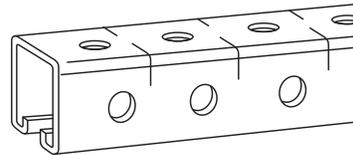
Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings.  
118#/C. ft.

| CAT. NO.       | DESCRIPTION           | JOINER |
|----------------|-----------------------|--------|
| <b>B-909</b>   | 12 ga. Galv-Krom      | G978-C |
| <b>B-909HD</b> | Hot-Dipped Galvanized | G978-C |

Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings.  
118#/C. ft.

#### B-995 Channel — 1½" x 1½"

Connection by means of continuous slot or ⅜" holes on 1½" centers on three sides which match holes in B-900 series fittings.



| CAT. NO.             | DESCRIPTION | MATERIAL |
|----------------------|-------------|----------|
| <b>B 995 10</b>      | Galv-Krom®  | 12 ga.   |
| <b>B-995-20</b>      | Galv-Krom®  | 12 ga.   |
| <b>B-995-M-10</b>    | Galv-Krom®  | 14 ga.   |
| <b>B-995-M-20</b>    | Galv-Krom®  | 14 ga.   |
| <b>B-995-10-EG</b>   | SilverGalv® | 12 ga.   |
| <b>B-995-20-EG</b>   | SilverGalv® | 12 ga.   |
| <b>B-995-M-10-EG</b> | SilverGalv® | 14 ga.   |
| <b>B-995-M-20-EG</b> | SilverGalv® | 14 ga.   |

Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings.  
150#/C ft. Scribe marks designate midpoint between holes for accurate field cutting.  
Standard 10 ft. lengths

### Channel Nuts

Kindorf® Channel Nuts are manufactured from mild steel and are case hardened.

### Design Data

Kindorf® self-aligning channel nuts are designed to provide resistance to pull out and resistance to side slip in excess of the full strength of the channels with which they are used. The extreme resistance to side slip results from the unique design of the alternate teeth, spaced and designed to develop a wedging action that increases with pressure or load.



#### Load Ratings of Steel Channel and Insert Nuts

(B-910-1/2 or B-911-1/2) when used in slot of 12 ga. Kindorf® channel and tightened to a torque of 50 ft. Pounds are as follows:

Withdrawal resistance to pull out safe-load rating = 1,600 lbs.  
Slip resistance safe-load rating = 400 lbs.

(B-910-1/2 or B-912-1/2) when used in slot of 14 ga. Kindorf channel and tightened to a torque of 50 ft. Pounds are as follows:

Withdrawal resistance to pull out safe-load rating = 1,300 lbs. Slip resistance safe-load rating = 400 lbs.

Load ratings are based on safety factor of 3.

### BC-910 Universal Cone Nut

Eliminates the inventory and installation hassles of conventional spring nuts. Fits all 1 1/2" channel, regardless of depth, with a simple twist of your thumb. Pliable nylon cone secures the nut in place through the entire range of construction site temperatures.

### Screw Threads

| THREAD SIZE              | B  | J  | C  | D  |
|--------------------------|----|----|----|----|
| Threads per inch         | 20 | 18 | 16 | 13 |
| Design Torque (ft.-lbs.) | 6  | 11 | 19 | 50 |

All threaded products are American Standard thread, free fit class 2.

Galv-Krom® hardware finish is standard for all Superstrut products. This is a multi-process finish of electro-plated zinc, followed by gold-colored zinc dichromate to give excellent corrosion resistance and a superior paint base.

Standard Finish – Galv-Krom®, unless otherwise stated.

### Trapnut® Strut Fastener



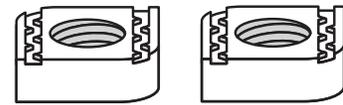
H 122 3/8  
Trapnut™ Strut  
Fastener Galv-Krom®



H 122 3/8 EG  
Trapnut™ Strut  
Fastener SilverGalv®

| CAT. NO.      | DESCRIPTION                   | SIZE (IN.) | DESIGN LOAD LBS. | STD. CTN. |
|---------------|-------------------------------|------------|------------------|-----------|
| H 122 1/4     | 1/4" Galv-Krom®               | 1/4        | 150              | 50        |
| H 122 3/8     | 3/8" Galv-Krom®               | 3/8        | 590              | 50        |
| H 122 1/2     | 1/2" Galv-Krom®               | 1/2        | 1,080            | 50        |
| H 122 1/4 EG  | 1/4" SilverGalv®              | 1/4        | 150              | 50        |
| H 122 3/8 EG  | 3/8" SilverGalv®              | 3/8        | 590              | 50        |
| H 122 1/2 EG  | 1/2" SilverGalv®              | 1/2        | 1,080            | 50        |
| H 122 1/4 SS6 | 1/4" Type 316 Stainless Steel | 1/4        | 150              | 50        |
| H 122 3/8 SS6 | 3/8" Type 316 Stainless Steel | 3/8        | 590              | 50        |
| H 122 1/2 SS6 | 1/2" Type 316 Stainless Steel | 1/2        | 1,080            | 50        |

### Channel Nuts — Standard Finish: Galv-Krom® B-910 Series



For use with all Kindorf® channels

| CAT. NO.   | SIZE (IN.) | THICKNESS (IN.) | WT. LBS./C |
|------------|------------|-----------------|------------|
| B 910 1/4  | 1/4-20     | 3/16            | 7.5        |
| B-910-5/16 | 5/16-18    | 3/16            | 7.3        |
| B-910-3/8  | 3/8-16     | 3/16            | 9.15       |
| B-910-1/2  | 1/2-13     | 3/8             | 9.9        |

### Load Ratings for B-910 Strut Nuts

| CHANNEL NUT SIZES (IN.) | SLIP TEST RATING | PULL TEST RATING |
|-------------------------|------------------|------------------|
| 1/4                     | 300              | 500              |
| 3/8                     | 750              | 1000             |
| 1/2                     | 1,200            | 2000             |

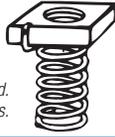
If connections will be subjected to dynamic or seismic loading conditions, contact the factory for design assistance.

- All ratings have safety factor of 3 applied.
- Load ratings are for Static Applications.



### B-911 Series

Self-holding clamping nut with spring attached.  
For use with 1/2" deep channels.

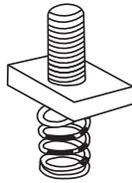


| CAT. NO.     | SIZE (IN.) | THICKNESS (IN.) | WT. LBS./C |
|--------------|------------|-----------------|------------|
| B 911 1/4    | 1/4-20     | 3/16            | 8          |
| B-911-5/16   | 5/16-18    | 5/16            | 8.25       |
| B-911-3/8    | 3/8-16     | 5/16            | 10         |
| B-911-D-3/8* | 3/8-16     | 5/16            | 12         |
| B-911-1/2    | 1/2-13     | 3/8             | 10         |
| B-911-D-1/2* | 1/2-13     | 3/8             | 13         |

\* For clamping nuts with spring for 3" deep channels add suffix D to catalog number.

### B-911-SN Series

Stud nut self-holding clamping nut with spring attached.



| CAT. NO.       | SIZE (IN.) | THICKNESS (IN.) | WT. LBS./C |
|----------------|------------|-----------------|------------|
| B 911 3/8 SN1† | 3/8-16     | 3/16            | 12.5       |
| B-911-3/8-SN2† | 3/8-16     | 3/16            | 13.0       |
| B-911-1/2-SN1† | 1/2-13     | 5/16            | 16.0       |
| B-911-1/2-SN2† | 1/2-13     | 3/8             | 17.0       |

†B-911-3/8-SN1, Stud: 3/8 Dia., 1" Long and B-911-3/8-SN2, Stud: 3/8 Dia., 1 1/4" Long.

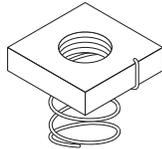
Accepts Kindorf® Nuts H-114C (hex), H-116-C (square).

B-911-1/2-SN1, Stud: 1/2 Dia., 1" Long. and B-911-1/2-SN2, Stud: 1/2 Dia., 1 1/4" Long.

Accepts Kindorf® Nuts H-114D (hex), H-116-D (square).

### B-912 Series

Self-holding clamping nut with spring attached.  
For use with 3/4" deep channels.

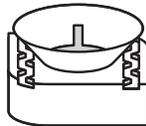


| CAT. NO.   | SIZE (IN.) | THICKNESS (IN.) | WT. LBS./C |
|------------|------------|-----------------|------------|
| B 912 1/4  | 1/4-20     | 3/16            | 8.0        |
| B-912-5/16 | 5/16-18    | 3/16            | 7.5        |
| B-912-3/8  | 3/8-16     | 5/16            | 9.5        |
| B-912-1/2  | 1/2-13     | 3/8             | 9.8        |

Standard finish: Galv-Krom®

### BC-910 Series

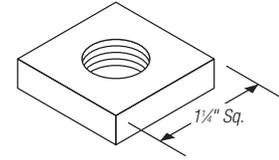
- Universal nylon cone nut
- Sizes: 1/4", 3/8" & 1/2"  
For all 1 5/8" & 1 1/2" channels.  
May be used with ALL strut depths



| CAT. NO.  | SIZE (IN.) | FINISH     |
|-----------|------------|------------|
| BC910 1/4 | 1/4-20     | Galv-Krom® |
| BC910 3/8 | 3/8-16     | Galv-Krom® |
| BC910 1/2 | 1/2-13     | Galv-Krom® |

### B-914 Series

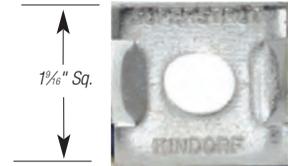
Square nuts for use with channel and spot-type concrete inserts.



| CAT. NO.   | SIZE (IN.) | THICKNESS (IN.) | WT. LBS./C |
|------------|------------|-----------------|------------|
| B 914 1/4  | 1/4-20     | 3/16            | 10.50      |
| B-914-3/8  | 3/8-16     | 5/16            | 13.25      |
| B-914-1/2  | 1/2-13     | 3/8             | 14.00      |
| B-914-5/8  | 5/8-11     | 3/8             | 14.00      |
| B-914-3/4  | 3/4-10     | 3/8             | 12.00      |
| B-914-7/8  | 7/8-9      | 3/8             | 10.50      |
| B-914-3/8P | 3/8-18**   | 3/8             | 12.00      |
| B-914-1/2P | 1/2-14**   | 3/8             | 11.00      |

\*\* Standard Pipe Threads.  
Standard finish: Galv-Krom®.

### Located Square Washers

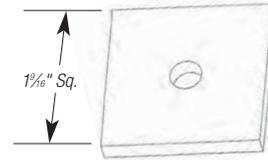


| CAT. NO.     | BOLT SIZE (IN.) | STD. CTN. |
|--------------|-----------------|-----------|
| AB-241L-1/4  | 1/4             | 100       |
| AB-241L-5/16 | 5/16            | 100       |
| AB-241L-3/8  | 3/8             | 100       |
| AB-241L-1/2  | 1/2             | 100       |
| AB-241L-5/8  | 5/8             | 100       |

GoldGalv® is standard finish.

Add "EG" suffix for SilverGalv®.

### Square Washers



| CAT. NO.    | BOLT SIZE (IN.) | STD. CTN. |
|-------------|-----------------|-----------|
| AB-241-1/4  | 1/4             | 100       |
| AB-241-5/16 | 5/16            | 100       |
| AB-241-3/8  | 3/8             | 100       |
| AB-241-1/2  | 1/2             | 100       |
| AB-241-5/8  | 5/8             | 50        |

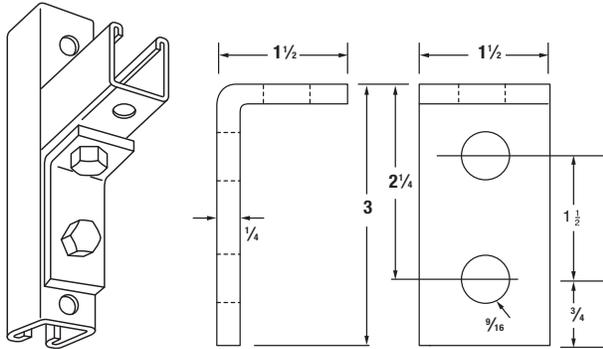
GoldGalv® is standard finish.

Add "EG" suffix for SilverGalv®.

# Kindorf®

## Channel Fittings

### B-915 Two-Hole Angle Connector

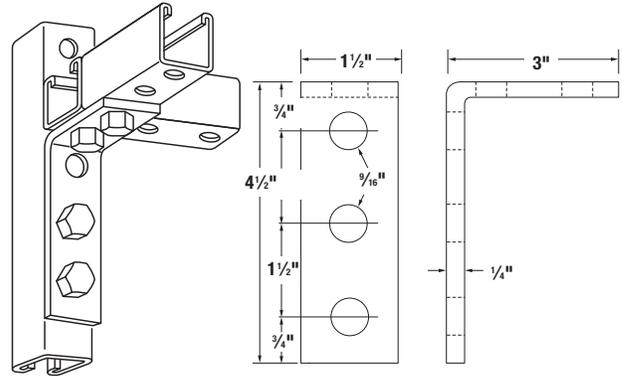


Can also be used as side-beam connector to suspend 1/2" hanger rod.

| CAT. NO. | FINISH                |
|----------|-----------------------|
| B 915    | Galv-Krom®            |
| B-915EG  | Electro-Galvanized    |
| B-915HD  | Hot-Dipped Galvanized |

1/4" steel, 39#/C.

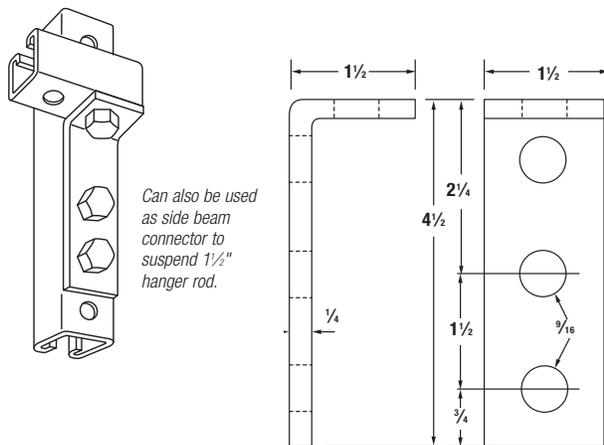
### B-917 Five-Hole Angle Connector



| CAT. NO. | FINISH                |
|----------|-----------------------|
| B 917    | Galv-Krom®            |
| B-917EG  | Electro-Galvanized    |
| B-917HD  | Hot-Dipped Galvanized |

1/4" steel, 68#/C.

### B-916 Three-Hole Angle Connector

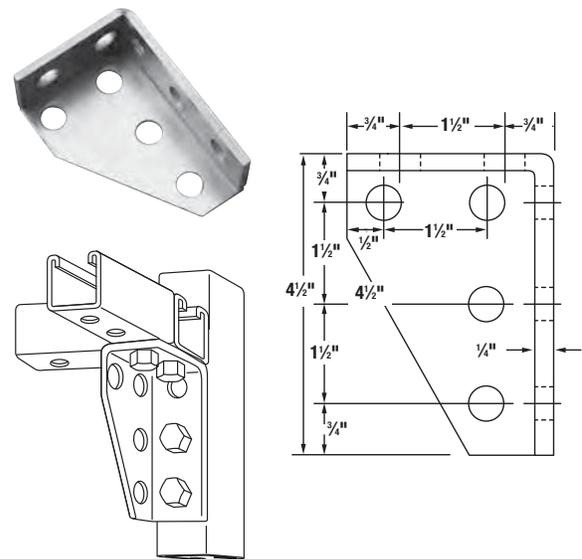


Can also be used as side beam connector to suspend 1 1/2" hanger rod.

| CAT. NO. | FINISH                |
|----------|-----------------------|
| B 916    | Galv-Krom®            |
| B-916HD  | Hot-dipped galvanized |

1/4" steel, 46#/C.

### B-918 Left-Hand Gusset Connector



| CAT. NO. | FINISH             |
|----------|--------------------|
| B 918    | Galv-Krom®         |
| B-918EG  | Electro-Galvanized |

12 Ga. and 1/4" steel, 102#/C.

Kindorf® Modular Metal Framing and Support System

**Thomas & Betts**

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Corporate Office  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

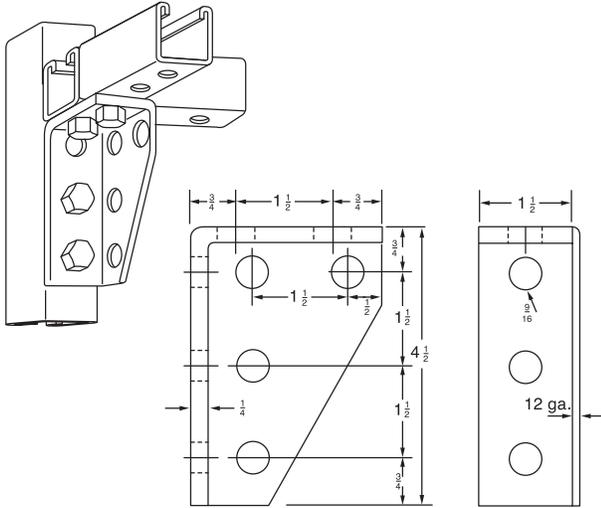
Customer Service  
Tel: 800.816.7809  
Fax: 800.816.7810

Technical Services  
Tel: 888.862.3289  
Fax: 901.252.1321

Tool Services  
Tel: 800.284.8665



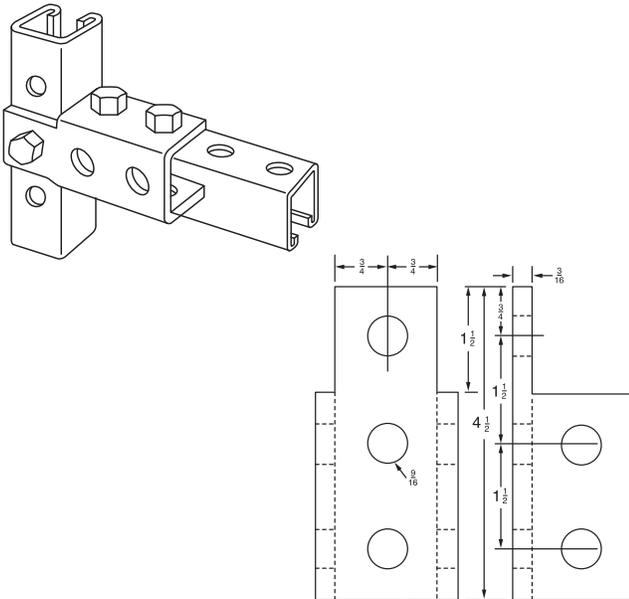
### B-919 Right-Hand Gusset Connector



| CAT. NO. | FINISH             |
|----------|--------------------|
| B 919    | Galv-Krom®         |
| B-919EG  | Electro-Galvanized |

12 ga. and 1/4" steel. 102#/C.

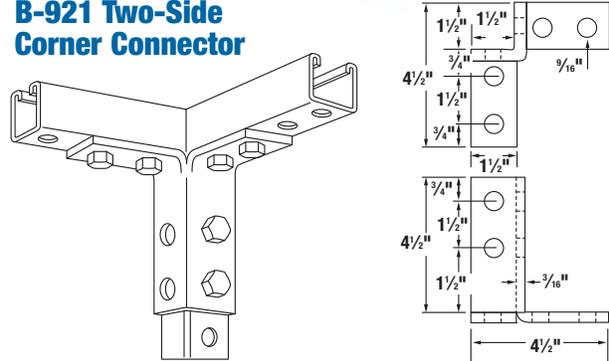
### B-920 End Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 920    | Galv-Krom® |

3/16" steel. 80#/C.

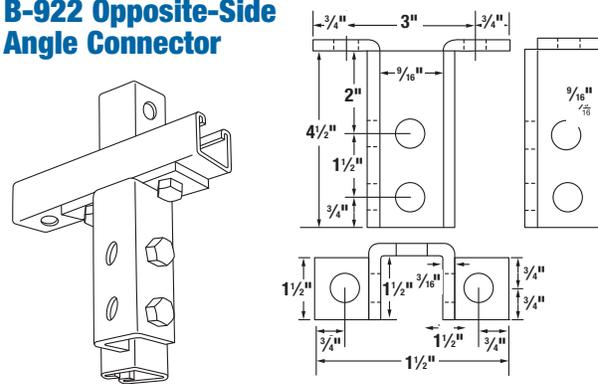
### B-921 Two-Side Corner Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 921    | Galv-Krom® |

3/16" steel. 101#/C.

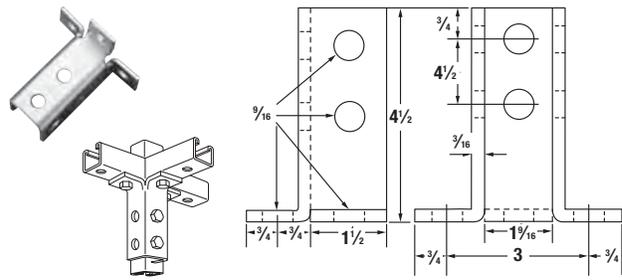
### B-922 Opposite-Side Angle Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 922    | Galv-Krom® |

3/16" steel. 124#/C.

### B-923 Three-Side Angle Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 923    | Galv-Krom® |

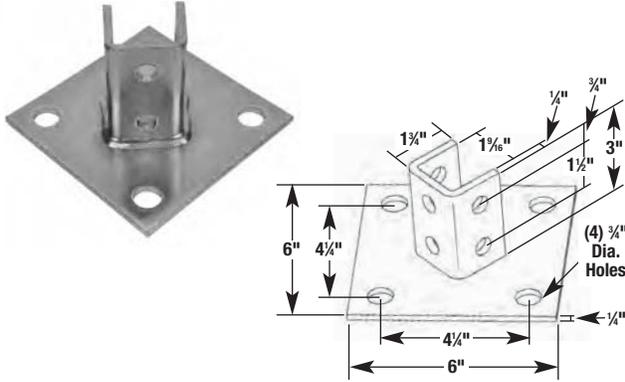
3/16" steel. 137#/C.

# Kindorf®

## Channel Fittings

Kindorf® Modular Metal Framing and Support System

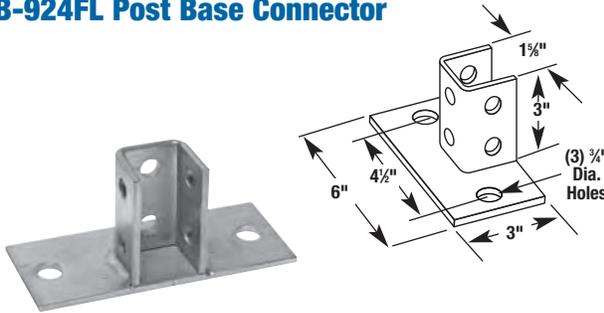
### B-924 Post Base Connector



| CAT. NO. | FINISH      |
|----------|-------------|
| B 924    | Galv-Krom®  |
| B-924-EG | SilverGalv® |

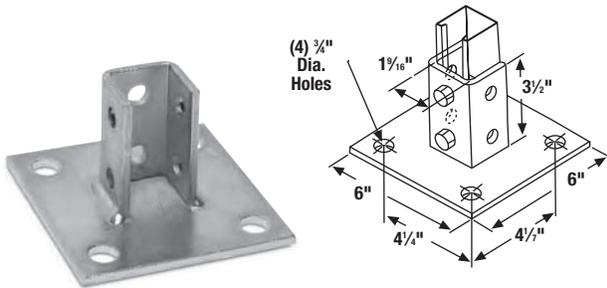
1/4" steel 250#/C.  
For use with 1 1/2" x 1 1/2" channels.

### B-924FL Post Base Connector



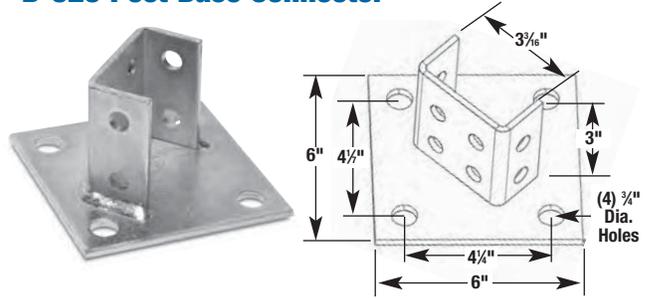
| CAT. NO.   | FINISH      |
|------------|-------------|
| B 924FL    | Galv-Krom®  |
| B-924-FLEG | SilverGalv® |

### B-924SQ Post Base Connector



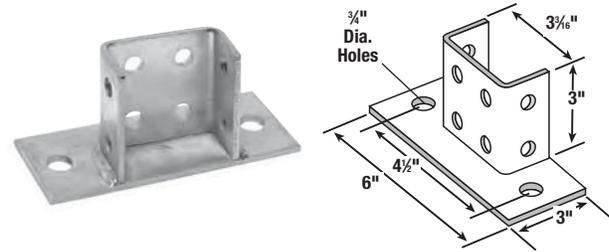
| CAT. NO.  | FINISH      |
|-----------|-------------|
| B 924SQ   | Galv-Krom®  |
| B-924SQEG | SilverGalv® |

### B-925 Post Base Connector



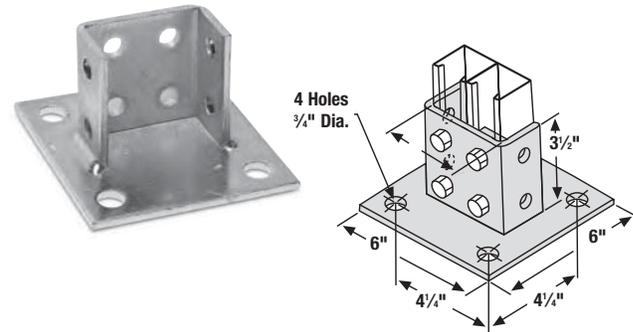
| CAT. NO. | FINISH      |
|----------|-------------|
| B-925    | Galv-Krom®  |
| B-925-EG | SilverGalv® |

### B-925FL Post Base Connector



| CAT. NO.  | FINISH      |
|-----------|-------------|
| B-925FL   | Galv-Krom®  |
| B-925FLEG | SilverGalv® |

### B-925SQ Post Base Connector



| CAT. NO.  | FINISH      |
|-----------|-------------|
| B-925SQ   | Galv-Krom®  |
| B-925SQEG | SilverGalv® |

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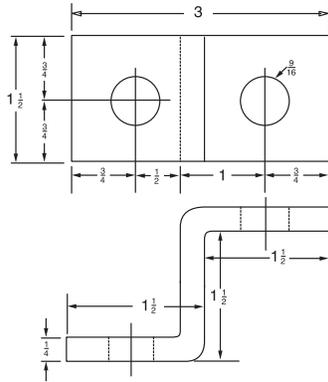
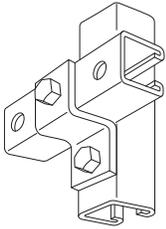
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### B-926 Z Support

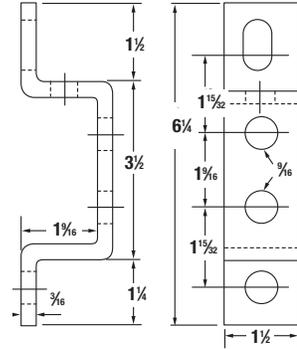
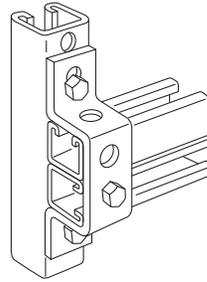


| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 926</b> | Galv-Krom® |

1/4" steel, 42#/C.

For use with 1 1/2" x 1 1/2" channels.

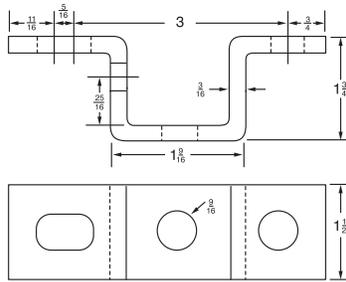
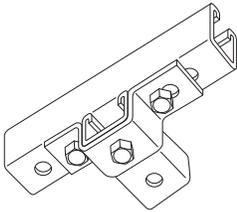
### B-929 Wide U Support



| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 929</b> | Galv-Krom® |

3/16" steel, 63#/C.

### B-927 U Support

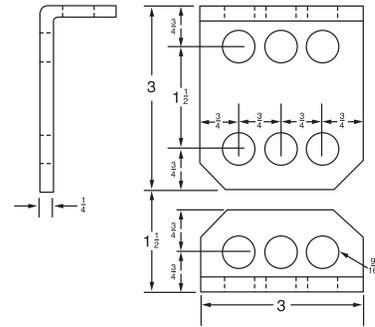
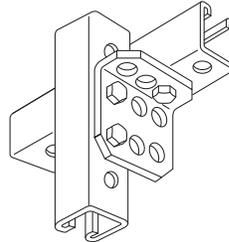


| CAT. NO.       | FINISH             |
|----------------|--------------------|
| <b>B 927</b>   | Galv-Krom®         |
| <b>B-927EG</b> | Electro-Galvanized |

3/16" steel, 57#/C.

For use with 1 1/2" x 1 1/2" channels.

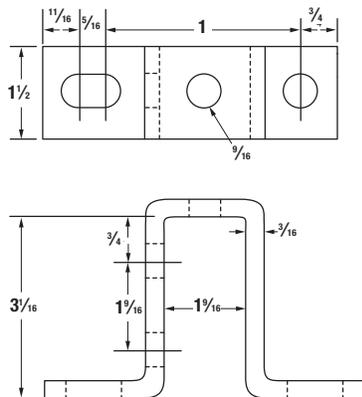
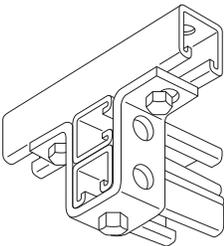
### B-930 Angle Support



| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 930</b> | Galv-Krom® |

1/4" steel, 70#/C.

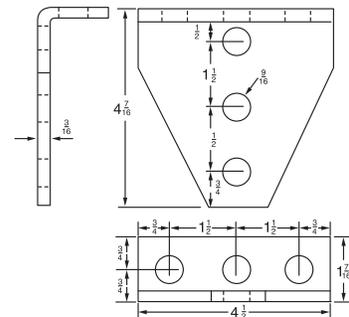
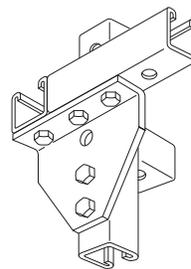
### B-928 Deep U Support



| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 928</b> | Galv-Krom® |

3/16" steel, 77#/C.

### B-932 Heavy Angle Connector



| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 932</b> | Galv-Krom® |

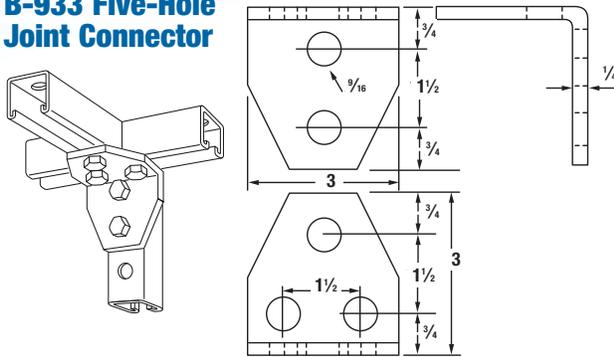
3/16" steel, 136#/C.

# Kindorf®

## Channel Fittings

Kindorf® Modular Metal Framing and Support System

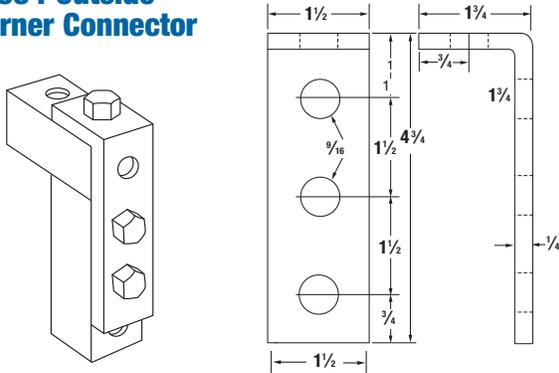
### B-933 Five-Hole Joint Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 933    | Galv-Krom® |

1/4" steel, 96#/C.

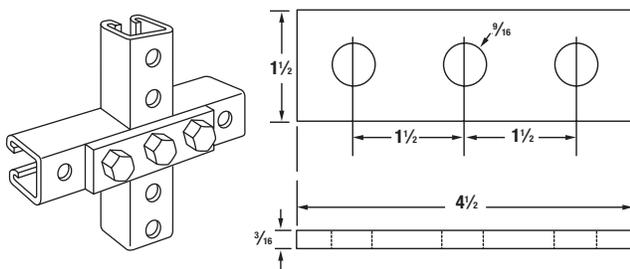
### B-934 Outside Corner Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 934    | Galv-Krom® |

1/4" steel, 57#/C.

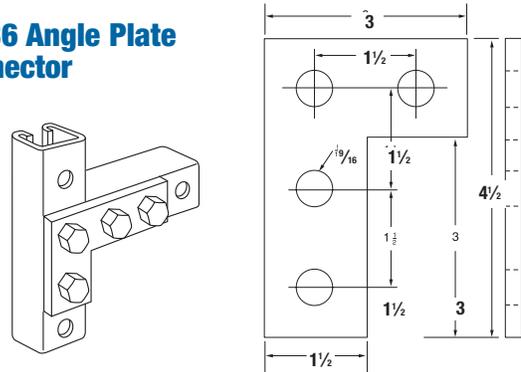
### B-935 Three-Hole Plate Connector



| CAT. NO. | FINISH             |
|----------|--------------------|
| B 935    | Galv-Krom®         |
| B-935-GR | Green Coated       |
| B-935-EG | Electro-Galvanized |

3/16" steel, 32#/C.

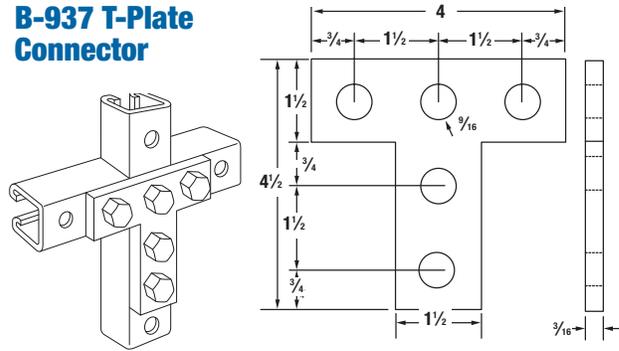
### B-936 Angle Plate Connector



| CAT. NO. | FINISH             |
|----------|--------------------|
| B 936    | Galv-Krom®         |
| B-936GR  | Green Coated       |
| B-936EG  | Electro-Galvanized |

3/16" steel, 42#/C.

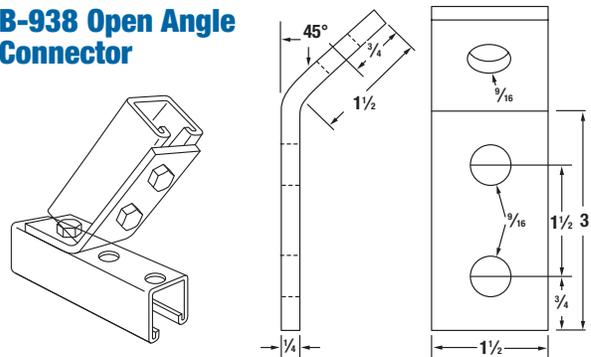
### B-937 T-Plate Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 937    | Galv-Krom® |

3/16" steel, 53#/C.

### B-938 Open Angle Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 938    | Galv-Krom® |

1/4" steel, 42#/C.

**Thomas & Betts**

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Corporate Office  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

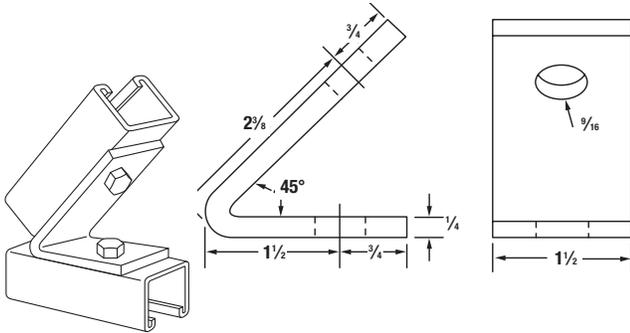
Customer Service  
Tel: 800.816.7809  
Fax: 800.816.7810

Technical Services  
Tel: 888.862.3289  
Fax: 901.252.1321

Tool Services  
Tel: 800.284.8665



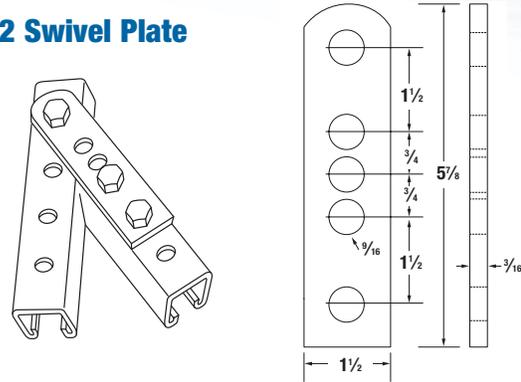
### B-939 Closed Angle Connector



| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 939</b> | Galv-Krom® |

1/4" steel, 50#/C.

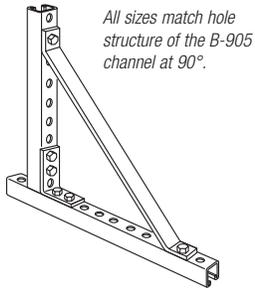
### B-942 Swivel Plate



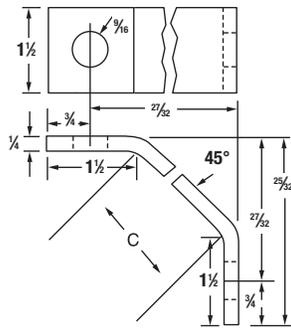
| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 942</b> | Galv-Krom® |

3/16" steel, 40#/C.

### B-940 Corner Braces



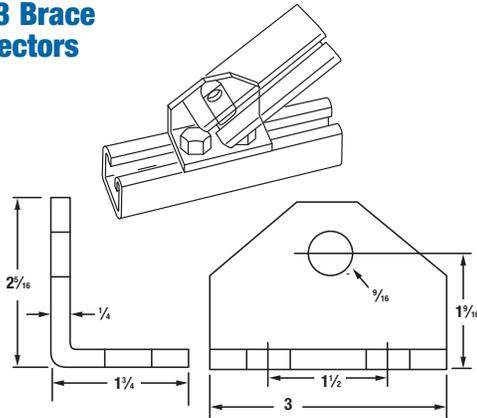
All sizes match hole structure of the B-905 channel at 90°.



| CAT. NO.       | DIMENSIONS (IN.) |        |        | WT. IN LBS./C |
|----------------|------------------|--------|--------|---------------|
|                | A                | B      | C      |               |
| <b>B 940 1</b> | 7 1/2            | 6 3/4  | 8 3/8  | 115           |
| <b>B-940-2</b> | 13 1/2           | 12 3/4 | 16 3/8 | 212           |
| <b>B-940-3</b> | 19 1/2           | 18 3/4 | 25 3/8 | 305           |

1/4" steel, Galv-Krom®.

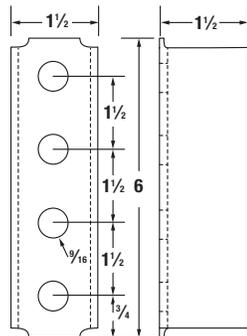
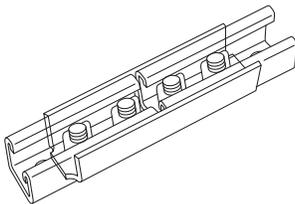
### B-943 Brace Connectors



| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 943</b> | Galv-Krom® |

1/4" steel, 66#/C.

### B-941 Joiner for B-905 Channel

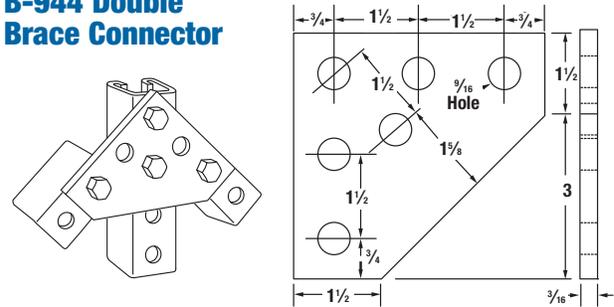


| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 941</b> | Galv-Krom® |

Order four B-910-1/2 nuts and four H-113-A cap screws separately.

12 ga. steel 80#/C.

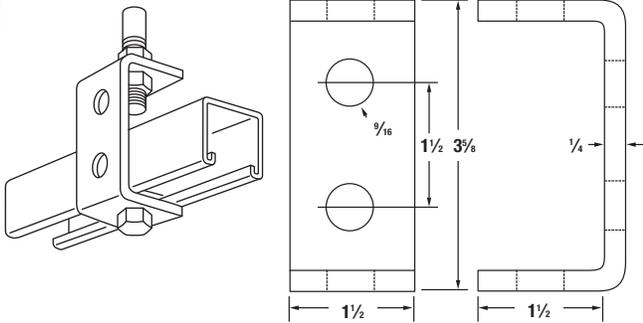
### B-944 Double Brace Connector



| CAT. NO.     | FINISH     |
|--------------|------------|
| <b>B 944</b> | Galv-Krom® |

3/16" steel, 75#/C.

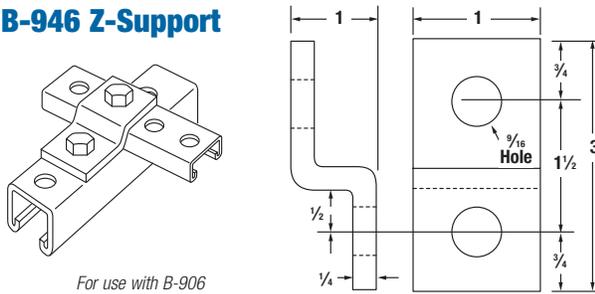
### B-945 Rod Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 945    | Galv-Krom® |

1/4" steel, 61#/C.

### B-946 Z-Support

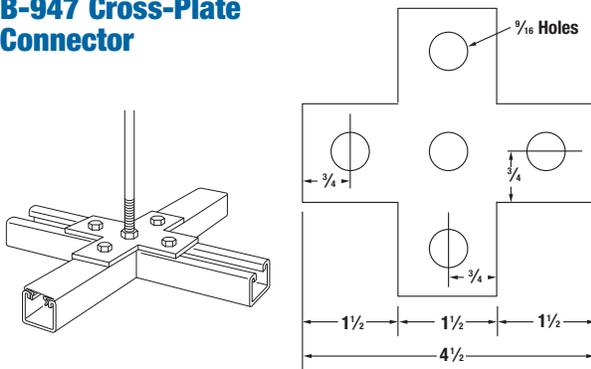


For use with B-906 or B-907 channel only.

| CAT. NO. | FINISH     |
|----------|------------|
| B 946    | Galv-Krom® |

1/4" steel, 34#/C.

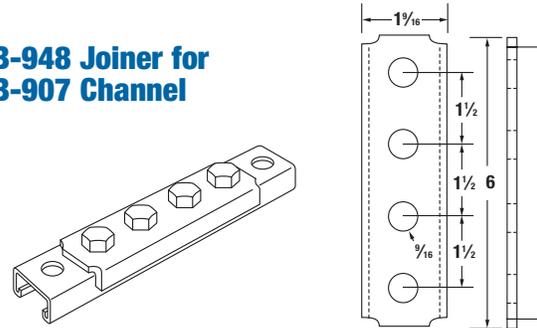
### B-947 Cross-Plate Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 947    | Galv-Krom® |

1/4" steel, 55#/C.

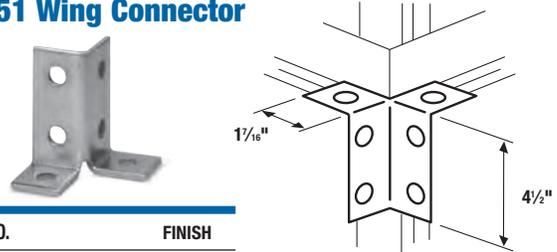
### B-948 Joiner for B-907 Channel



| CAT. NO. | FINISH     |
|----------|------------|
| B 948    | Galv-Krom® |

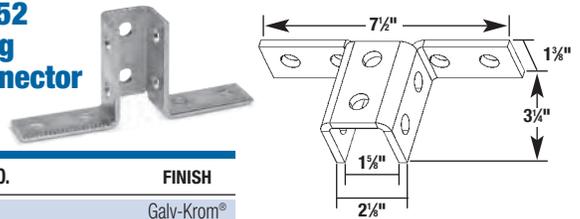
Order four B-910-1/2 nuts and four H-113-A cap screws separately.  
12 ga. steel, 51#/C.

### B-951 Wing Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B-951    | Galv-Krom® |

### B-952 Wing Connector



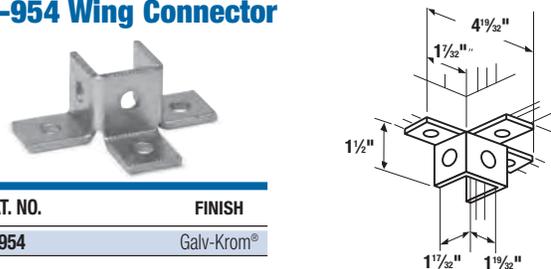
| CAT. NO. | FINISH     |
|----------|------------|
| B-952    | Galv-Krom® |

### B-953 Wing Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B-953    | Galv-Krom® |

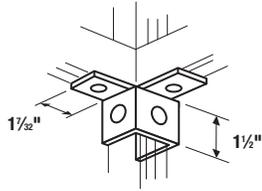
### B-954 Wing Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B-954    | Galv-Krom® |

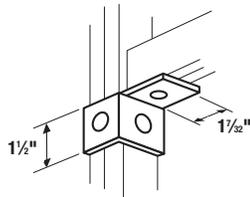


### B-957 Wing Connector



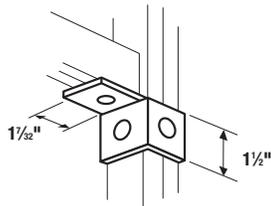
| CAT. NO. | FINISH     |
|----------|------------|
| B 957    | Galv-Krom® |

### B-958L Wing Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 958L   | Galv-Krom® |

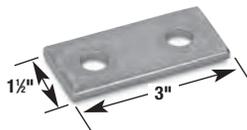
### B-958R Wing Connector



| CAT. NO. | FINISH     |
|----------|------------|
| B 958R   | Galv-Krom® |

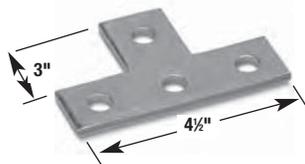
### B-960 Plate Connector

| CAT. NO. | FINISH     |
|----------|------------|
| B 960    | Galv-Krom® |



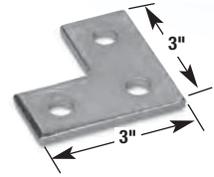
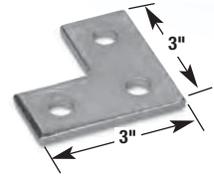
### B-961 Plate Connector

| CAT. NO. | FINISH     |
|----------|------------|
| B 961    | Galv-Krom® |



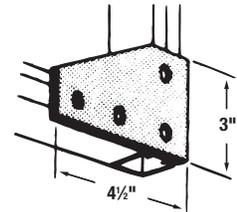
### B-962 Plate Connector

| CAT. NO. | FINISH     |
|----------|------------|
| B-962    | Galv-Krom® |



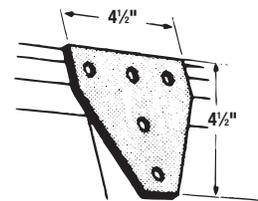
### B-964 Plate Connector

| CAT. NO. | FINISH     |
|----------|------------|
| B-964    | Galv-Krom® |



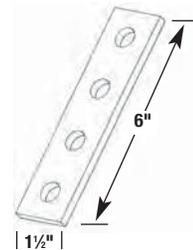
### B-965 Plate Connector

| CAT. NO. | FINISH     |
|----------|------------|
| B-965    | Galv-Krom® |



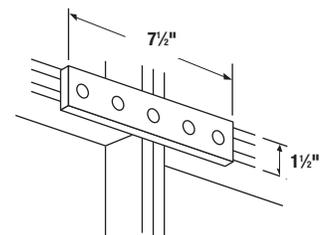
### B-966 Plate Connector

| CAT. NO. | FINISH     |
|----------|------------|
| B-966    | Galv-Krom® |



### B-967 Plate Connector

| CAT. NO. | FINISH     |
|----------|------------|
| B-967    | Galv-Krom® |



# Kindorf®

## Bantam Channels

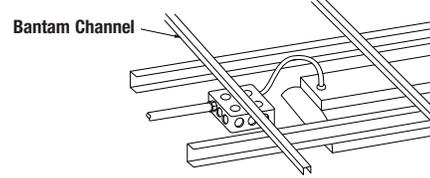
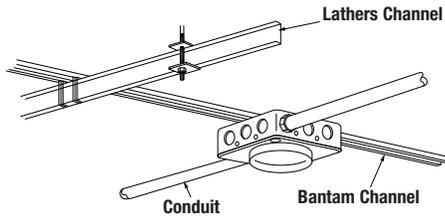
For the support of light- and medium-weight equipment in electrical and mechanical applications.

### Bantam Channels

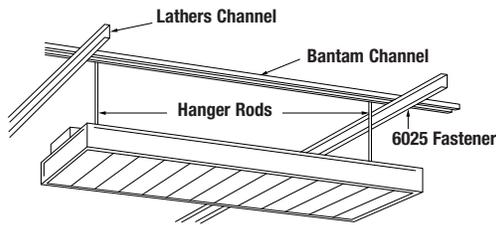
Bantam Channels simplify the support of overhead fixtures, conduits, pipes and boxes in suspended ceiling installations where they can be supported on runs of lathers channel or directly from bar joists or ceiling beams. Ribbed channels may also be mounted on concrete forms and used as low-cost continuous-slot concrete inserts.

Installed slot down the open slot accommodates and enables easy positioning of accessory fittings or 1/4" hanger rod to support light- or medium-weight equipment.

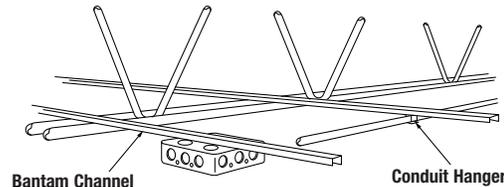
The use of Kindorf® Channel Bars provides a ready made system of bars and accessories designed to eliminate costly and time-consuming on-the-job improvising.



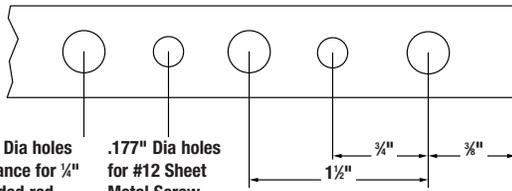
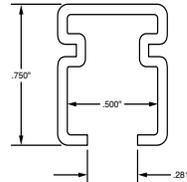
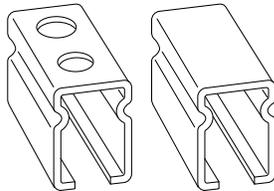
Box mounted on Bantam Channel to feed fixtures.



Suspended Fixture



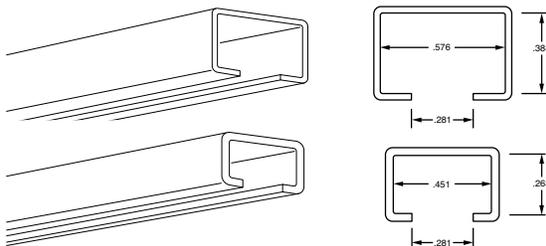
Typical mounting on bar joists



### Ribbed Channels (extra strength)

| CAT. NO. | DESCRIPTION                                | WT. LBS./C FT. |
|----------|--|----------------|
| 6029 H   | 16 gauge (.060") Ribbed Channel with Holes | 30             |
| 6029     | 16 gauge (.060") Ribbed Channel            | 45             |

Channels are produced in 10-ft. lengths. Pre-galvanized steel.



### Lightweight Channels

| CAT. NO. | DESCRIPTION                          | WT. LBS./C FT. |
|----------|--------------------------------------|----------------|
| 6013     | 20 gauge (.034") Lightweight Channel | 17             |
| 6014     | 18 gauge (.044") Lightweight Channel | 16             |

Channels are produced in 10-ft. lengths. Pre-galvanized steel.

Kindorf® Modular Metal Framing and Support System

**Thomas & Betts**

www.tnb.com

Corporate Office  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

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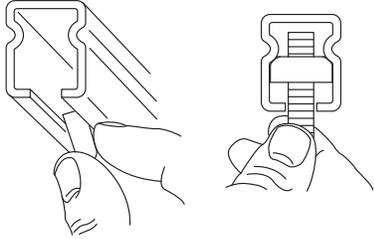
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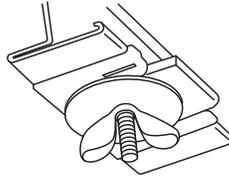
### Low-Cost Techniques for Bantam Channel. Fast, Easy Hanging With Standard Fittings

**Groove Holds Nut Squarely —  
Nut Won't Rotate.**



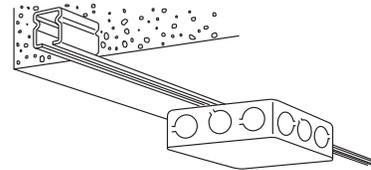
**Cat. No. H-116-A-1/4**  
square nut tips in anywhere.

**T-Bar Clip**



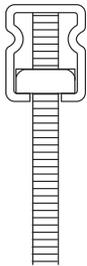
**Cat. No. 6075**  
Mounts electrical fixtures to exposed  
grid acoustical ceilings. Fits 3/8" or 1" bar face.  
Load Rating: 100 lbs. Safety factor of 4.  
Furnished complete with cupped washer and wing nut.

**Bantam Channel for  
Low-Cost, Continuous-Slot  
Concrete Inserts.**



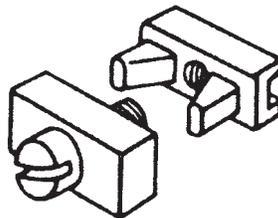
**Cat. No. 6029**  
Maximum recommended loads 200 lbs.

**Insert Rod Full Height of Channel  
for Rigidity.**



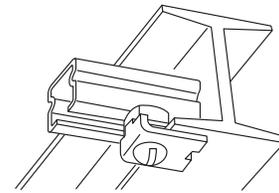
**Cat. No. H-193-1/4**  
hanger rod.

**Fastener and Carrier,  
(Complete Assembly) 6#/C**



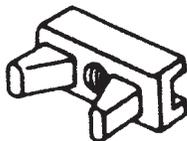
**Cat. No. 6016**

**Beam Flange Clip**



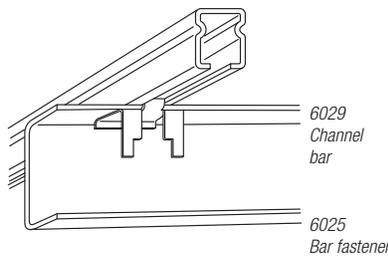
**Cat. No. 6024**  
Secures channel to I-beams, angle iron or bar joists  
with flanges not exceeding 1/4" thickness.

**Channel Carrier 2#/C**



**Cat. No. 6017**

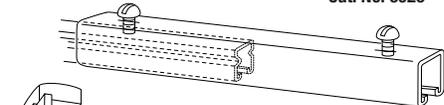
**Hung Ceiling Carrying Channel**



**Cat. No. 6025**  
Secures channel to lathers channel  
or other ceiling-carrying channels.

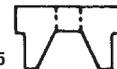
**Fixture Stud and Carrier,  
(Complete Assembly) 7#/C**

**Cat. No. 6026**



Fits over ends of ribbed  
channels for continuous runs.

**Cat. No. 6015**



C-18 N.P.S.

### C105 and C106 Series Pipe Straps

Kindorf® Pipe Straps are designed to be twist inserted anywhere along the slot side of the channel. Pipes can be placed as closely as pipe couplings permit.

Single or multiple runs of pipe and cable are secured easily and economically by Kindorf® supports. In the racking of multiple runs of pipe, for example, C-105 Straps are quickly twist inserted into a channel slot and the pipe is installed by the tightening of a single screw. There are no holes to drill and position adjustment is made simple by sliding the strap along the channel slot. Runs of pipe or conduit can be spaced with complete freedom, as close as conduit couplings permit.

For single runs, the C-149 Pipe Hanger saves installation time by allowing the conduit or pipe to be laid in place after the hanger is mounted. The versatile C-149 can be suspended from hanger rod or bolted directly to the wall, and pipe insulation, when needed, can be installed without removing the pipe from the hanger.

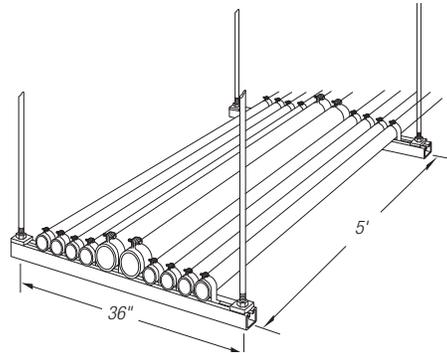
These are but two examples of how Kindorf® products deliver lower installed costs. Whether it be a problem of tight spacing, adjustment or alignment of adequate spacing between hangers, there's a Kindorf® support to solve it.

Kindorf® pipe and cable supports are engineered to provide safe and secure installations. The majority of Kindorf® supports are protected by the exclusive Galv-Krom® finish, including threaded components.

There's a wide range of Kindorf® pipe and cable supports to meet almost every job condition, installed either in combination with channel or individually secured to the structure surface.

#### Some unique features of the straps include:

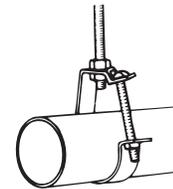
- Bolt head is combination slot and hexhead for flexibility of attachment
- Square nut is captivated on the shoulder for easy one-handed tightening
- Straps are interchangeable with 1½" strut for broader application
- Straps are shipped assembled so counting and sorting are easier
- Pipe or conduit sizes are shown on the strap for easy identification



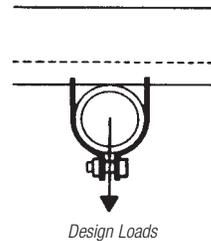
Trapeze application supporting multiple conduit runs.



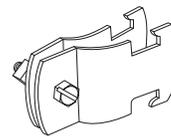
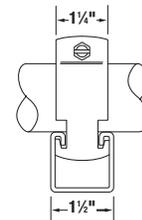
C-247 Beam clamp supports pipe.



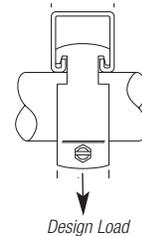
Pipe supported by C-149 lay-in hanger.



Design Loads



All Kindorf® Straps are pre-assembled for easy handling and sorting.



Design Load

### Conduit Strap Size Chart — Old Kindorf Strut

| EMT TRADE SIZE (IN.) | STRAP         |
|----------------------|---------------|
| ½                    | 700-3/8STR    |
| ¾                    | 700-3/4-STR   |
| 1                    | 700-1         |
| 1¼                   | 700-1-1/4-STR |
| 1½                   | 700-1-1/2-STR |
| 2                    | 700-2-STR     |

| RIGID CONDUIT SIZE (IN.) | STRAP     |
|--------------------------|-----------|
| ½                        | 702-1/2   |
| ¾                        | 702-3/4   |
| 1                        | 702-1     |
| 1¼                       | 702-1-1/4 |
| 1½                       | 702-1-1/2 |
| 2                        | 702-2-STR |



### Angler® Pipe and Conduit Clamp

For EMT, IMC, Rigid and Standard Pipe.



#### Universal Series



| CAT. NO.                 | SIZE (IN.) | STRAP THICKNESS | DESIGN LOAD (LBS.) | INSTALL TORQUE (IN. LBS.) | STD. CTN. |
|--------------------------|------------|-----------------|--------------------|---------------------------|-----------|
| <b>Galv-Krom® Finish</b> |            |                 |                    |                           |           |
| C 109 1/2                | ½          | 14 ga.          | 400                | 40                        | 100       |
| C 109 3/4                | ¾          | 14 ga.          | 500                | 40                        | 100       |
| C 109 1                  | 1          | 14 ga.          | 500                | 40                        | 100       |
| C 109 1 1/4              | 1¼         | 14 ga.          | 500                | 40                        | 100       |
| C 109 1 1/2              | 1½         | 12 ga.          | 800                | 60                        | 50        |
| C 109 2                  | 2          | 12 ga.          | 800                | 60                        | 50        |
| C 109 2 1/2              | 2½         | 12 ga.          | 800                | 60                        | 50        |
| C 109 3                  | 3          | 12 ga.          | 800                | 60                        | 50        |
| C 109 3 1/2              | 3½         | 11 ga.          | 1,200              | 60                        | 25        |
| C 109 4                  | 4          | 11 ga.          | 1,200              | 60                        | 25        |

#### SilverGalv® Finish

|                |    |        |       |    |     |
|----------------|----|--------|-------|----|-----|
| C 109 1/2 EG   | ½  | 14 ga. | 400   | 40 | 100 |
| C 109 3/4 EG   | ¾  | 14 ga. | 500   | 40 | 100 |
| C 109 1 EG     | 1  | 14 ga. | 500   | 40 | 100 |
| C 109 1 1/4 EG | 1¼ | 14 ga. | 500   | 40 | 100 |
| C 109 1 1/2 EG | 1½ | 12 ga. | 800   | 60 | 50  |
| C 109 2 EG     | 2  | 12 ga. | 800   | 60 | 50  |
| C 109 2 1/2 EG | 2½ | 12 ga. | 800   | 60 | 50  |
| C 109 3 EG     | 3  | 12 ga. | 800   | 60 | 50  |
| C 109 3 1/2 EG | 3½ | 11 ga. | 1,200 | 60 | 25  |
| C 109 4 EG     | 4  | 11 ga. | 1,200 | 60 | 25  |

Available in SilverGalv® Finish by adding "EG" suffix to catalog number.

#### Rigid Series



| CAT. NO.                 | SIZE (IN.) | STRAP THICKNESS | DESIGN LOAD (LBS.) | INSTALL TORQUE (IN. LBS.) | STD. CTN. |
|--------------------------|------------|-----------------|--------------------|---------------------------|-----------|
| <b>Galv-Krom® Finish</b> |            |                 |                    |                           |           |
| C 109R 1/2               | ½          | 14 ga.          | 600                | 40                        | 100       |
| C 109R 3/4               | ¾          | 14 ga.          | 600                | 40                        | 100       |
| C 109R 1                 | 1          | 14 ga.          | 600                | 40                        | 100       |
| C 109R 1 1/4             | 1¼         | 14 ga.          | 600                | 40                        | 100       |
| C 109R 1 1/2             | 1½         | 12 ga.          | 800                | 60                        | 50        |
| C 109R 2                 | 2          | 12 ga.          | 800                | 60                        | 50        |
| C 109R 2 1/2             | 2½         | 12 ga.          | 800                | 60                        | 50        |
| C 109R 3                 | 3          | 12 ga.          | 800                | 60                        | 50        |
| C 109R 3 1/2             | 3½         | 11 ga.          | 1,200              | 60                        | 25        |
| C 109R 4                 | 4          | 11 ga.          | 1,200              | 60                        | 25        |

#### SilverGalv® Finish

|                 |    |        |       |    |     |
|-----------------|----|--------|-------|----|-----|
| C 109R 1/2 EG   | ½  | 14 ga. | 600   | 40 | 100 |
| C 109R 3/4 EG   | ¾  | 14 ga. | 600   | 40 | 100 |
| C 109R 1 EG     | 1  | 14 ga. | 600   | 40 | 100 |
| C 109R 1 1/4 EG | 1¼ | 14 ga. | 600   | 40 | 100 |
| C 109R 1 1/2 EG | 1½ | 12 ga. | 800   | 60 | 50  |
| C 109R 2 EG     | 2  | 12 ga. | 800   | 60 | 50  |
| C 109R 2 1/2 EG | 2½ | 12 ga. | 800   | 60 | 50  |
| C 109R 3 EG     | 3  | 12 ga. | 800   | 60 | 50  |
| C 109R 3 1/2 EG | 3½ | 11 ga. | 1,200 | 60 | 25  |
| C 109R 4 EG     | 4  | 11 ga. | 1,200 | 60 | 25  |

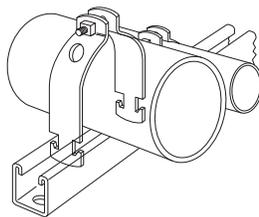
Hex head size ¾" for ½" to 1¼" sizes, ½" for 1½" to 4" sizes.

Material: Stamped Steel.

Pipe sizes 2½" to 4" utilize the same clamps for the Rigid Series and the Universal Series.

Available in SilverGalv® Finish by adding "EG" suffix to catalog number.

### C-200 Universal Pipe Straps



| CAT. NO.    | EMT, IMC, RIGID PIPE SIZE (IN.) | PIPE O.D. RANGE (IN.) | STRAP THICKNESS | WT. LBS./C |
|-------------|---------------------------------|-----------------------|-----------------|------------|
| C-200-1/2   | ½                               | .706-.804             | 14 ga.          | 12         |
| C-200-3/4   | ¾                               | .922-1.060            | 14 ga.          | 13         |
| C-200-1     | 1                               | 1.163-1.315           | 14 ga.          | 14         |
| C-200-1-1/4 | 1¼                              | 1.508-1.660           | 14 ga.          | 16         |
| C-200-1-1/2 | 1½                              | 1.738-1.900           | 12 ga.          | 27         |
| C-200-2     | 2                               | 2.196-2.375           | 12 ga.          | 31         |

Design load equal to C-105 straps.

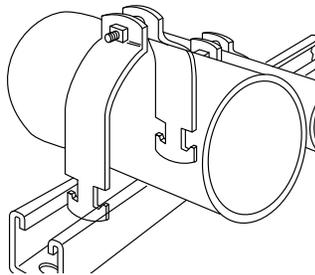
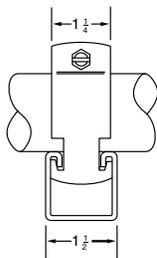
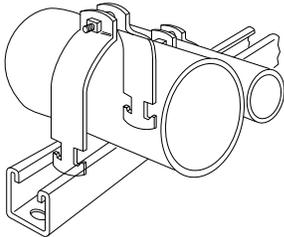
### C-105 and C-106 Pipe Straps

Kindorf® Pipe Straps are designed to be twist inserted anywhere along the slot side of the channel. Pipes can be placed as closely as pipe couplings permit.

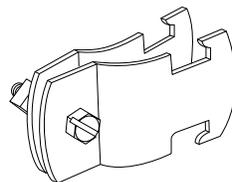
**Some unique features of the straps include:**

- Bolt head is combination slot and hex head for flexibility of attachment
- Square nut is captivated on the shoulder for easy one-handed tightening

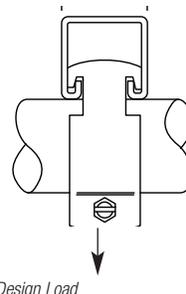
- Straps are interchangeable with 1½" strut for broader application
- Straps are shipped assembled so counting and sorting are easier
- Pipe or conduit sizes are shown on the strap for easy identification



Interchangeable strap fits both 1½" and 1¾".



All Kindorf® Straps are preassembled for easy handling and sorting.



### Kindorf® Straps for Rigid Conduit, IMC and Pipe

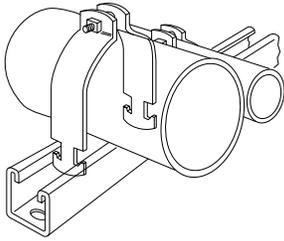


STEEL STRAPS — GALV-KROM® FINISH

| CAT. NO.    | RIGID CONDUIT OR PIPE SIZE (IN.) | O.D. SIZE (IN.) | STEEL STRAP THICKNESS | DESIGN LOAD (LBS.) | WT. LBS./C |
|-------------|----------------------------------|-----------------|-----------------------|--------------------|------------|
| C-105-3/8   | ¾                                | 0.675           | 14 ga.                | 750                | 12         |
| C-105-1/2   | 1                                | 0.840           | 14 ga.                | 750                | 13         |
| C-105-3/4   | ¾                                | 1.050           | 14 ga.                | 750                | 15         |
| C-105-1     | 1                                | 1.315           | 14 ga.                | 750                | 17         |
| C-105-1-1/4 | 1¼                               | 1.660           | 14 ga.                | 800                | 19         |
| C-105-1-1/2 | 1½                               | 1.900           | 12 ga.                | 800                | 28         |
| C-105-2     | 2                                | 2.375           | 12 ga.                | 800                | 31         |
| C-105-2-1/2 | 2½                               | 2.875           | 12 ga.                | 1000               | 36         |
| C-105-3     | 3                                | 3.500           | 12 ga.                | 1650               | 42         |
| C-105-3-1/2 | 3½                               | 4.000           | 11 ga.                | 1650               | 56         |
| C-105-4     | 4                                | 4.500           | 11 ga.                | 1650               | 64         |
| C-105-4-1/2 | 4½                               | 5.000           | 11 ga.                | 1650               | 72         |
| C-105-5     | 5                                | 5.563           | 11 ga.                | 1650               | 76         |
| C-105-6     | 6                                | 6.625           | 11 ga.                | 1650               | 89         |
| C-105-8     | 8                                | 8.625           | 11 ga.                | 1650               | 114        |
| C-105-10    | 10                               | 10.750          | 10 ga.                | 1650               | 160        |
| C-105-12    | 12                               | 12.750          | 10 ga.                | 1650               | 165        |



### Kindorf® Straps for EMT



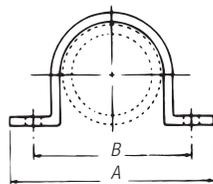
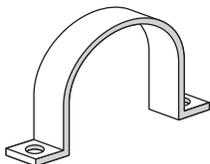
| STEEL — GALV-KROM® FINISH |                |                 |                       |                    |            |
|---------------------------|----------------|-----------------|-----------------------|--------------------|------------|
| CAT. NO.                  | EMT SIZE (IN.) | O.D. SIZE (IN.) | STEEL STRAP THICKNESS | DESIGN LOAD (LBS.) | WT. LBS./C |
| C-106-3/8                 | 3/8            | 0.577           | 14 ga.                | 750                | 13         |
| C-106-1/2                 | 1/2            | 0.706           | 14 ga.                | 750                | 14         |
| C-106-3/4                 | 3/4            | 0.922           | 14 ga.                | 750                | 13         |
| C-106-1                   | 1              | 1.163           | 14 ga.                | 750                | 16         |
| C-106-1-1/4               | 1 1/4          | 1.510           | 14 ga.                | 750                | 19         |
| C-106-1-1/2               | 1 1/2          | 1.740           | 12 ga.                | 800                | 20         |
| C-106-2                   | 2              | 2.197           | 12 ga.                | 800                | 22         |

### Kindorf® Straps for O.D. Tubing

| CAT. NO.                 | TUBING O.D. (IN.) | STEEL STRAP THICKNESS | DESIGN LOAD (LBS.) | CAT. NO.                 | TUBING O.D. (IN.) | STEEL STRAP THICKNESS | DESIGN LOAD (LBS.) |
|--------------------------|-------------------|-----------------------|--------------------|--------------------------|-------------------|-----------------------|--------------------|
| <i>Galv-Krom® Finish</i> |                   |                       |                    | <i>Galv-Krom® Finish</i> |                   |                       |                    |
| 701 1/4                  | 1/4               | 14 ga.                | 750                | 701-4                    | 4                 | 11 ga.                | 1,650              |
| 701-3/8                  | 3/8               | 14 ga.                | 750                | 701-4-1/8                | 4 1/8             | 11 ga.                | 1,650              |
| 701-1/2-STR              | 1/2               | 14 ga.                | 750                | 701-4-1/4                | 4 1/4             | 11 ga.                | 1,650              |
| 701-5/8                  | 5/8               | 14 ga.                | 750                | 701-4-3/8                | 4 3/8             | 11 ga.                | 1,650              |
| 701-3/4                  | 3/4               | 14 ga.                | 750                | 701-4-1/2                | 4 1/2             | 11 ga.                | 1,650              |
| 701-7/8                  | 7/8               | 14 ga.                | 750                | 701-4-5/8                | 4 5/8             | 11 ga.                | 1,650              |
| 701-1-STR                | 1                 | 14 ga.                | 750                | 701-4-3/4                | 4 3/4             | 11 ga.                | 1,650              |
| 701-1-1/8                | 1 1/8             | 14 ga.                | 1,000              | 701-4-7/8                | 4 7/8             | 11 ga.                | 1,650              |
| 701-1-1/4                | 1 1/4             | 14 ga.                | 1,000              | 701-5                    | 5                 | 11 ga.                | 1,650              |
| 701-1-3/8                | 1 3/8             | 14 ga.                | 1,000              | 701-5-1/8                | 5 1/8             | 11 ga.                | 1,650              |
| 701-1-1/2                | 1 1/2             | 14 ga.                | 1,000              | 701-5-1/4                | 5 1/4             | 11 ga.                | 1,650              |
| 701-1-5/8                | 1 5/8             | 14 ga.                | 1,000              | 701-5-3/8                | 5 3/8             | 11 ga.                | 1,650              |
| 701-1-3/4                | 1 3/4             | 12 ga.                | 1,000              | 701-5-1/2                | 5 1/2             | 11 ga.                | 1,650              |
| 701-1-7/8                | 1 7/8             | 12 ga.                | 1,000              | 701-5-5/8                | 5 5/8             | 10 ga.                | 1,650              |
| 701-2                    | 2                 | 12 ga.                | 1,000              | 701-5-3/4                | 5 3/4             | 10 ga.                | 1,650              |
| 701-2-1/8                | 2 1/8             | 12 ga.                | 1,300              | 701-5-7/8                | 5 7/8             | 10 ga.                | 1,650              |
| 701-2-1/4                | 2 1/4             | 12 ga.                | 1,300              | 701-6                    | 6                 | 10 ga.                | 1,650              |
| 701-2-3/8                | 2 3/8             | 12 ga.                | 1,300              | 701-6-1/8                | 6 1/8             | 10 ga.                | 1,650              |
| 701-2-1/2                | 2 1/2             | 12 ga.                | 1,300              | 701-6-1/4                | 6 1/4             | 10 ga.                | 1,650              |
| 701-2-5/8                | 2 5/8             | 12 ga.                | 1,300              | 701-6-3/8                | 6 3/8             | 10 ga.                | 1,650              |
| 701-2-3/4                | 2 3/4             | 12 ga.                | 1,300              | 701-6-1/2                | 6 1/2             | 10 ga.                | 1,650              |
| 701-2-7/8                | 2 7/8             | 12 ga.                | 1,300              | 701-6-5/8                | 6 5/8             | 10 ga.                | 1,650              |
| 701-3                    | 3                 | 12 ga.                | 1,300              | 701-6-3/4                | 6 3/4             | 10 ga.                | 1,650              |
| 701-3-1/8                | 3 1/8             | 12 ga.                | 1,300              | 701-6-7/8                | 6 7/8             | 10 ga.                | 1,650              |
| 701-3-1/4                | 3 1/4             | 12 ga.                | 1,300              | 701-8                    | 8                 | 10 ga.                | 1,650              |
| 701-3-3/8                | 3 3/8             | 12 ga.                | 1,300              |                          |                   |                       |                    |
| 701-3-1/2                | 3 1/2             | 12 ga.                | 1,300              |                          |                   |                       |                    |
| 701-3-5/8                | 3 5/8             | 11 ga.                | 1,650              |                          |                   |                       |                    |
| 701-3-3/4                | 3 3/4             | 11 ga.                | 1,650              |                          |                   |                       |                    |
| 701-3-7/8                | 3 7/8             | 11 ga.                | 1,650              |                          |                   |                       |                    |

Kindorf® Modular Metal Framing and Support System

### C-708-U Short Strap for Channel or Wall Mounting



| CAT. NO.      | PIPE SIZE (IN.) | DIMENSIONS (IN.) |       | HOLE SIZE (IN.) | STOCK SIZE (IN.) | DESIGN LOAD (LBS.) |
|---------------|-----------------|------------------|-------|-----------------|------------------|--------------------|
|               |                 | A                | B     |                 |                  |                    |
| C708U 1/2     | 1/2             | 2 7/8            | 2     | 5/32            | 1/2 x 1 1/2      | 650                |
| C-708-U-3/4   | 3/4             | 3 1/8            | 2 3/8 | 5/32            | 1/2 x 1 1/2      | 650                |
| C-708-U-1     | 1               | 3 3/8            | 2 1/2 | 5/32            | 1/2 x 1 1/2      | 650                |
| C-708-U-1-1/4 | 1 1/4           | 3 1/8            | 2 3/8 | 5/32            | 1/2 x 1 1/2      | 650                |
| C-708-U-1-1/2 | 1 1/2           | 3 3/8            | 3 1/8 | 5/32            | 1/2 x 1 1/2      | 650                |
| C-708-U-2     | 2               | 5 1/4            | 4 1/4 | 7/16            | 1/4 x 1 1/2      | 650                |
| C-708-U-2-1/2 | 2 1/2           | 6 3/8            | 4 3/8 | 7/16            | 1/4 x 1 1/2      | 1,000              |
| C-708-U-3     | 3               | 6 3/8            | 5 3/8 | 7/16            | 1/4 x 1 1/2      | 1,000              |
| C-708-U-3-1/2 | 3 1/2           | 7 3/8            | 5 1/8 | 7/16            | 1/4 x 1 1/2      | 1,000              |
| C-708-U-4     | 4               | 7 3/8            | 6 3/8 | 7/16            | 1/4 x 1 1/2      | 1,200              |
| C-708-U-5     | 5               | 8 3/8            | 7 3/8 | 7/16            | 1/4 x 1 1/2      | 1,200              |
| C-708-U-6     | 6               | 9 3/8            | 8 3/8 | 7/16            | 1/4 x 1 1/2      | 1,200              |

Corporate Office  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

Customer Service  
Tel: 800.816.7809  
Fax: 800.816.7810

Technical Services  
Tel: 888.862.3289  
Fax: 901.252.1321

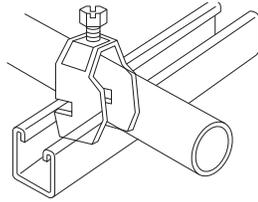
Tool Services  
Tel: 800.284.8665

**Thomas & Betts**

www.tnb.com

### EZ-Strap

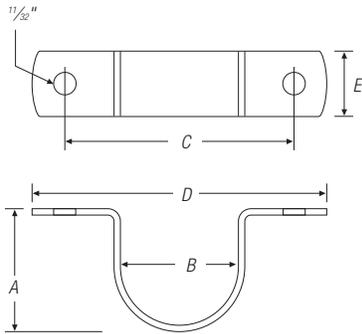
- Fits EMT, IMC and rigid conduit
- Size range ½" thru 2"
- Can be used on 1½" or 1¾" channel
- Saves inventory dollars
- Corrosion-resistant Galv-Krom® finish
- One-piece construction means no assembly required
- Installs directly over conduit for easy installation
- 50% reduction of installation time
- No twisting required to install
- Slotted hex head screw



### C-108 Universal Pipe Strap

| CAT. NO. & SIZE | DIMENSIONS (IN.)     |        |          | THICKNESS STEEL | O.D. SIZE                       | WT. LBS./C |
|-----------------|----------------------|--------|----------|-----------------|---------------------------------|------------|
|                 | CONDUIT OR PIPE SIZE |        |          |                 |                                 |            |
| C-108-1/2       | ½ EMT                | ½ IMC  | ½ Rigid  | 16 ga.          | ¾                               | 8          |
| C-108-3/4       | ¾ EMT                | ¾ IMC  | ¾ Rigid  | 16 ga.          | 1 <sup>23</sup> / <sub>32</sub> | 10         |
| C-108-1         | 1 EMT                | 1 IMC  | 1 Rigid  | 16 ga.          | 1 <sup>11</sup> / <sub>32</sub> | 10         |
| C-108-1-1/4     | 1¼ EMT               | 1¼ IMC | 1¼ Rigid | 14 ga.          | 1 <sup>11</sup> / <sub>16</sub> | 15         |
| C-108-1-1/2     | 1½ EMT               | 1½ IMC | 1½ Rigid | 14 ga.          | 1 <sup>15</sup> / <sub>16</sub> | 16         |
| C-108-2         | 2 EMT                | 2 IMC  | 2 Rigid  | 14 ga.          | 2 <sup>13</sup> / <sub>32</sub> | 19         |

### C-144 Two-Hole Pipe Straps



Holds pipe tight against mounting surface.

| CAT. NO.    | DIMENSIONS (IN.) |    |    |   | WOOD SCREW SIZE REQ'D. | THICKNESS STEEL | WT. LBS./C |
|-------------|------------------|----|----|---|------------------------|-----------------|------------|
|             | A & B            | C  | D  | E |                        |                 |            |
| C-144-1/2   | .840             | 2  | 3  | ¾ | No. 12 x 1             | ⅛               | 10         |
| C-144-3/4   | 1.050            | 2¼ | 3¼ | ¾ | No. 12 x 1             | ⅛               | 11         |
| C-144-1     | 1.315            | 2½ | 3½ | ¾ | No. 12 x 1             | ⅛               | 13         |
| C-144-1-1/4 | 1.660            | 3¼ | 4¼ | 1 | No. 12 x 1             | ⅛               | 20         |
| C-144-1-1/2 | 1.900            | 3½ | 4½ | 1 | No. 12 x 1             | ⅛               | 23         |
| C-144-2     | 2.375            | 4¼ | 5¼ | 1 | No. 16 x 1½            | ⅛               | 30         |
| C-144-2-1/2 | 2.875            | 5  | 6  | 1 | No. 16 x 1½            | ⅛               | 35         |
| C-144-3     | 3.500            | 5¾ | 6¾ | 1 | No. 16 x 2             | ⅛               | 42         |
| C-144-3-1/2 | 4.000            | 6½ | 7½ | 1 | No. 16 x 2½            | ⅜               | 69         |
| C-144-4     | 4.500            | 7  | 8  | 1 | No. 16 x 3             | ⅜               | 78         |

Standard finish Galv-Krom®.

### Framing Channel Clamp

#### Ty-Rap® Cable Clamp

When fastening wire bundles, cables or hoses to framing channels, you can cut costs considerably by using the TY-RAP® Cable Clamp. It is made of smooth, weather-resistant nylon and designed to protect cable insulation and hoses from wear or damage as can occur with metal clamps. The clamp may be used for both indoor or outdoor applications. It installs in the framing channel with a simple push and twist. It requires no screws, nuts or tools. The clamp fits all 1½" and 1¾" channels regardless of channel depth.



- Installs with a push and twist
- Designed for indoor or outdoor use
- Smooth design protects cable insulation
- Takes range of cable diameters



| CAT. NO. | CHANNEL SIZE | MAXIMUM TIE WIDTH ACCOM. | UNIT QUAN. | STD. CTN. |
|----------|--------------|--------------------------|------------|-----------|
| TC5363X  | 1.5 & 1.625  | .301                     | 50         | 250       |

Mounting bases for heavy-duty applications are made from high-impact weather-resistant nylon.



The new specification standard for heavy-duty industrial applications.

**NEW!**

### King Cobra® Cable and Pipe Clamp with GoldGalv® Finish

- Superior design load capabilities for industrial applications: 350 lbs. for ½" to 2½" trade sizes; 450 lbs. for 3" to 4" trade sizes
- Durable one-piece heavy-duty steel construction — designed specifically for use in industrial applications
- Embosses on shoulder and hooks increase loading capability and durability, preventing deformation of clamps
- Rugged stirrup provides increased strength for heavier loads, minimizing deflection
- Wider saddle design with anti-rotation tabs distributes load evenly over a larger surface area, preventing jacket damage
- Increased corrosion protection\* — GoldGalv® (yellow zinc dichromate) finish stands up to harsh industrial applications
- Parallel hook design keeps conduit and cable square with strut
- Heavy-duty ⅝" hex bolt
- One clamp size works on equal trade sizes for both EMT and rigid conduit, simplifying clamp specification



\* Compared to conventional electrogalvanization.

### King Cobra®

| CAT. NO.                | FOR EMT AND RIGID CONDUIT |                        | STATIC LOAD LIMIT (LB)<br>SAFETY FACTOR = 4 | STD. CTN. |
|-------------------------|---------------------------|------------------------|---|-----------|
|                         | TRADE SIZE (IN.)          | CABLE O.D. RANGE (IN.) |   |           |
| <b>GoldGalv® Finish</b> |                           |                        |   |           |
| KCPC050                 | ½                         | 0.650–0.890            | 350   | 100       |
| KCPC075                 | ¾                         | 0.860–1.110            | 350   | 100       |
| KCPC100                 | 1                         | 1.100–1.400            | 350   | 100       |
| KCPC125                 | 1¼                        | 1.400–1.725            | 350   | 50        |
| KCPC150                 | 1½                        | 1.690–1.980            | 350   | 50        |
| KCPC200                 | 2                         | 1.980–2.576            | 350   | 50        |
| KCPC250                 | 2½                        | 2.576–3.060            | 350   | 25        |
| KCPC300                 | 3                         | 3.060–3.626            | 450   | 25        |
| KCPC350                 | 3½                        | 3.626–4.126            | 450   | 25        |
| KCPC400                 | 4                         | 4.126–4.626            | 450   | 25        |

Standard Finish — GoldGalv®, unless otherwise stated.

### Cobra® One-Piece Cable and Pipe Clamp

Takes a bite out of your installation time!

- One-piece heavy-duty construction ready to install right out of the box, no need to break apart and reassemble, no screws or bolts to drop
- Installs quickly and securely using one hand
- Universal bolt head accepts a range of tools
- Eliminates the guesswork from clamp selection — one catalog number attaches equal trade sizes of EMT and rigid conduit
- Parallel hook design keeps conduits and cable square with strut
- Reconfigure wiring without complete disassembly. Remove cables easily without disturbing neighboring clamps



### Cobra®

| CAT. NO.                        | FOR EMT AND RIGID CONDUIT |                        | STATIC LOAD LIMIT (LB)<br>SAFETY FACTOR = 4 | STD. CTN. |
|---------------------------------|---------------------------|------------------------|---|-----------|
|                                 | TRADE SIZE (IN.)          | CABLE O.D. RANGE (IN.) |   |           |
| <b>Electro-Galvanized Steel</b> |                           |                        |   |           |
| CPC025                          | ¼                         | 0.312–0.600            | 200   | 100       |
| CPC050                          | ½                         | 0.650–0.890            | 200   | 100       |
| CPC075                          | ¾                         | 0.860–1.110            | 200   | 100       |
| CPC100                          | 1                         | 1.100–1.400            | 200   | 100       |
| CPC125                          | 1¼                        | 1.400–1.725            | 200   | 50        |
| CPC150                          | 1½                        | 1.690–1.980            | 200   | 50        |
| CPC200                          | 2                         | 1.980–2.576            | 200   | 50        |
| CPC250                          | 2½                        | 2.576–3.060            | 350   | 25        |
| CPC300                          | 3                         | 3.060–3.626            | 350   | 25        |
| CPC350                          | 3½                        | 3.626–4.126            | 350   | 25        |
| CPC400                          | 4                         | 4.126–4.626            | 350   | 25        |

Standard Finish — GoldGalv®, unless otherwise stated.

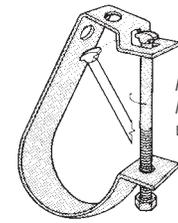
Stainless Steel: add suffix SS or 556.

Modular Metal Framing and Support System

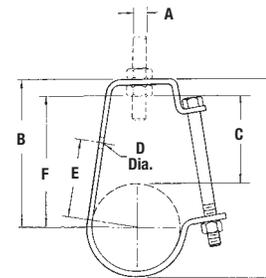
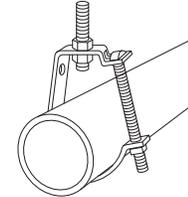
### C-711 Lay-in-Pipe Hanger (J-Hanger)

Saves installation time by allowing the conduit or pipe to be laid in place after the hanger is mounted. Fastening of side bolt can be delayed until most convenient for job conditions. Insulation can be installed without removing pipe from hanger. The C-149 hanger can be suspended from hanger rod or can be bolted directly to a wall. When used with hanger rod, assembly requires two H-114 hex nuts.

Vertical adjustment of at least 1½" after pipe is laid in place. The lower nut adjusts pipe lines to the proper pitch and the top nut, when locked into position, prevents loosening due to vibration. The square nut on the side bolt is kept from loosening by the arrangement of hole and up-turned lip.



Rest pipe in body of hanger. Fasten side bolt when convenient.



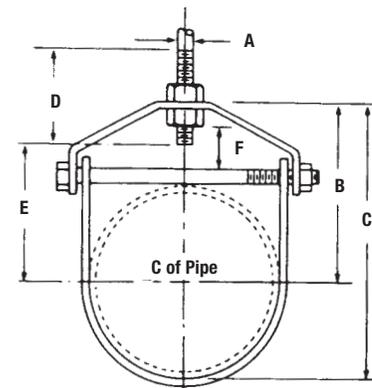
| CAT. NO.    | PIPE SIZE (IN.) | A ROD SIZE (IN.) | DIMENSIONS (IN.) |     |   |     |     |      | BOLT SIZE (IN.) | STOCK SIZE   | MAX. REC. LOADS LBS. |
|-------------|-----------------|------------------|------------------|-----|---|-----|-----|------|-----------------|--------------|----------------------|
|             |                 |                  | B                | C   | D | E   | F   | G    |                 |              |                      |
| C-711-1/2   | ½               | ¾                | 2 ½              | 1 ¼ | ⅞ | 1 ½ | 1 ⅝ | 3 ⅝  | ¼               | 12 ga. x ¾   | 400                  |
| C-711-3/4   | ¾               | ¾                | 2 ½              | 1 ½ | ⅞ | 1 ⅝ | 2 ⅞ | 3 ½  | ¼               | 12 ga. x ¾   | 400                  |
| C-711-1     | 1               | ¾                | 2 ⅝              | 1 ⅝ | ⅞ | 1 ⅝ | 2 ⅝ | 3 ⅝  | ¼               | 12 ga. x ¾   | 400                  |
| C-711-1-1/4 | 1 ¼             | ¾                | 3 ¼              | 2   | ⅞ | 2 ⅝ | 2 ⅞ | 4 ⅞  | ¼               | 12 ga. x ¾   | 400                  |
| C-711-1-1/2 | 1 ½             | ¾                | 3 ⅝              | 2 ⅝ | ⅞ | 2 ⅝ | 2 ⅞ | 4 ⅞  | ¼               | 12 ga. x ¾   | 400                  |
| C-711-2     | 2               | ¾                | 3 ⅝              | 2 ⅞ | ⅞ | 2 ⅝ | 3 ⅝ | 5    | ¼               | 12 ga. x ¾   | 400                  |
| C-711-2-1/2 | 2 ½             | ½                | 7 ⅝              | 2 ⅝ | ⅞ | 3 ⅝ | 3 ⅞ | 6    | ⅝               | 12 ga. x 1 ¼ | 500                  |
| C-711-3     | 3               | ½                | 4 ⅝              | 2 ⅝ | ⅞ | 3 ½ | 4 ⅝ | 6 ⅝  | ⅝               | 12 ga. x 1 ¼ | 500                  |
| C-711-3-1/2 | 3 ½             | ½                | 5 ⅞              | 2 ⅞ | ⅞ | 3 ¼ | 4 ⅞ | 7 ⅞  | ⅝               | ⅝ x 1 ¼      | 500                  |
| C-711-4     | 4               | ⅝                | 6 ⅞              | 3 ⅝ | ⅞ | 4 ⅞ | 5 ⅝ | 8 ⅝  | ⅝               | ⅝ x 1 ¼      | 550                  |
| C-711-5     | 5               | ⅝                | 6 ¾              | 3 ¼ | ⅞ | 5 ⅝ | 5 ⅞ | 9 ⅝  | ⅝               | ⅝ x 1 ¼      | 550                  |
| C-711-6     | 6*              | ¾                | 7 ¼              | 3 ⅝ | ⅞ | 5 ⅝ | 6 ⅞ | 11 ¼ | ⅝               | ⅝ x 1 ¼      | 600                  |
| C-711-8     | 8*              | ⅞                | 9 ⅝              | 3 ⅝ | ⅞ | 6 ⅝ | 8   | 13 ⅝ | ⅝               | ⅝ x 1 ¼      | 760                  |

\* Hangers 6" and over have hole instead of slot.

### C-710 Clevis Hanger

| CAT. NO.    | PIPE SIZE (IN.) | SIZE OF STEEL (IN.) |         | DIMENSIONS (IN.) |      |      |     |      |     | MAX. REC. LOADS LBS. |
|-------------|-----------------|---------------------|---------|------------------|------|------|-----|------|-----|----------------------|
|             |                 | UPPER               | LOWER   | A                | B    | C    | D   | E    | F   |                      |
| C710 1/2    | ½               | ½ x 1               | ½ x 1   | ¾                | 1 ⅝  | 2 ⅞  | 2 ½ | ⅞    | ⅞   | 610                  |
| C-710-3/4   | ¾               | ½ x 1               | ½ x 1   | ¾                | 1 ⅞  | 2 ⅞  | 2 ½ | 1    | ½   | 610                  |
| C-710-1     | 1               | ½ x 1               | ½ x 1   | ¾                | 2 ⅞  | 2 ⅞  | 2 ½ | 1 ¼  | ⅝   | 610                  |
| C-710-1-1/4 | 1 ¼             | ½ x 1               | ½ x 1   | ¾                | 2 ⅞  | 3 ⅞  | 2 ½ | 1 ¼  | ⅞   | 610                  |
| C710-1-1/2  | 1 ½             | ½ x 1               | ½ x 1   | ¾                | 3    | 4    | 2 ½ | 2 ⅞  | 1 ⅝ | 610                  |
| C-710-2     | 2               | ½ x 1               | ½ x 1   | ¾                | 3 ⅝  | 4 ⅞  | 2 ½ | 2 ⅝  | 1 ⅞ | 610                  |
| C-710-2-1/2 | 2 ½             | ¾ x 1 ¼             | ¾ x 1 ¼ | ½                | 4 ⅝  | 6 ⅞  | 3   | 3 ⅝  | 2   | 1,130                |
| C-710-3     | 3               | ¾ x 1 ¼             | ¾ x 1 ¼ | ½                | 4 ¾  | 6 ⅞  | 3   | 3 ⅞  | 1 ¾ | 1,130                |
| C-710-3-1/2 | 3 ½             | ¾ x 1 ¼             | ¾ x 1 ¼ | ½                | 4 ⅝  | 6 ⅞  | 3   | 4 ⅝  | 1 ¾ | 1,130                |
| C-710-4     | 4               | ¾ x 1 ¼             | ¾ x 1 ¼ | ¾                | 5 ⅞  | 7 ⅞  | 3 ½ | 4 ⅞  | 1 ⅝ | 1,130                |
| C-710-5     | 5               | ¾ x 1 ¼             | ¾ x 1 ¼ | ¾                | 6 ⅞  | 9    | 3 ½ | 5 ⅞  | 1 ¾ | 1,430                |
| C-710-6     | 6               | ¾ x 1 ½             | ¾ x 1 ½ | ¾                | 6 ⅞  | 10 ⅞ | 4   | 5 ⅞  | 1 ⅞ | 1,430                |
| C-710-7     | 7               | ¾ x 1 ¾             | ¾ x 1 ¾ | ¾                | 8 ½  | 12 ⅞ | 4 ¼ | 6 ½  | 2 ¼ | 1,940                |
| C-710-8     | 8               | ¾ x 1 ¾             | ¾ x 1 ¾ | ¾                | 8 ⅝  | 12 ⅞ | 4 ¼ | 7    | 2 ⅞ | 1,940                |
| C-710-10    | 10              | ¾ x 1 ¾             | ¾ x 1 ¾ | ¾                | 9 ⅞  | 15 ¼ | 4 ¼ | 8 ⅞  | 2 ¼ | 1,940                |
| C-710-12    | 12              | ¾ x 2               | ¾ x 2   | ¾                | 11 ⅝ | 17 ⅞ | 4 ¾ | 9 ¾  | 2 ⅞ | 3,600                |
| C-710-14    | 14              | ¾ x 2 ½             | ¾ x 2 ½ | 1                | 12 ⅞ | 19 ⅞ | 5 ¼ | 10 ⅝ | 2 ⅝ | 3,800                |
| C-710-16    | 16              | ¾ x 2 ½             | ¾ x 2 ½ | 1                | 15   | 23   | 6   | 12 ⅞ | 2 ⅞ | 4,200                |
| C-710-18    | 18              | ¾ x 2 ½             | ¾ x 2 ½ | 1 ⅞              | 15 ¼ | 24 ¼ | 6 ½ | 13 ⅝ | 3 ¾ | 4,600                |
| C-710-20    | 20              | ¾ x 3               | ¾ x 3   | 1 ¼              | 16 ¾ | 26 ¾ | 7   | 13 ⅝ | 4   | 4,800                |
| C-710-24    | 24              | ¾ x 3               | ¾ x 3   | 1 ¼              | 19   | 31   | 7 ½ | 17 ½ | 4 ¼ | 4,800                |
| C-710-30    | 30              | ¾ x 3               | ¾ x 3   | 1 ¼              | 24 ¼ | 39 ¾ | 8 ¼ | 21 ⅞ | 5   | 6,000                |

Order by Cat. No., finish and pipe size.

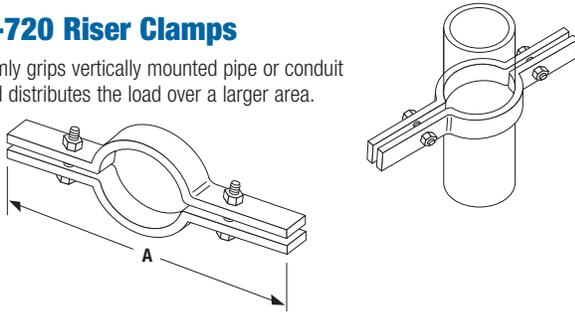


## Conduit, Cable and Pipe Supports



### C-720 Riser Clamps

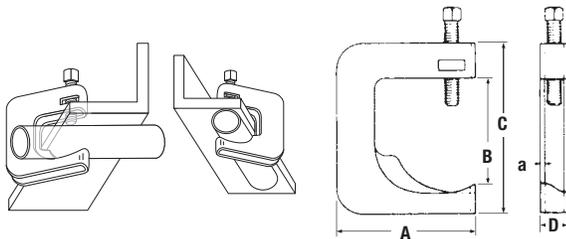
Firmly grips vertically mounted pipe or conduit and distributes the load over a larger area.



| CAT. NO.    | PIPE SIZE (IN.) | A (IN.) | SIZE STOCK (IN.) | SIZE BOLT (IN.) | MAX. REC. LOAD LBS. |
|-------------|-----------------|---------|------------------|-----------------|---------------------|
| C720 1/2    | 1/2             | 9 5/8   | 3/8 x 1          | 3/8 x 1 1/2     | 220                 |
| C-720-3/4   | 3/4             | 9 1/4   | 3/8 x 1          | 3/8 x 1 1/2     | 220                 |
| C-720-1     | 1               | 9 5/8   | 3/8 x 1          | 3/8 x 1 1/2     | 220                 |
| C-720-1-1/4 | 1 1/4           | 9 5/8   | 3/8 x 1          | 3/8 x 1 1/2     | 250                 |
| C-720-1-1/2 | 1 1/2           | 10      | 3/8 x 1          | 3/8 x 1 1/2     | 250                 |
| C-720-2     | 2               | 10 1/2  | 3/8 x 1          | 3/8 x 1 1/2     | 300                 |
| C-720-2-1/2 | 2 1/2           | 11 1/8  | 3/8 x 1          | 3/8 x 1 1/2     | 400                 |
| C-720-3     | 3               | 11 1/8  | 3/8 x 1          | 3/8 x 1 1/2     | 500                 |
| C-720-3-1/2 | 3 1/2           | 13      | 3/8 x 1          | 1/2 x 1 1/2     | 600                 |
| C-720-4     | 4               | 13 1/2  | 3/8 x 1          | 1/2 x 1 1/2     | 750                 |
| C-720-5     | 5               | 14      | 3/8 x 1 1/2      | 1/2 x 1 3/4     | 1,500               |
| C-720-6     | 6               | 15 1/8  | 3/8 x 1 1/2      | 1/2 x 1 3/4     | 1,600               |
| C-720-8     | 8               | 19      | 3/8 x 1 1/2      | 5/8 x 2 1/2     | 2,500               |

### C-247, C-248 & C-249 Steel Conduit Clamps

A versatile clamp for attaching conduit to any type of beam, channel, angle or column. Designed to hold the conduit snug against the support with conduit either parallel or at right angle to it. The case-hardened steel screw bites into the structural member for maximum security. 1/8" steel.

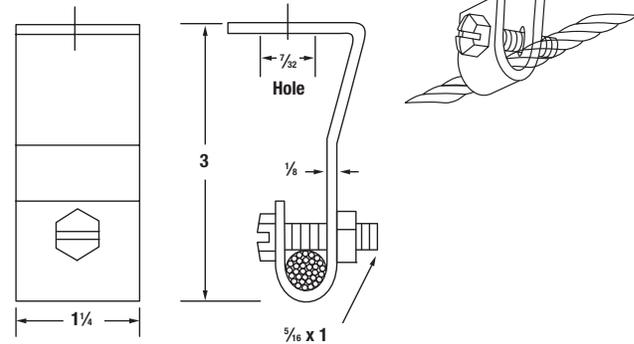


| CONDUIT SIZE  | MAXIMUM BEAM FLANGE THICKNESS (IN.) |       |       |
|---------------|-------------------------------------|-------|-------|
|               | C-247                               | C-248 | C-249 |
| 1/2           | 3/8                                 | 1     | —     |
| 3/4           | 7/16                                | 3/4   | 1 1/2 |
| 1             | —                                   | 1/2   | 1 1/4 |
| 1 1/4         | —                                   | 1     | —     |
| 1 1/2         | —                                   | —     | 5/8   |
| Dim A         | 2 1/4                               | 2 5/8 | 3 1/4 |
| Dim B         | 1 3/8                               | 1 3/4 | 2 1/2 |
| Dim C         | 2 1/4                               | 3     | 4     |
| Dim D         | 5/16                                | 5/16  | 5/8   |
| Per Carton    | 100                                 | 50    | 50    |
| Wt. in lbs./C | 33                                  | 36    | 59    |

Galv-Krom® Finish.

### C-708 Messenger Cable Support

Designed for use as intermediate supports for 3/8" messenger cable. Grips cable when 5/16" screw is tightened. Provides easy vertical adjustment. Design load 1,000 lbs. Safety factor of 3.

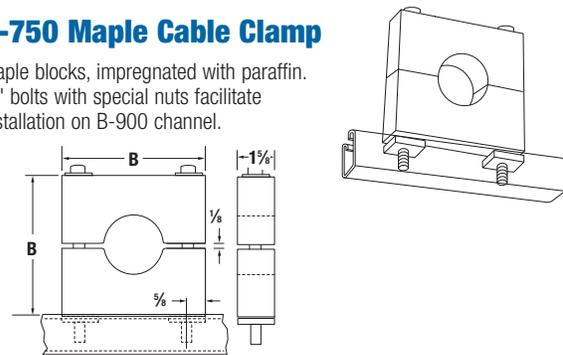


| CAT. NO. | DESCRIPTION       |
|----------|-------------------|
| C-708    | 1/8" Steel, 27#/C |

Galv-Krom® finish.

### C-750 Maple Cable Clamp

Maple blocks, impregnated with paraffin. 3/8" bolts with special nuts facilitate installation on B-900 channel.



| CAT. NO. & SIZE | O.D. OF CABLE (IN.) | DIMENSIONS (IN.) |       | WT. IN. LBS./C |
|-----------------|---------------------|------------------|-------|----------------|
|                 |                     | A                | B     |                |
| C-750-1         | 0-0.99              | 4                | 3 3/8 | 90             |
| C750 2          | 1.0-1.49            | 4 1/2            | 4 1/8 | 100            |
| C-750-3         | 1.5-1.99            | 5                | 4 3/8 | 120            |
| C-750-4         | 2-2.49              | 5 1/2            | 5 1/8 | 140            |
| C-750-5         | 2.5-2.99            | 6                | 5 3/8 | 160            |
| C750 6          | 3-3.49              | 7                | 6 1/8 | 200            |
| C-750-7         | 3.5-3.99            | 8                | 7 1/8 | 240            |
| C-750-8         | 4-4.49              | —                | —     | —              |
| C-750-9         | 4.5-5.00            | —                | —     | —              |

Size refers to overall dimensions of Maple Cable Clamp only.

Hole will be bored to fit O.D. of cable.

Orders MUST specify exact O.D. of cable.

Special order.

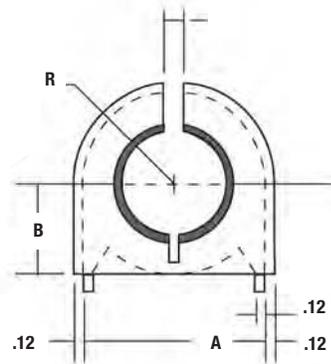
### Lightweight, non-breakable and inexpensive! Kindorf® TPE Cable Insulator Clamps

Offer a less expensive, lighter weight and non-breakable alternative to porcelain for cable support, and they won't rot like maple clamps. The one-piece thermoplastic elastomer (TPE) insulator is flame-retardant, UV-resistant and chemical-resistant. A tapered flange isolates and protects cable. Available sizes accommodate cables from 3/8" to 4 1/2" O.D. and fit all Kindorf® channels as well as all 1 1/8" channel systems.



| CAT. NO.    | HOLE DIA. (IN.) | CLAMP SIZE (IN.) | DIM. A (IN.) | DIM. B&R (IN.) | TOTAL HEIGHT (IN.) |
|-------------|-----------------|------------------|--------------|----------------|--------------------|
| C755 1ATP   | 3/8             | 1 1/8            | 1.12         | .56            | 1.82               |
| C-755-1B-TP | 1/2             | 1 1/8            | 1.12         | .56            | 1.82               |
| C-755-1C-TP | 5/8             | 1 1/8            | 1.12         | .56            | 1.82               |
| C-755-2 TP  | 3/4             | 1 1/8            | 1.62         | .81            | 2.34               |
| C-755-2A-TP | 7/8             | 1 1/8            | 1.62         | .81            | 2.34               |
| C-755-2B-TP | 1               | 1 1/8            | 1.62         | .81            | 2.34               |
| C-755-2C-TP | 1 1/8           | 1 1/8            | 1.62         | .81            | 2.34               |
| C-755-3 TP  | 1 1/4           | 2 1/8            | 2.12         | 1.06           | 2.86               |
| C-755-3A-TP | 1 1/2           | 2 1/8            | 2.12         | 1.06           | 2.86               |
| C-755-3B-TP | 1 3/4           | 2 1/8            | 2.12         | 1.06           | 2.86               |
| C-755-3C-TP | 1 7/8           | 2 1/8            | 2.12         | 1.06           | 2.86               |
| C-755-4 TP  | 1 3/4           | 2 3/8            | 2.62         | 1.31           | 3.5                |
| C-755-4A-TP | 1 7/8           | 2 3/8            | 2.62         | 1.31           | 3.5                |
| C-755-4B-TP | 2               | 2 3/8            | 2.62         | 1.31           | 3.5                |
| C-755-4C-TP | 2 1/8           | 2 3/8            | 2.62         | 1.31           | 3.5                |
| C-755-5 TP  | 2 1/4           | 3 1/8            | 3.12         | 1.56           | 4.05               |
| C-755-5A-TP | 2 3/8           | 3 1/8            | 3.12         | 1.56           | 4.05               |
| C-755-5B-TP | 2 7/8           | 3 1/8            | 3.12         | 1.56           | 4.05               |
| C-755-5C-TP | 3               | 3 1/8            | 3.12         | 1.56           | 4.05               |
| C-755-6 TP  | 2 3/4           | 3 3/8            | 3.62         | 1.81           | 4.75               |
| C-755-6A-TP | 2 7/8           | 3 3/8            | 3.62         | 1.81           | 4.75               |
| C-755-6B-TP | 3               | 3 3/8            | 3.62         | 1.81           | 4.75               |
| C-755-6C-TP | 3 1/8           | 3 3/8            | 3.62         | 1.81           | 4.75               |
| C-755-7 TP  | 3 1/4           | 4 1/8            | 4.12         | 2.06           | 5.125              |
| C-755-7A-TP | 3 3/8           | 4 1/8            | 4.12         | 2.06           | 5.125              |
| C-755-7B-TP | 3 7/8           | 4 1/8            | 4.12         | 2.06           | 5.125              |
| C-755-7C-TP | 4               | 4 1/8            | 4.12         | 2.06           | 5.125              |
| C-755-8 TP  | 3 3/4           | 4 3/8            | 4.62         | 2.31           | 5.54               |
| C-755-8A-TP | 4               | 4 3/8            | 4.62         | 2.31           | 5.54               |
| C-755-8B-TP | 4 1/8           | 4 3/8            | 4.62         | 2.31           | 5.54               |
| C-755-8C-TP | 4 3/8           | 4 3/8            | 4.62         | 2.31           | 5.54               |
| C-755-8D-TP | 4 1/2           | 5                | 5            | 2.5            | 5.92               |
| C-755-8E-TP | 4 7/8           | 5                | 5            | 2.5            | 5.92               |
| C-755-8F-TP | 5               | 5                | 5            | 2.5            | 5.92               |

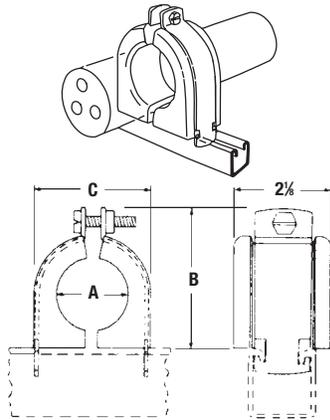
- Tapered flange isolates and protects cable
- Flame retardant
- UV resistant
- Exceptional chemical resistance
- Ideal for commercial and industrial applications
- Thermoplastic elastomer (TPE) insulator
- Electro-galvanized finish steel clamp with Everdur and bolt
- Dielectric strength of 640V per mil
- Sizes to hold cables 3/8" to 4 1/2" O.D.
- Fits all channel sizes
- UL Listed





### C-755 Porcelain Insulator Clamp

Dry-process white-glaze porcelain insulators assembled in pairs to accept cables from 3/8" through 4 1/2" O.D. C-105 clamp with bronze slotted hex head screw and nut furnished. Fits all Kindorf® channels.

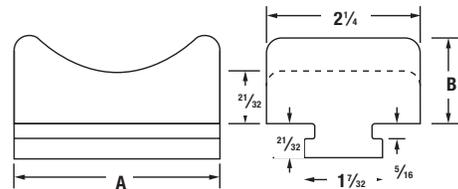
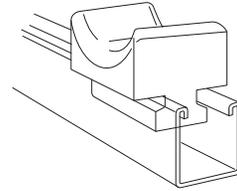


| CAT. NO. | DIMENSIONS (IN.) |        |         | STRAP<br>C-105 (IN.) | WT. IN<br>LBS./C |
|----------|------------------|--------|---------|----------------------|------------------|
|          | A                | B      | C       |                      |                  |
| C-755-1A | 3/8              | 2 1/16 | 1 1/16  | 1                    | 50               |
| C-755-1B | 1/2              | 2 1/16 | 1 1/16  | 1                    | 50               |
| C-755-1C | 5/8              | 2 1/16 | 1 1/16  | 1                    | 50               |
| C-755-2  | 3/4              | 2 3/32 | 2 5/32  | 1 1/2                | 91               |
| C-755-2A | 7/8              | 2 3/32 | 2 5/32  | 1 1/2                | 90               |
| C-755-2B | 1                | 2 3/32 | 2 5/32  | 1/2                  | 85               |
| C-755-2C | 1 1/8            | 2 3/32 | 2 5/32  | 1 1/2                | 82               |
| C-755-3  | 1 1/4            | 3      | 2 3/8   | 2                    | 114              |
| C-755-3A | 1 3/8            | 3 3/8  | 2 3/8   | 2                    | 110              |
| C-755-3B | 1 1/2            | 3 3/8  | 2 3/8   | 2                    | 105              |
| C-755-3C | 1 5/8            | 3 3/8  | 2 3/8   | 2                    | 102              |
| C-755-4  | 1 3/4            | 4 1/4  | 3 3/4   | 3                    | 220              |
| C-755-4A | 1 7/8            | 4 1/4  | 3 3/4   | 3                    | 214              |
| C-755-4B | 2                | 4 1/4  | 3 3/4   | 3                    | 205              |
| C-755-4C | 2 1/8            | 4 1/4  | 3 3/4   | 3                    | 200              |
| C-755-5  | 2 1/4            | 4 3/4  | 4 1/4   | 3 1/2                | 260              |
| C-755-5A | 2 3/8            | 4 3/4  | 4 1/4   | 3 1/2                | 250              |
| C-755-5B | 2 1/2            | 4 3/4  | 4 1/4   | 3 1/2                | 243              |
| C-755-5C | 2 5/8            | 4 3/4  | 4 1/4   | 3 1/2                | 240              |
| C-755-6  | 2 3/4            | 5 1/4  | 4 3/4   | 4                    | 250              |
| C-755-6A | 2 7/8            | 5 1/4  | 4 3/4   | 4                    | 240              |
| C-755-6B | 3                | 5 1/4  | 4 3/4   | 4                    | 230              |
| C-755-6C | 3 1/8            | 5 1/4  | 4 3/4   | 4                    | 220              |
| C-755-7  | 3 1/4            | 6 1/8  | 5 13/16 | 5                    | 340              |
| C-755-7A | 3 3/8            | 6 1/8  | 5 13/16 | 5                    | 330              |
| C-755-7B | 3 1/2            | 6 1/8  | 5 13/16 | 5                    | 318              |
| C-755-7C | 3 5/8            | 6 1/8  | 5 13/16 | 5                    | 387              |
| C-755-8  | 3 3/4            | 7      | 6 3/8   | 6                    | 565              |
| C-755-8A | 3 7/8            | 7      | 6 3/8   | 6                    | 550              |
| C-755-8B | 4                | 7      | 6 3/8   | 6                    | 535              |
| C-755-8C | 4 1/8            | 7      | 6 3/8   | 6                    | 520              |
| C-755-8D | 4 1/4            | 7      | 6 3/8   | 6                    | 490              |
| C-755-8E | 4 3/8            | 7      | 6 3/8   | 6                    | 475              |
| C-755-8F | 4 1/2            | 7      | 6 3/8   | 6                    | 460              |

\* Also available in thermoplastic, order as C775-TP.

### C-756-1 Porcelain Saddle, C-756-2 Porcelain Saddle

- White-glaze dry-process porcelain cable rack insulator
- Fits all sizes of B-900 series channel including B-906



| CAT. NO. | DIMENSIONS (IN.) |        |
|----------|------------------|--------|
|          | A                | B      |
| C-756-1  | 3                | 1 3/16 |
| C-756-2  | 4                | 1 7/32 |

C-756-1 is for cables up to 3" O.D. Weight 72 lbs/C.

C-756-2 for cables up to 5" O.D. Weight 102 lbs/C.

# Kindorf®

## Concrete Inserts

Buildings designed with concrete inserts as an integral part of the ceiling or wall construction realize many economies, both in initial construction and when updating of the mechanical and electrical system is required. The initial economies of construction stem from the ease with which pipe, air conditioning, lighting and other fixtures can be attached to ceilings or walls.

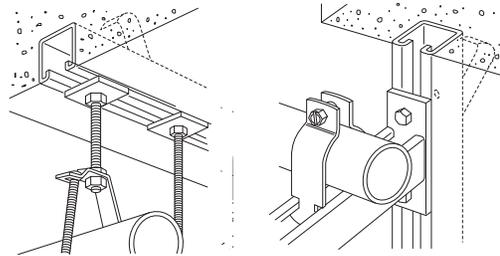
Inserted by casting into the structure, Kindorf® continuous-slot channels will accept all the assembly parts and fittings of the Kindorf® system. This provides virtually limitless structural arrangements — present and future.

Hanger attachments are made by the standard Kindorf® procedure of simply inserting a standard channel nut which can be pre-started on the hanger rod or bolt. Placement or adjustment of attachments can be made in infinite increments at any time along the length of the concrete insert. Future flexibility means economies in terms of future changes in equipment or its placement.

### Initial Installation of Continuous-Slot Channel Inserts Offers:

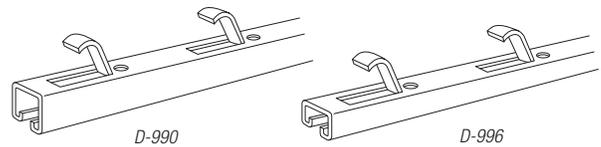
- An immediate savings in time and labor by eliminating the need for precise calculation and measurement, both in layout planning and actual installation of attachment devices
- Additional savings in time and labor because changes or additions can be made readily to the existing channel at any time; the need for costly drilling in concrete and other costly procedures can be eliminated

Companion to the channel inserts is the spot-type insert for use where a single hanger is required at a specific location.



Pipe section hangs from D-990 concrete insert.

D-990 concrete insert supports conduit installation.



D-990

D-996

| CAT. NO. | TYPE ANCHOR | CROSS-SECTION    | LOAD RATING LBS. PER FT.* |
|----------|-------------|------------------|---------------------------|
| D-990    | Punched     | 1½ x 1½ x 12 ga. | 2,000                     |
| D-996    | Punched     | 1½ x ¾ x 14 ga.  | 1,500                     |

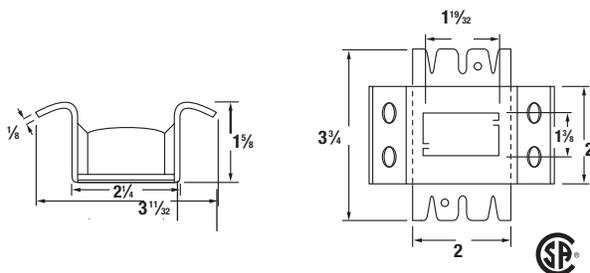
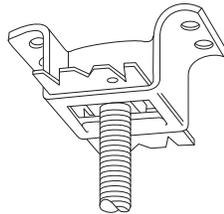
\* Safety factor of 3. Based on uniformly distributed load.

\* Standard lengths 10 and 20 feet.

\* Special lengths available on request.

### D-255 Concrete Inserts

An insert with a knockout saves covering the slot or covering the opening. Load rating at 1,300 lbs. with a safety factor of three. Accommodates hanger rod sizes from ¼" through ¾" by means of a B-914 insert nut. ⅝" steel. 52 lbs./C.

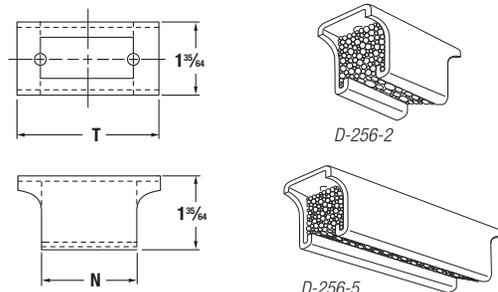


| CAT. NO. | DESCRIPTION                               |
|----------|---|
| D-255    | For ¼" through ¾" Hanger Rod — ¼"-½" Pipe |

Standard finish: Galv-Krom®.

### D-256-2 and D-256-5 Concrete Insert

This unique product reduces the "spot" concrete insert to its simplest possible components with all the adjustability of the most expensive. Its features include: two sizes — 2" and 5" adjustability, takes standard insert nuts, uses hanger rod sizes ¼" through ⅝" and has a load rating up to 1,000 lbs. and a safety factor of 3 (hanger rod permitting).



D-256-2

D-256-5



| CAT. NO. | N (IN.) | T (IN.) | WT. IN LBS./C |
|----------|---------|---------|---------------|
| D-256-2  | 2       | 3       | 34            |
| D-256-5  | 5       | 6       | 76            |

Standard finish: Galv-Krom®.

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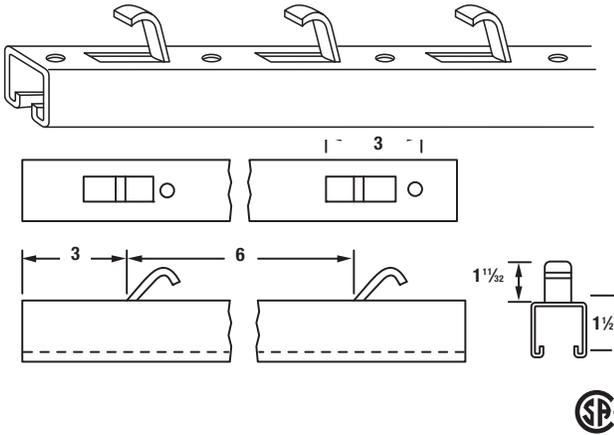
Technical Services  
Tel: 888.862.3289  
Fax: 901.252.1321

Tool Services  
Tel: 800.284.8665



### D-990 Continuous-Slot Concrete Insert

Insert is made of B-900 channel (12-ga.) with anchors punched out of insert on 6" centers. Polystyrene filled.



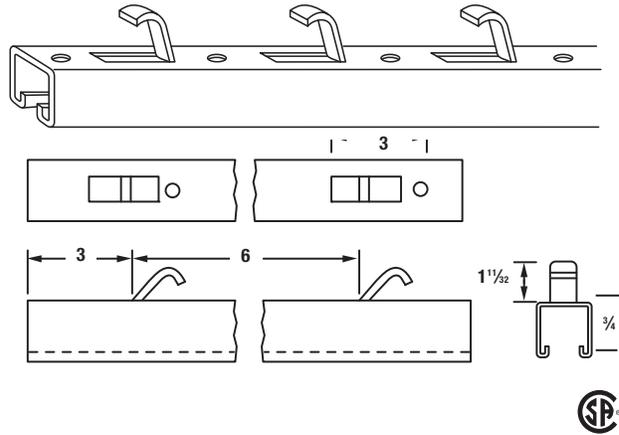
| CAT. NO. | DESCRIPTION                         |
|----------|-------------------------------------|
| D-990    | Continuous Slot and Concrete Insert |

Use B-910 or B-914 steel nuts for assembly. Load rating 2,000 lbs. per foot with a safety factor of three. Available in 10- and 20-foot lengths.

Galv-Krom® finish.

### D-996 Continuous-Slot Concrete Insert

Insert is made of B-900 channel (14-ga.) with anchors punched out of insert on 6" centers. Polystyrene filled.



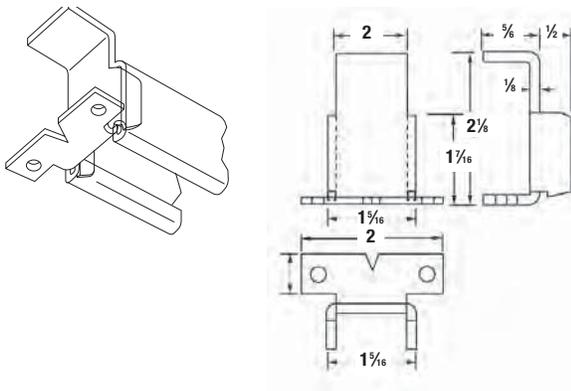
| CAT. NO. | DESCRIPTION                         |
|----------|-------------------------------------|
| D-996    | Continuous Slot and Concrete Insert |

Use B-910 or B-914 steel nuts for assembly. Load rating 1,500 lbs. per foot with a safety factor of three. Available in 10- and 20-foot lengths.

Galv-Krom® finish.

### D-982 Anchor End Cap

For capping the ends of D-990 continuous-slot concrete inserts. It may be used on the job to make up inserts of less than 1-foot lengths of B-900 channel.



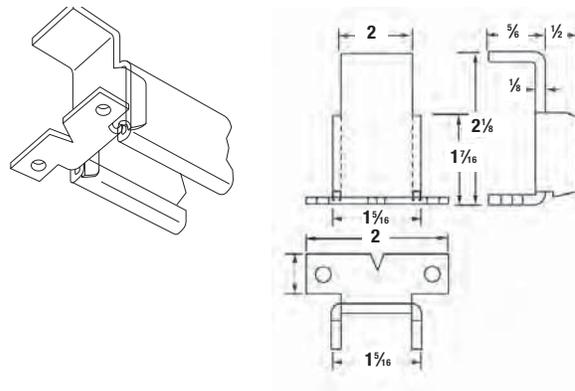
| CAT. NO. | DESCRIPTION    |
|----------|----------------|
| D-982    | Anchor End Cap |

Load rating of such an insert less than 1-foot long is 1,000 lbs. with a safety factor of three. 1/4" steel. 19 lbs./C.

Galv-Krom® finish.

### D-988 Anchor End Cap

For capping the ends of D-996 continuous-slot concrete inserts. May be used on the job to make up inserts of less than 1-foot lengths of B-906 channel.



| CAT. NO. | DESCRIPTION    |
|----------|----------------|
| D-988    | Anchor End Cap |

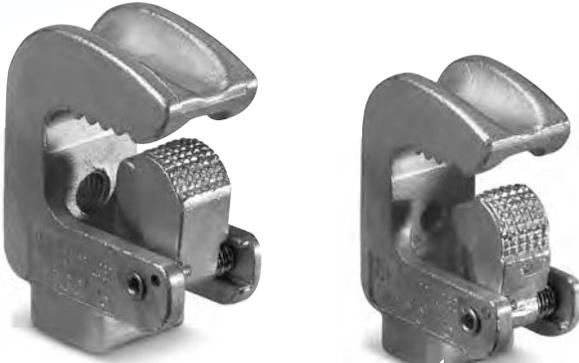
Load rating of each insert less than 1-foot long is 600 lbs. with a safety factor of three. 1/4" steel. 13 lbs./C.

Galv-Krom® finish.

# Kindorf®

## Beam Clamps and Hanger Rod Supports

Kindorf® Modular Metal Framing and Support System



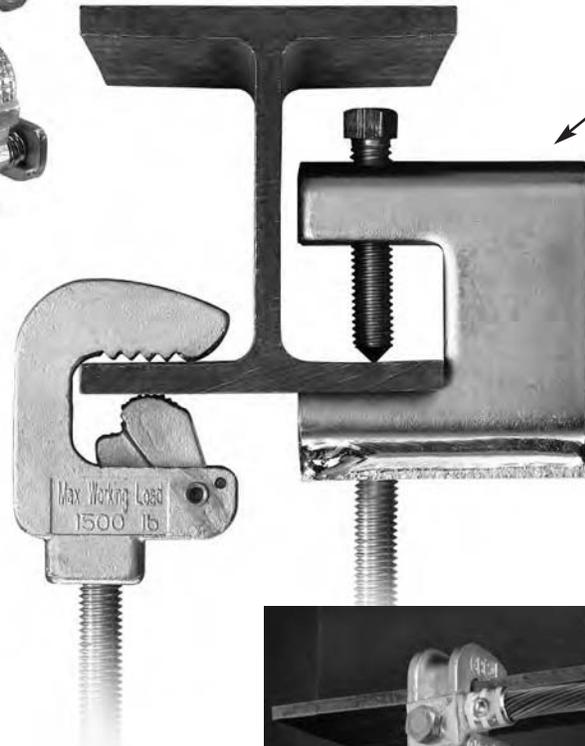
Attach to I-Beam by Hand,  
then Lock and Load in One Step!

### Heavy-Duty Beam Clamp

You can't get much easier than the new Kindorf® Heavy-Duty Beam Clamp. Simply clamp it to the I-beam flange by hand, and it will remain firmly fixed while you install the threaded rod. When tightened, the threaded rod locks the tongue of the clamp against the I-beam for a fast installation and a superior hold.



New Way vs. Old Way



#### Standard Heavy-Duty Beam Clamp

- The clamp must be held in place while tightening the set screw
- The set screw is difficult to access within the I-beam web

#### Kindorf® Heavy-Duty Beam Clamp

- Toolless attachment to the I-beam
- Thread rod secures the clamp, eliminating an entire step in process



Kindorf® Heavy-Duty Beam Clamps can also be used for electrical grounding connections.

| CAT. NO. | DESCRIPTION                       | LOAD RATING (LBS.) | ROD SIZE | STD. CTN. |
|----------|-----------------------------------|--------------------|----------|-----------|
| FBC1     | Heavy-Duty Beam Clamp, 600 lbs.   | 600                | 3/8-16   | 24        |
| FBC2     | Heavy-Duty Beam Clamp, 800 lbs.   | 800                | 3/8-16   | 24        |
| FBC3     | Heavy-Duty Beam Clamp, 1,000 lbs. | 1,000              | 3/8-16   | 24        |
| FBC4     | Heavy-Duty Beam Clamp, 1,500 lbs. | 1,500              | 1/2-13   | 24        |

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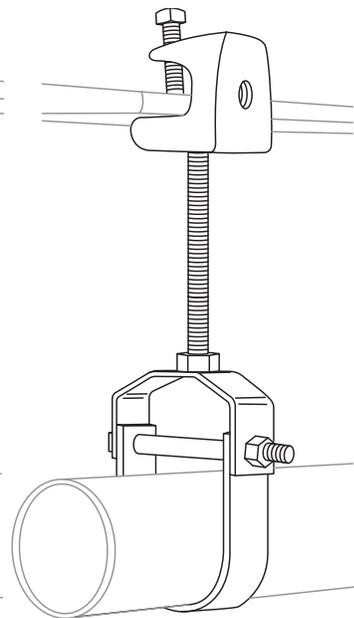


### From the Simple Job to the Complex Job with Special Needs, the Kindorf® Line of Beam Clamps Can Fit the Bill.

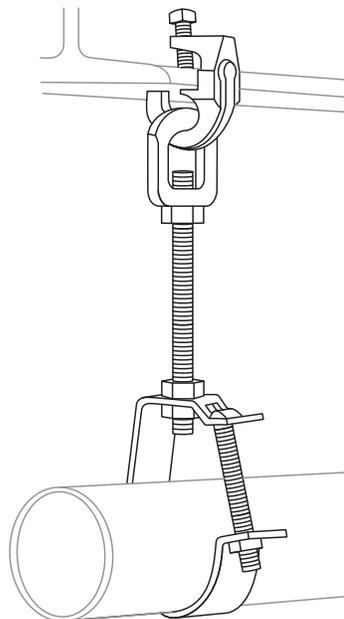
Kindorf® devices for hanging the load can deliver lower installation costs. Hanger rod and conduit pipe supports are attached to ceilings or to other structural members such as beams, columns or purlins, without drilling, welding or fastening by means of power-actuated tools. A full selection of beam clamps and hanger rod supports are offered to meet a wide variety of needs.

The flexibility of the Kindorf® Series of clamps affords a range of applications, from simple attachment of channel to the suspending of supports from sloping, as well as horizontal, beams.

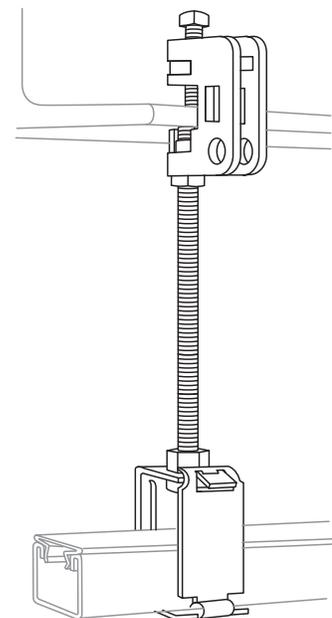
Where high vibrations are expected, additional support can be attained by gripping the beam on both sides.



**500 Series Beam Clamp**  
supports pipe with C-710 clevis hanger.



**H-550 Swivel Beam Clamp**  
supports pipe with C-711 hanger.

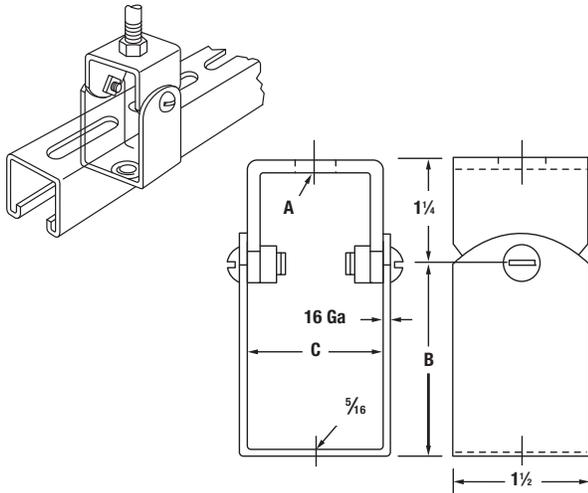


**E-231 Beam Clamp**  
supports channel raceway  
with G-1012 lay-in-hanger.

**Modular Metal Framing and Support System**



## Beam Clamps and Hanger Rod Supports



### G-962 and G-962-D Channel Hangers

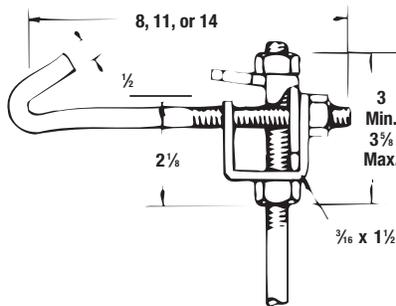
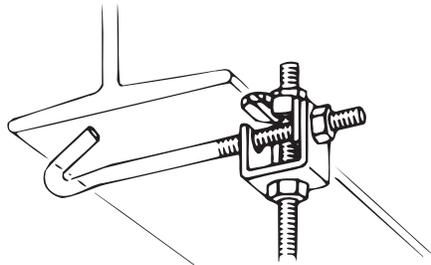
- G-962 fits around 1½" or 1⅞" deep channel, G-962-D series hangers for 3" deep channel

| CAT. NO.    | WT. LBS./C | HANGER SIZE (IN.) | DIM. A (IN.) |
|-------------|------------|-------------------|--------------|
| G-962-D-1   | 47         | ¼ and ⅝ rod       | 1⅜           |
| G-962-D-2   | 47         | ½ rod and ¼ pipe  | ¾            |
| G-962-D-3   | 47         | ¾ pipe and ⅝ rod  | 1⅜           |
| G-962-D-4** | 47         | ½ pipe            | 7/8          |

\*\* Load rating of 700 lbs. with a safety factor of three.

"B" dimension for G-962: 2½"; for G-962-D: 4". UL Listed for raceway. "C" dimension for G-962, 1⅞"; for G-962-D, 3⅞".

Galv-Krom® finish.



### E-160 Adjustable Beam Clamp (½" Rod)

- Clamps to I-beams where edge of beam flange does not exceed .8" thickness. Hook rod is furnished in three lengths to fit beam flanges up to 6, 9 or 12" widths



| CAT. NO. FOR ½" HANGER RODS | FOR BEAM FLANGE WIDTH (IN.) | WT. LBS./C |
|-----------------------------|-----------------------------|------------|
| E-160-1/2-6                 | 2½ to 6                     | 115        |
| E-160-1/2-9                 | 5½ to 9                     | 125        |
| E-160-1/2-12                | 8½ to 12                    | 154        |

Load rating 800 lbs. with a safety factor of three.

Assembly requires hanger rod of the proper length and size plus two H-114-D nuts.

⅜" steel, ½" hook rod.

Galv-Krom® finish.

# Kindorf®

## Beam Clamps and Hanger Rod Supports

### U577 Adjustable Swinging Hanger Flange (3/8" or 1/2" Rod)

- Flange has 13/32" holes for connection to ceiling

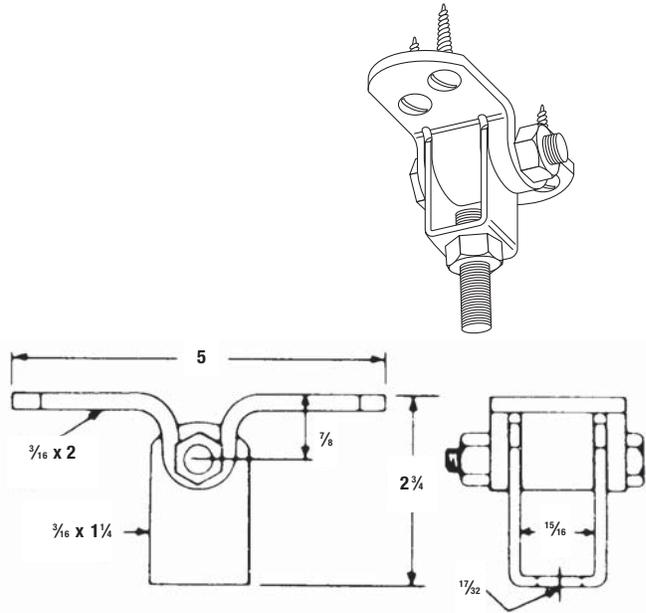


| CAT. NO. | WT. LBS./C |
|----------|------------|
| U577     | 100        |

Assembly requires 3/8" or 1/2" hanger rod of proper length plus two H-114-C or H-114-D nuts. 3/16" steel.

Flange has 13/32" diameter holes for connection to ceiling.

Galv-Krom® finish.



### E-177 Adjustable Channel Clamp (1/2" Rod)

- Adjustable to fit all structural channels up to a maximum flange width of 3 1/4", and all structural angles with leg up to 3" long and not more than 3/8" thick



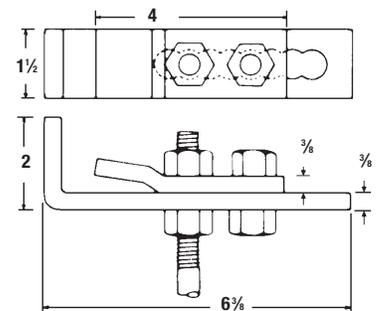
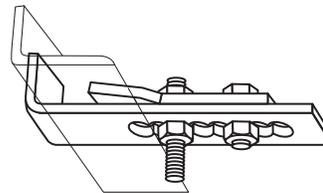
| CAT. NO. | WT. LBS./C |
|----------|------------|
| E-177    | 183        |

Load rating is 800 lbs. with a safety factor of three.

Assembly requires 1/2" hanger rod of the proper length plus two H-114-D nuts.

3/8" steel.

Galv-Krom® finish.



Kindorf® Modular Metal Framing and Support System

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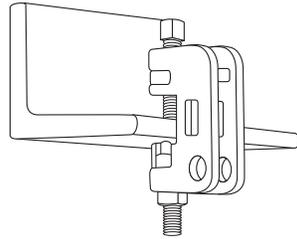
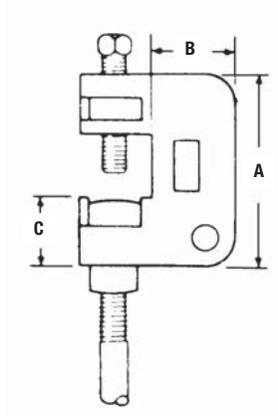
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## Beam Clamps and Hanger Rod Supports



### E-231 Structural Steel Clamp ( $\frac{3}{8}$ " or $\frac{1}{2}$ " Rod)

- Clamps to I-beams, channels, angles and column. Two sizes are available, one for  $\frac{3}{8}$ " and the other for  $\frac{1}{2}$ " hanger rod. Each takes flanges up to .8"



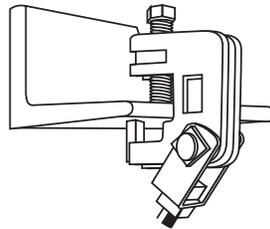
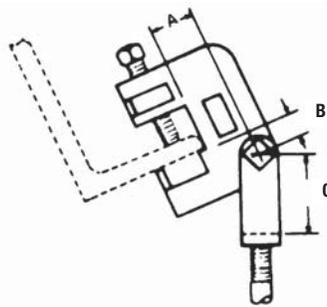
| CAT. NO.    | DIMENSIONS (IN.) |        |        | WT. LBS./C |
|-------------|------------------|--------|--------|------------|
|             | A                | B      | C      |            |
| E-231-3/8*  | 2½               | 1      | 7/8    | 31         |
| E-231-1/2** | 3                | 1 1/32 | 1 1/16 | 53         |

Assembly requires two H-116-C ( $\frac{3}{8}$ " ) or two H-116-D ( $\frac{1}{2}$ " ) square nuts to attach hanger rod.  $\frac{1}{8}$ " steel.

\* Load rating of 500 lbs. with a safety factor of three.

\*\* Load rating of 800 lbs. with a safety factor of three.

Galv-Krom® finish.



E-231 clamp with swing connector affords a convenient method of attaching to angled beams.

### E-232 Clamp with Swing Connector ( $\frac{3}{8}$ " or $\frac{1}{2}$ " Rod)

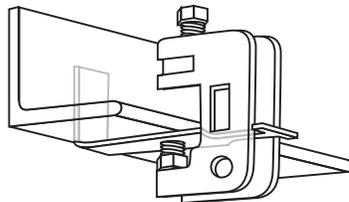


| CAT. NO.    | DIAMETER FOR ROD (IN.) | DIMENSIONS (IN.) |       |       | WT. LBS./C |
|-------------|------------------------|------------------|-------|-------|------------|
|             |                        | A                | B     | C     |            |
| E-232-3/8*  | 3/8                    | 9/16             | 7/16  | 1     | 48         |
| E-232-1/2** | 1/2                    | 7/8              | 29/64 | 1 1/8 | 76         |

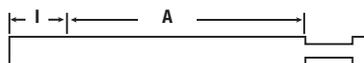
\* Load rating of 400 lbs. with a safety factor of three.

\*\* Load rating of 550 lbs. with a safety factor of three.

Galv-Krom® finish.



For use with E-231 and E-232 clamps when hanger rod is not in straight through position.



### E-233 Anchor Clip

- Anchor clips should be used when clamps are subject to excessive vibration. To obtain the correct size clips add 1" to the flange width. If length required is not standard, order next largest standard length



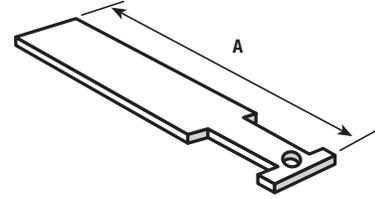
| CAT. NO.     | ROD SIZE (IN.) | MAX. BEAM WIDTH (IN.) "A" | FOR USE WITH           | WT. LBS./C |
|--------------|----------------|---------------------------|------------------------|------------|
| E-233-3/8-6  | 3/8            | 6                         | E-231-3/8 or E-232-3/8 | 20         |
| E-233-3/8-10 | 3/8            | 10                        | E-231-3/8 or E-232-3/8 | 33         |
| E-233-1/2-6  | 1/2            | 6                         | E-231-1/2 or E-232-1/2 | 26         |
| E-233-1/2-10 | 1/2            | 10                        | E-231-1/2 or E-232-1/2 | 37         |

Galv-Krom® finish.

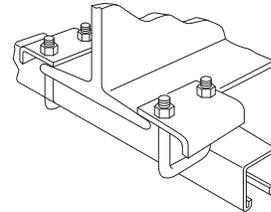
### U-568 Beam Clamps

| CAT. NO. | BEAM FLANGE WIDTH (IN.) | DIMENSION A (IN.) | STD. CTN. |
|----------|-------------------------|-------------------|-----------|
| U-568-6  | 6                       | 9                 | 25        |
| U-568-8  | 12                      | 15                | 25        |

16 ga. material.



### E-760 Channel to Beam Clamp



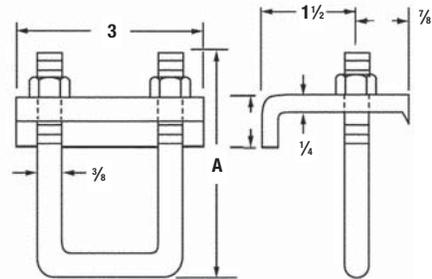
Hardened points bite into beam flange. Fits all I-beams where edge of beam flange does not exceed .8 inch thickness.

| CAT. NO.  | FOR STRUCTOR CHANNEL          | DIMENSION A (IN.) | WT. LBS./C |
|-----------|-------------------------------|-------------------|------------|
| E-760-2*  | B-900, B-905, B-906, B-907    | 3 1/4             | 76         |
| E-760-2SS | Stainless Steel               |                   |            |
| E-760-3   | B-901, B-900-2A, B-902, B-903 | 4 3/4             | 88         |

\* Load rating of 2,200 lbs. with a safety factor of three.

1/4" steel, 3/8 inch U-bolt.

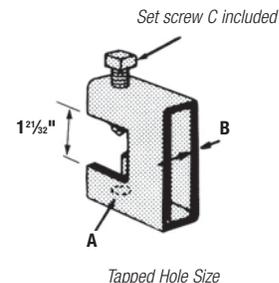
Standard finish: Galv-Krom®.



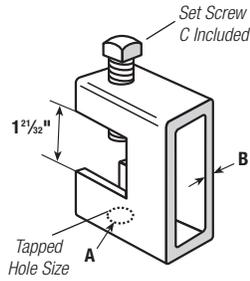
### E-235 Heavy-Duty Beam Clamp

| CAT. NO.     | DIMENSIONS (IN.) |     |             | WT. LBS./C | DESIGN LOAD LBS. |
|--------------|------------------|-----|-------------|------------|------------------|
|              | A                | B   | C           |            |                  |
| E-235-3/8-HD | 3/8              | 1/8 | 3/8 x 2 3/4 | 109        | 1,300            |
| E-235-1/2-HD | 1/2              | 1/4 | 1/2 x 2 3/4 | 201        | 3,150            |

Finish: Hot-dipped galvanized.

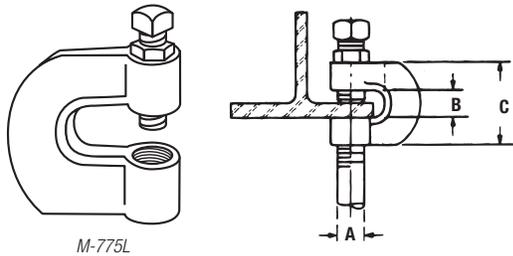


## Beam Clamps and Hanger Rod Supports



### U-564 Heavy-Duty Beam Clamp

| CAT. NO.  | DIMENSIONS (IN.) |     |             | DESIGN LOAD LBS. | STD. CTN. |
|-----------|------------------|-----|-------------|------------------|-----------|
|           | A                | B   | C           |                  |           |
| U-564-3/8 | 3/8              | 1/4 | 3/8 x 2 1/4 | 1,300            | 25        |
| U-564-1/2 | 1/2              | 1/4 | 1/2 x 2 1/4 | 3,150            | 15        |



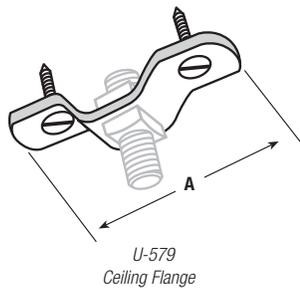
### M-775L Clamp with Lock Nut

| CAT. NO.   | ROD SIZE<br>A (IN.) | B (IN.) | C (IN.) | DESIGN LOAD LBS. | STD. CTN. |
|------------|---------------------|---------|---------|------------------|-----------|
|            |                     |         |         |                  |           |
| M-775L-5/8 | 5/8                 | 3/4     | 2       | 440              | 50        |
| M-775L-3/4 | 3/4                 | 3/4     | 2       | 500              | 50        |

Standard Finishes - GoldGalv® brand or Black (B) Malleable Iron.

EG=Electro-Galv

B=Black



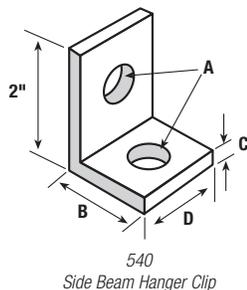
### U-579 Beam Clamp for Hanging Rod

| CAT. NO.  | A (IN.) | STD. CTN. |
|-----------|---------|-----------|
| U579-3/8  | 3 1/2   | 25        |
| U-579-1/2 | 4 1/4   | 25        |

Nuts and wood screws not included.

Mounting holes 13/32".

Finishes - GoldGalv® brand Malleable Iron.



### 540 Beam Clamp for Hanging Rod

| CAT. NO. | DIMENSIONS (IN.) |       |     |     | STD. CTN. |
|----------|------------------|-------|-----|-----|-----------|
|          | A                | B     | C   | D   |           |
| 540 3/8  | 1/8              | 1 1/8 | 1/4 | 7/8 | 25        |
| 540-5/8  | 1 1/16           | 2 1/2 | 3/8 | 2   | 25        |

Finishes - GoldGalv® brand or Black (B).

# Kindorf®

## Beam Clamps and Hanger Rod Supports

### S5413/8 Swing Connector (3/8" Rod)

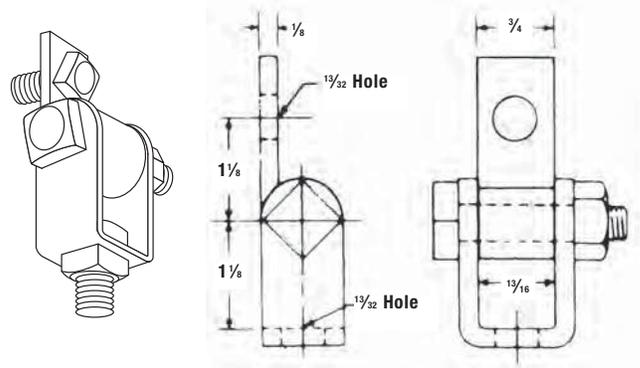
Used to secure a 3/8" hanger rod to the side or bottom of beam or ceiling.

| CAT. NO. | WT. LBS./C |
|----------|------------|
| S5413/8  | 28         |

Assembly requires two (3/8") square nuts. Also screw or bolt for fastening to beam or ceiling. 1/4" steel.

Load rating of 700 lbs. with a safety factor of three.

Galv-Krom® finish.



### U501 Channel to Beam Clamp

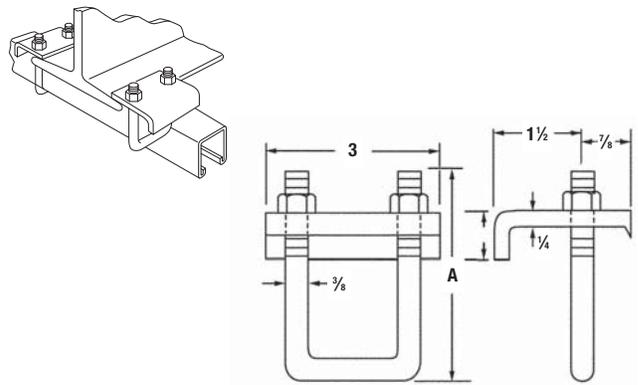
Hardened points bite into beam flange. Fits all I-beams where edge of beam flange does not exceed .8" thickness.

| CAT. NO. | FOR STRUCTOR CHANNEL          | DIMENSION A (IN.) | WT. LBS./C |
|----------|-------------------------------|-------------------|------------|
| U501     | B-900, B-905, B-906, B-907    | 3/4               | 76         |
| U501SS   | Stainless Steel               | 3/4               | 76         |
| U502     | B-901, B-900-2A, B-902, B-903 | 4/4               | 88         |
| U502SS   | Stainless Steel               | 4/4               | 88         |

\* Load rating of 2,200 lbs. with a safety factor of three.

1/4" steel, 3/8-inch U-bolt.

Standard finish: Galv-Krom®.

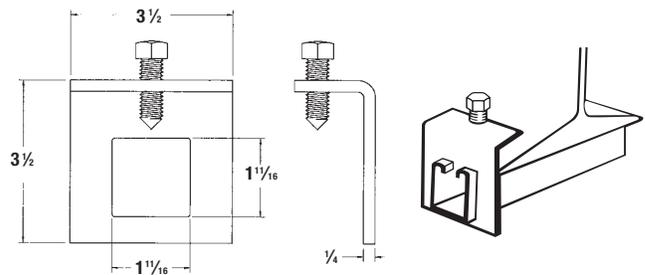


### A597 Channel to Beam Clamp

| CAT. NO. | DESIGN LOAD LBS./EA. | CHANNEL SERIES      | WT. LBS./C |
|----------|----------------------|---------------------|------------|
| A597     | 800                  | B-900, B-905, B-995 | 108        |

1/2" x 1 1/2" set screw included.

Galv-Krom® finish.



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Technical Services  
Tel: 888.862.3289  
Fax: 901.252.1321

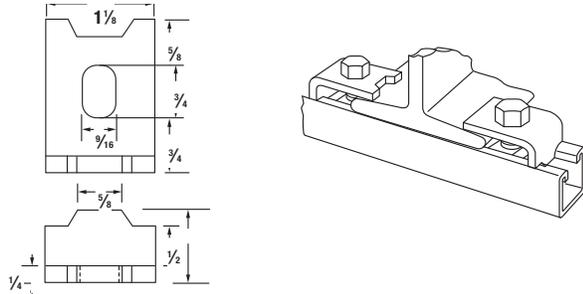
Tool Services  
Tel: 800.284.8665

## Beam Clamps and Hanger Rod Supports



### 512-U Channel to Beam Clamp

Secures all sizes of Kindorf® channel to beams where flange edge does not exceed .8" thickness.



| CAT. NO. | DESIGN LOAD (LBS.) | WT. LBS./C |
|----------|--------------------|------------|
| 512-U    | 500                | 25         |

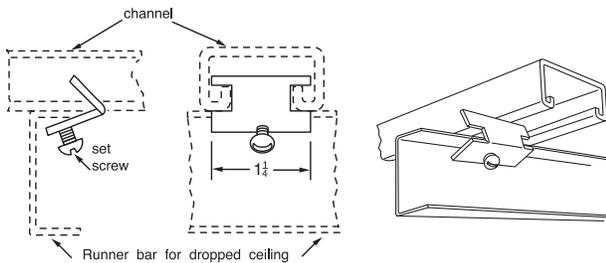
Load rating each clamp 800 lbs. with a safety factor of 3 1/4" steel.

Assembly requires one H-113-E bolt and one B-910-1/2 steel nut per clamp — order separately.

Galv-Krom® finish.

### E-764 Channel Clip

Complete with set screw for clipping a length of channel slot-side down and across the runner bars of a dropped ceiling installation.



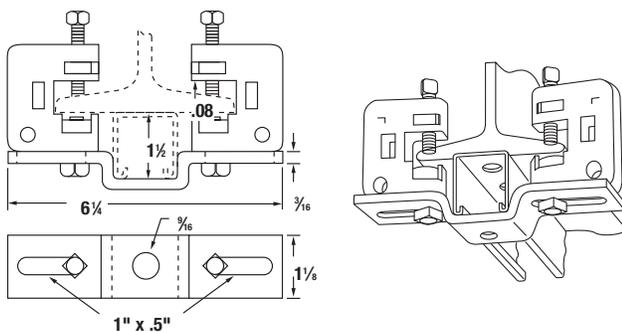
| CAT. NO. | WT. LBS./C |
|----------|------------|
| E-764    | 4          |

At least two required per each such application.

Galv-Krom® finish.

### E-765 Center Beam Clamp

Clamps 1 1/2" x 1 1/2" Kindorf® channel to beams where beam flange does not exceed 3/4" thickness and 4" to 6 3/4" wide.



| CAT. NO. | LOAD RATING (LBS.) | WT. LBS./C |
|----------|--------------------|------------|
| E-765    | 800                | 112        |

Load rating is 800 lbs. with a safety factor of 3.

Furnished assembled.

1/8" steel clamps, 3/16" steel strap.

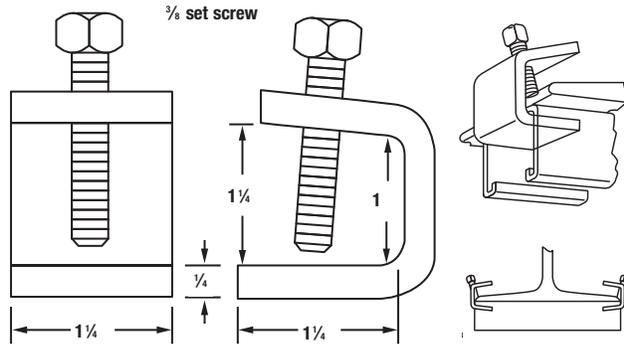
Galv-Krom® finish.

# Kindorf®

## Beam Clamps and Hanger Rod Supports

### U514 Channel Support

Supports any size Kindorf® channel. Clamps to I-beam where flange edge does not exceed .8" thickness.

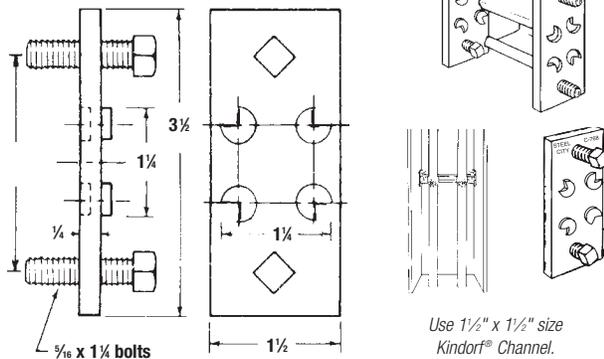


| CAT. NO. | LOAD RATING (LBS.) | WT. LBS./C |
|----------|--------------------|------------|
| U514     | 800                | 44         |

Load rating is 800 lbs. with a safety factor of 3/4" steel.  
Galv-Krom® finish.

### E-768 Column Mount Support

For use with 1 1/2" x 1 1/2" channel. Provides a rigid support between 'H' beam flanges for mounting pipe, conduit, outlet boxes and panel boards.

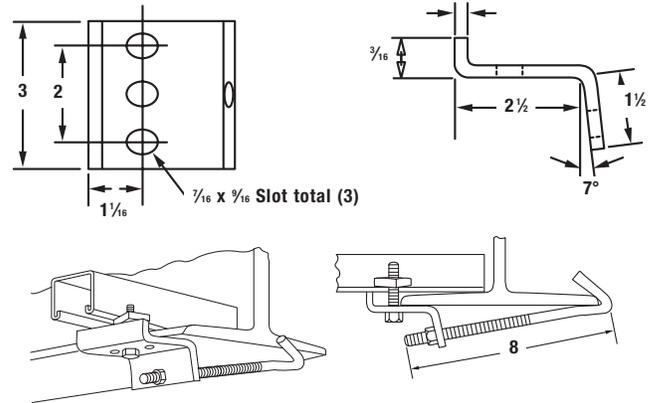


| CAT. NO. | LOAD RATING (LBS.) | WT. LBS./C |
|----------|--------------------|------------|
| E-768    | 800                | 50         |

Two E-768's required for installation.  
Use C-105, C-106 or C-107 straps for mounting 1/2" to 8" pipe on channel section.  
Load rating of 800# — safety factor of three.  
Galv-Krom® finish.

### E-781 Single-Beam Clamp

For use in attaching channel on top of beam flange with slot side down. Members are shipped assembled for easy installation.

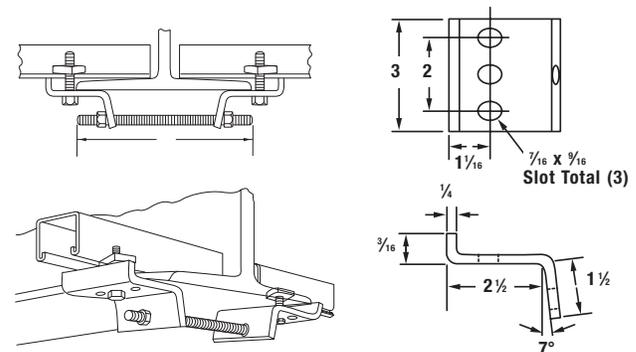


| CAT. NO. | WT. LBS./C |
|----------|------------|
| E-781    | 133        |

Galv-Krom® finish.

### E-782 Double-Beam Clamp

For use in attaching channel on both sides of a beam flange with slot side down. Members are shipped assembled for easy installation.



| CAT. NO. | WT. LBS./C |
|----------|------------|
| E-782    | 235        |

Galv-Krom® finish.

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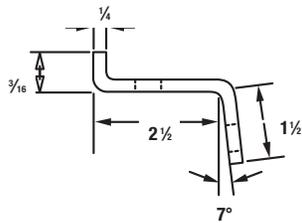
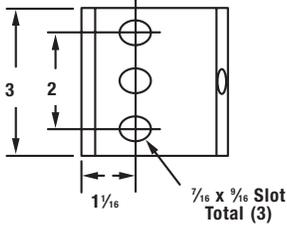
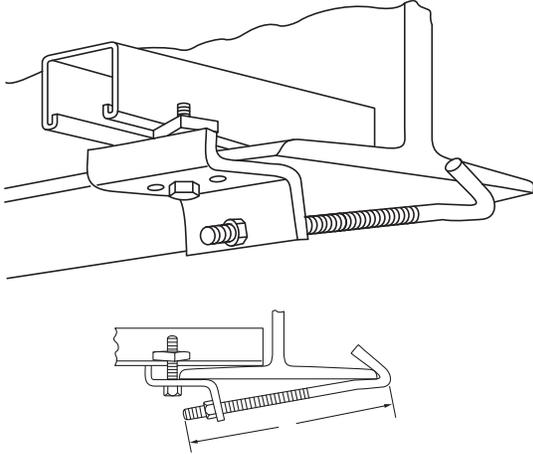
Tool Services  
Tel: 800.284.8665

## Beam Clamps and Hanger Rod Supports



### U-504 Single Beam Clamp

For use in attaching channel on top of beam flange with slot side down. Members are shipped assembled for easy installation.

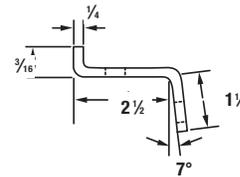
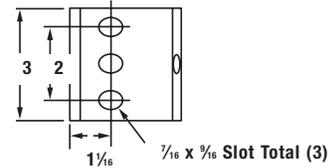
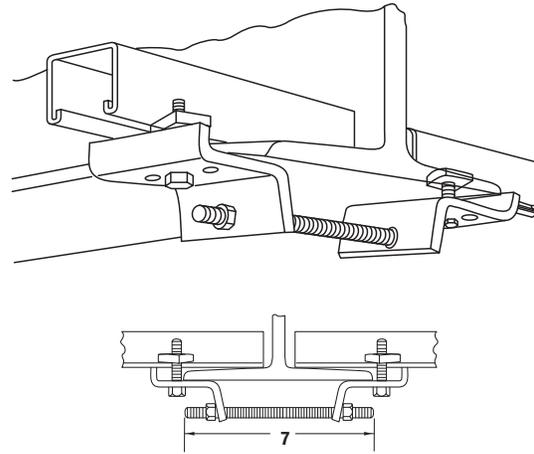


| CAT. NO. | WT. LBS./C |
|----------|------------|
| U504     | 133        |

Galv-Krom® finish.

### U-505 Double Beam Clamp

For use in attaching channel on both sides of a beam flange with slot side down. Members are shipped assembled for easy installation.



| CAT. NO. | WT. LBS./C |
|----------|------------|
| U505     | 235        |

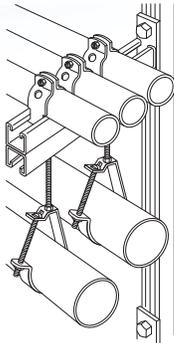
Galv-Krom® finish.

Kindorf® Modular Metal Framing and Support System

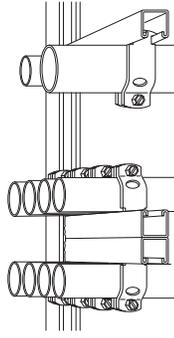
# Kindorf®

## Support Brackets

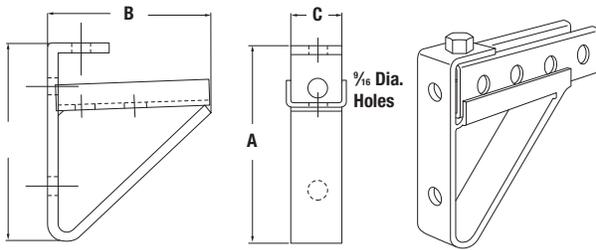
Kindorf® Modular Metal Framing and Support System



F-721 Wall bracket hangs and supports pipe runs.



Conduit installations supported above and below by F-721 wall bracket.



Kindorf® wall brackets provide a ready-made shelving arrangement that can be attached quickly to the supporting channels.

Utilizing the built-in advantages of the Kindorf® Channel, the support bracket members allow a great deal of flexibility in meeting the structural framing needs.

Axle supports and a variety of wall brackets all adapt to the standard Kindorf® channel and allow additional flexibility in the support of cables, conduit, pipe and other equipment.

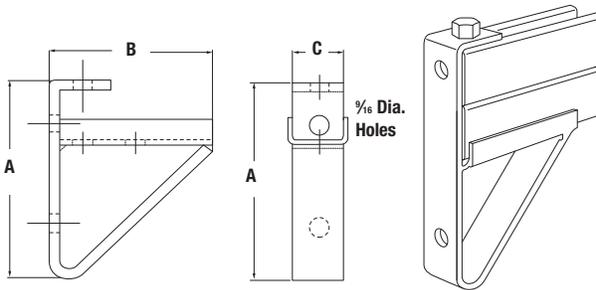
The application of axle supports and bracket members can be made on either the continuous slot of the channel or the pre-punched hole side. Utilizing the 1/2" hole spacing, greater adaptability is attained with a minimum of fittings.

### F-715 Wall Bracket

Mounts on Kindorf® channel or directly to wall. F-715 bracket supports 1 1/2" or 1 3/8" channels. Brackets allow for a variety of support channel lengths. The continuous tray on brackets prevent lateral movement of supported channels. Support channels can be fastened from top, bottom or both.

| CAT. NO. | DIMENSIONS (IN.) |       |       | WT. LBS./C. |
|----------|------------------|-------|-------|-------------|
|          | A                | B     | C     |             |
| F-715    | 5 27/32          | 4 5/8 | 1 1/2 | 163         |

Galv-Krom® finish.

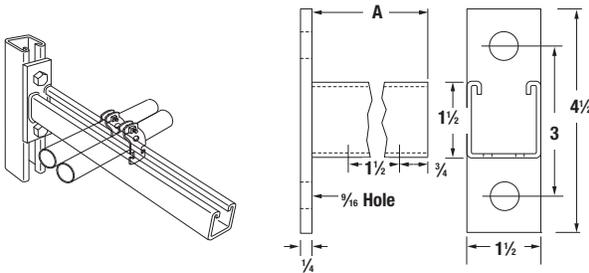


### F-716-3 Wall Bracket

Mounts on Kindorf® channel or directly to wall. F-716-3 bracket supports 3" deep or back-to-back channels. Brackets allow for a variety of support channel lengths. The continuous tray on brackets prevent lateral movement of supported channels. Support channels can be fastened from top, bottom or both.

| CAT. NO. | DIMENSIONS (IN.) |       |       | WT. LBS./C. |
|----------|------------------|-------|-------|-------------|
|          | A                | B     | C     |             |
| F-716-3  | 7 11/32          | 4 5/8 | 1 1/2 | 179         |

Galv-Krom® finish.



### F-720 Wall Bracket

Mounts on Kindorf® channel, concrete inserts or directly to wall. Continuous-slot accepts C-105, C-106 and C-107 series pipe straps. Bracket is 12-gauge steel, 1 1/2" x 1 1/2" channel welded to a 1/4" back plate. May be attached to either the continuous slot side or pre-punched holes in back or side of Kindorf® channel.

| CAT. NO.   | DIM. A (IN.) | END LOAD RATING LBS.* | WT. LBS./C |
|------------|--------------|-----------------------|------------|
| F720 6**   | 6            | 600                   | 132        |
| F-720-9**  | 9            | 450                   | 155        |
| F-720-12** | 12           | 300                   | 200        |
| F-720-18   | 18           | 200                   | 275        |
| F-720-24** | 24           | 150                   | 350        |

\* Safety factor of 3.

\*\* This product available in green & hot-dipped galvanized.

Standard finish: Galv-Krom®.

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Tool Services  
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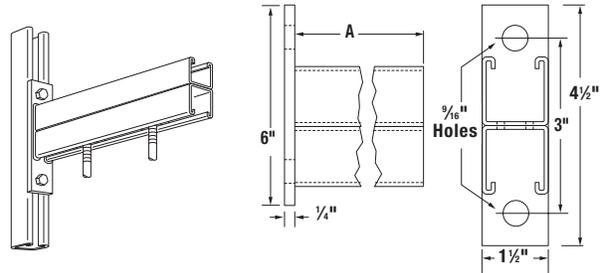
### F-721 Wall Bracket

Double channel to provide continuous slot for both top and bottom mounting. 12-ga. steel, 1/4-inch back plate. May be attached to either the continuous slot side or pre-punched holes in back or side of Kindorf® channel.

| CAT. NO. | DIM. A (IN.) | END LOAD RATING LBS.* | WT. LBS./C |
|----------|--------------|-----------------------|------------|
| F721 18  | 18           | 300                   | 568        |
| F-721-24 | 24           | 225                   | 736        |
| F-721-30 | 30           | 180                   | 904        |
| F-721-36 | 36           | 150                   | 1072       |

\* Safety factor of 3.

Standard finish: Galv-Krom®.



### F-735 and F-736 Axle Supports

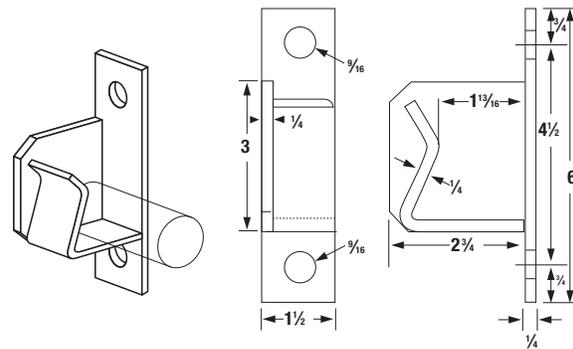
For use on storage racks constructed on Kindorf® channel. Supports reels of electrical cables, wire rope, chain and other materials. Left-hand axle support illustrated. F-736 identical except right hand. May be attached to either the continuous slot side or pre-punched holes in back or side of Kindorf® channel.

| CAT. NO. | DESCRIPTION | WT. LBS./C |
|----------|-------------|------------|
| F-735    | Left Hand   | 165        |
| F-736    | Right Hand  | 165        |

Assembly requires two B-910-1/2 steel nuts and two H-113-B bolts.

Accepts up to 1 1/4" steel bar or pipe for axle.

Galv-Krom® finish.



### F-737 Double Axle Support

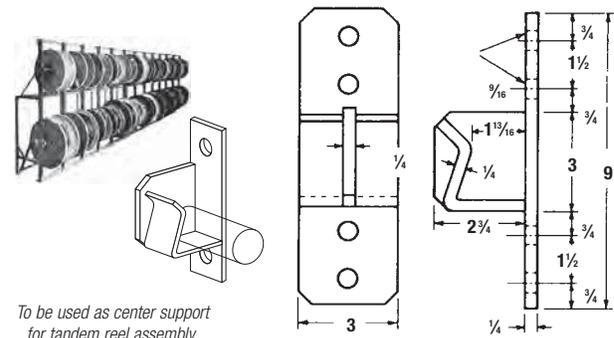
Typical Kindorf® Space-Saver reel rack. Kindorf® reel racks are easy to build, exceptionally strong and economical. Racks adjust easily to accommodate a variety of reel sizes. No special tools needed.

| CAT. NO. | WT. LBS./C |
|----------|------------|
| F-737    | 335        |

Assembly requires four B-910-1/2 steel nuts and four H-113-B bolts.

To be used with F-735 and F-736. 1/4" steel.

Galv-Krom® finish.



To be used as center support for tandem reel assembly.

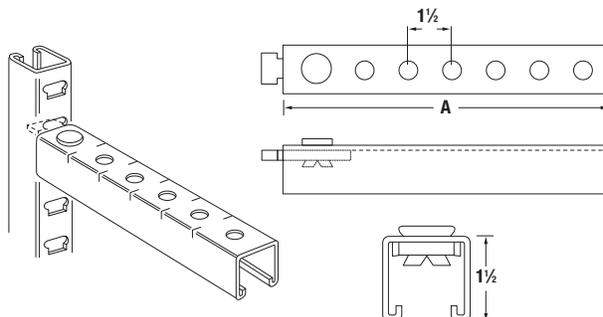
### F-739 Telephone Cable Hook

Cantilever-type cable hooks fit into 'T' slot on B-904 channel for rigid, non-slip support. Fast mounting, no hardware to tighten.

| CAT. NO.     | DIMENSION A (IN.) | WT. LBS./C |
|--------------|-------------------|------------|
| F-739-4-1/2  | 4 1/2             | 81         |
| F-739-7-1/2  | 7 1/2             | 122        |
| F-739-10-1/2 | 10 1/2            | 162        |
| F-739-13-1/2 | 13 1/2            | 198        |
| F-739-18     | 18                | 278        |

Has 3/16" diameter holes on 1 1/2" centers to allow for easy tie banding of cables.

Galv-Krom® 12-ga. steel.



# Kindorf®

## Surface Raceway and Lighting Support Systems

### For Mounting or Suspending High-Intensity Lighting Fixtures in High-Bay Installations. Surface Raceway and Lighting Support Systems

The Kindorf® Lighting Support System consists of high-quality construction materials that afford definite installation advantages to those most concerned with lighting installations. When used as a surface metal raceway, it is UL Listed and complies with National Electrical Code® Article 352.

#### To the Owner

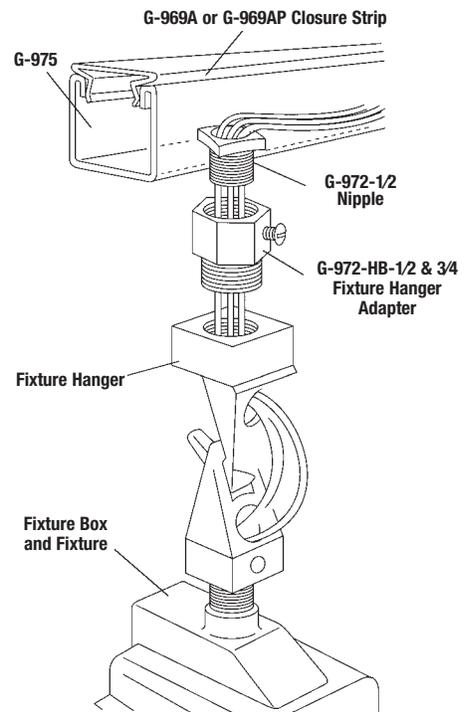
A flexible installation requiring fewer attachments to the building structure with built-in provisions for easy maintenance and future modifications when lighting fixtures must be added, deleted or relocated. Kindorf® channel and fittings form a strong, economical and attractive support and wiring system for fixtures and other equipment.

#### To the Architect and Engineer

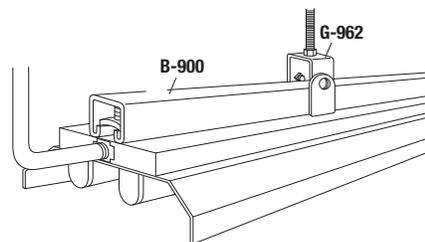
A system of construction least demanding on general design conditions and readily adaptable to all spacing of pillars, purlins and other structural components. Supply will not delay a job because Kindorf® channel is stocked at many locations throughout the country. The Kindorf® System saves planning time because it is designed for fast and easy installation by the contractor with little or no detailing.

#### To the Contractor

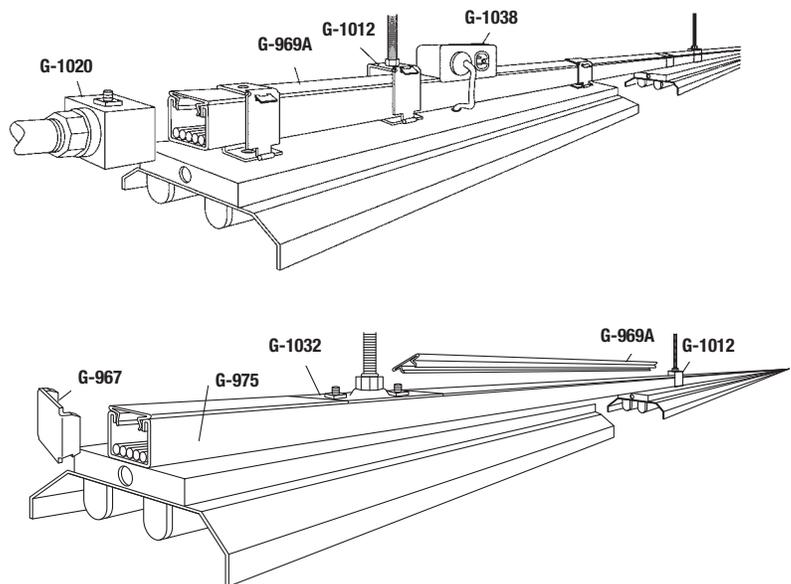
The Kindorf® System consists of time-saving materials that will simultaneously provide for the electrical feed and the mechanical support of lighting and other equipment. Kindorf® affords a means of making fewer attachments to the structure at wider spacing. It insures true and rigid alignment and lends itself to systematic preassembly methods which economize on labor. No special tools for installation and no painting is required. Kindorf® speeds all jobs because a complete line of fittings assures easy solution of many installation problems as they arise in the field.



### Other Mechanical Details.



Channel raceway system supports and feeds fluorescent lighting fixtures.



Kindorf® Modular Metal Framing and Support System

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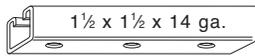
Tool Services  
Tel: 800.284.8665

## Surface Raceway and Lighting Support Systems

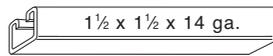


### Surface Raceway Channel Systems

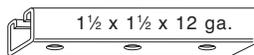
- Knock-out type by means of 1/2" channel knockouts on 6" centers
- Plug-in type by means of sliding fixture hanger



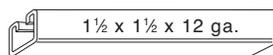
G-975-M



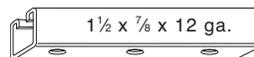
B-900-M



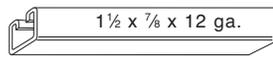
G-975



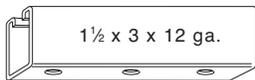
B-900



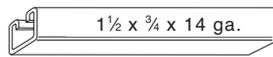
G-965



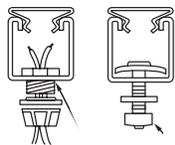
B-901



G-955

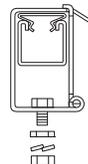


B-906



G-972-1/2 G-974-1-1/4

Nipple  
Lock nut  
and bushing

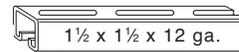


G-1012

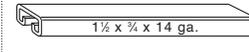
Hanger with H-115-A bolt  
and square nut plus  
G-1016 and H-118-C washers

### Channel Support Lighting Systems

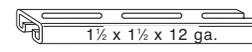
- Shoulder-bolt type by means of special shoulder bolt 1 3/32" x 3" slots on 4" centers
- Spring-nut type by means of spring-nut and bolt combination



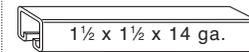
G-953



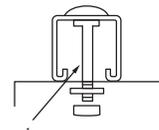
B-906



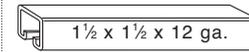
G-956



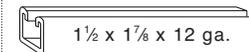
B-900-M



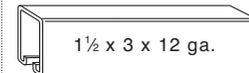
G-973-2-1/4



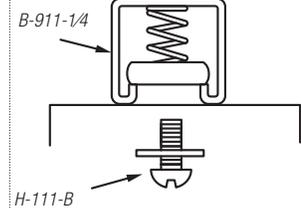
B-900



B-901



B-902



B-911-1/4

H-111-B

### Electrical Conductors "Lay-in" the Channel

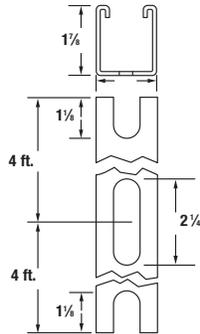
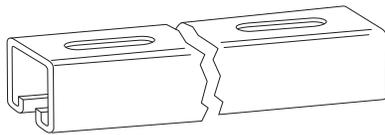
Kindorf® Surface Raceway channels provide a central wiring distribution system with conductor capacity that exceeds requirements of any lighting layout and with "power to spare" for other uses. Channel adapts to any interval of structural support — may be dropped to any level where it becomes a rigid platform for fixture attachment. Lighting fixtures may be spaced and fastened anywhere along the channel system with "plug-in" or direct-feed electrical connection.

Branch lighting circuit conductors are completely enclosed in channel from panel to fixture, eliminating the ordinary "clutter" of external conductors and protecting the wires from physical damage.

Listed by Underwriters Laboratories, Inc.

Kindorf® channels, installed slot-side down, are designed to provide fixture support only. A range of accessory fittings permit fixture attachment to the channel safely and securely in an approved manner. Channels with solid base or with slots are generally used for simple channel support systems.

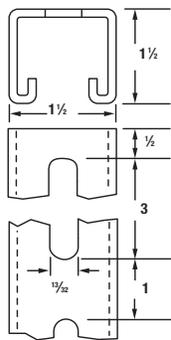
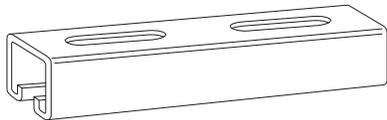
Channel support systems combine economy of investment with maximum strength and rigidity. The continuous-slot channel provides complete flexibility of lighting layout with fixture spacing continuous or intermittent. Fixtures may be added or relocated to meet changing requirements without disturbing the basic support system. The rigid channels maintain fixture alignment and adapt to any interval of structural support.



### G-950 Fixture Hanging Channel

| CAT. NO.     | DESCRIPTION              | JOINER |
|--------------|--------------------------|--------|
| <b>G-950</b> | 1 1/2" x 1 1/8" x 12 ga. | G-978C |

1 1/16" x 2 1/4" slots on 4 foot centers.  
20 ft. lengths only 194#/C ft.  
Standard finish: Galv-Krom®.

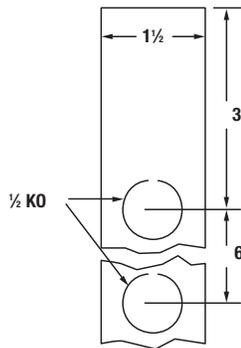
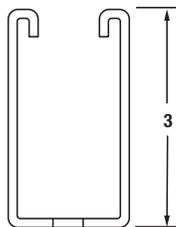
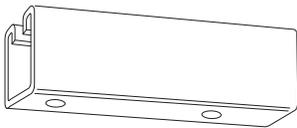


### G-953 Fixture Hanging Channel



| CAT. NO.     | DESCRIPTION              | JOINER |
|--------------|--------------------------|--------|
| <b>G-953</b> | 1 1/2" x 1 1/2" x 12 ga. | G-958  |

Fixtures attached to channel of G-973-2-1/4 shoulder bolts. 154#/C ft.  
1 3/2" x 3" slots on 4" centers.  
Standard finish: Galv-Krom®.



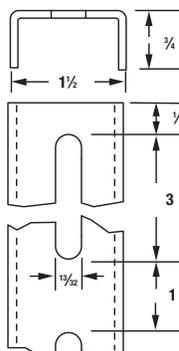
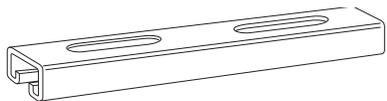
### G-955 Fixture Hanging Channel

To be used in place of G-975 channel when heavy fixtures are used or supports are on wider spacing.



| CAT. NO.     | DESCRIPTION          | JOINER  | END CAP        |
|--------------|----------------------|---------|----------------|
| <b>G-955</b> | 1 1/2" x 3" x 12 ga. | G-978-D | G-957<br>G-959 |

270#/C ft. UL Listed for raceway.  
1/2" KOs on 6" centers.  
Standard finish: Galv-Krom®.



### G-956 Fixture Hanging Channel

Similar to G-953 channel except lighter gauge and only 3/4" deep.

| CAT. NO.     | DESCRIPTION            | JOINER |
|--------------|------------------------|--------|
| <b>G-956</b> | 1 1/2" x 3/4" x 14 ga. | G-960  |

Fixtures attached to channel by means of G-973-1-1/2 shoulder bolts or G-973-2-1/4 fixture bolts. 80#/C ft.  
1 3/2" x 3" slots on 4" centers.  
Standard finish: Galv-Krom®.

## Surface Raceway and Lighting Support Systems



### G-957 End Cap

Blank end cap for use with G-955 and B-902 channel.

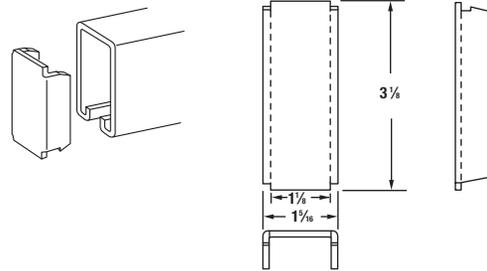


| CAT. NO.     | WT. LBS./C |
|--------------|------------|
| <b>G 957</b> | 14         |

14 ga. steel.

UL Listed for raceway.

Galv-Krom® finish.



### G-958 Channel Joiner

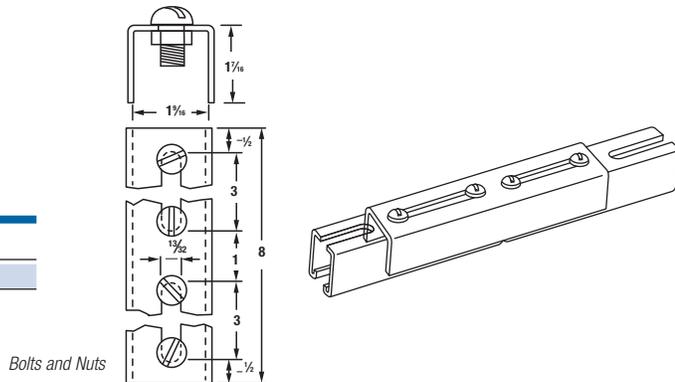
For 1 1/2" deep-slotted channel G-953.

| CAT. NO.     | WT. LBS./C |
|--------------|------------|
| <b>G 958</b> | 92         |

Four 3/8" x 3/4" bolts and nuts are furnished with the joiner.

14 ga. steel.

Galv-Krom® finish.



### G-959 End Cap

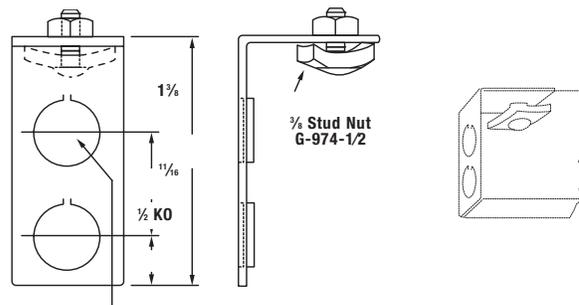
For use with G-955 and B-902 channel.

| CAT. NO.     | DESCRIPTION             | WT. LBS./C |
|--------------|-------------------------|------------|
| <b>G 959</b> | With two 1/2" Knockouts | 31         |

12 ga. steel.

UL Listed for raceway.

Galv-Krom® finish.



### G-960 Channel Joiner

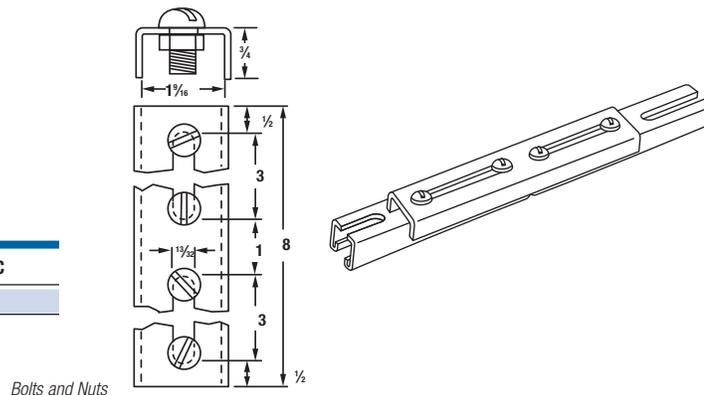
For 3/4" deep-slotted channel G-956.

| CAT. NO.     | WT. LBS./C |
|--------------|------------|
| <b>G 960</b> | 70         |

Four 3/8" x 3/4" bolts and nuts are furnished with the joiner.

14 ga. steel.

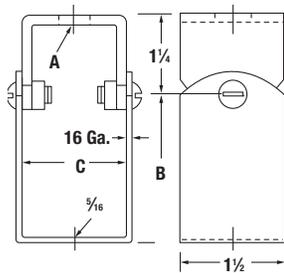
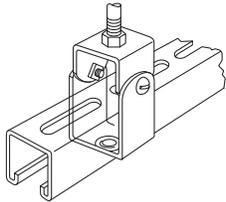
Galv-Krom® finish.



# Kindorf®

## Surface Raceway and Lighting Support Systems

Kindorf® Modular Metal Framing and Support System



### G-962 and G-962-D Channel Hangers

G-962 fits around 1/2" or 17/8" deep channel. G-962-D series hangers for 3" deep channel.

| CAT. NO. | WT. LBS./C | CAT. NO.    | WT. LBS./C | HANGER SIZE (IN.)    | DIM. A (IN.) |
|----------|------------|-------------|------------|----------------------|--------------|
| G-962-1  | 40         | G-962-D-1   | 47         | 1/4 and 3/8 rod      | 13/32        |
| G-962-2  | 42         | G-962-D-2   | 47         | 1/2 rod and 1/4 pipe | 9/16         |
| G-962-3  | 39         | G-962-D-3   | 47         | 3/8 pipe and 3/8 rod | 11/16        |
| G-962-4* | 47         | G-962-D-4** | 47         | 1/2 pipe             | 7/8          |

\* Load rating of 600 lbs. with a safety factor of three.

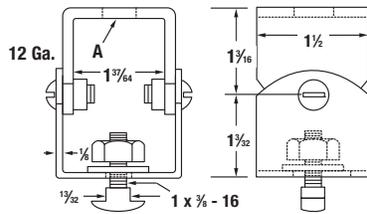
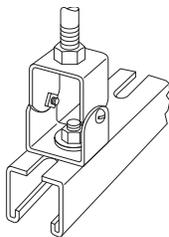
\*\* Load rating of 700 lbs. with a safety factor of three.

"B" dimension for G-962: 2 1/2"; for G-962-D: 4".

UL Listed for raceway.

"C" dimension for G-962, 1 3/4"; for G-962-D, 3 1/4".

Galv-Krom® finish.



### G-963 Channel Hanger

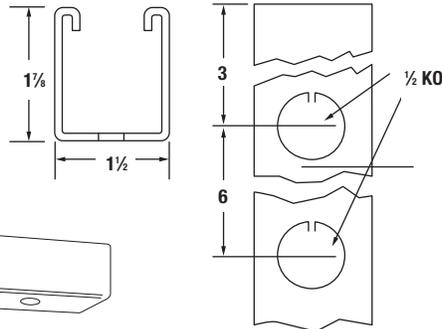
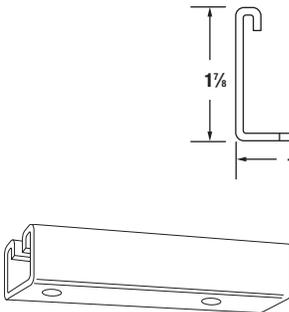
For use with G-953 or G-956 channel. Does not interfere with fluorescent fixtures.

| CAT. NO. | HANGER SIZE (IN.)    | DIM. A (IN.) |
|----------|----------------------|--------------|
| G-963-1  | 1/4 and 3/8 rod      | 13/32        |
| G-963-2  | 1/2 rod and 1/4 pipe | 9/16         |

Load rating of 900 lbs. with a safety factor of three.

48#/C.

Galv-Krom® finish.



### G-965 Fixture Hanging Channel

Provides a combination fixture support and surface raceway.

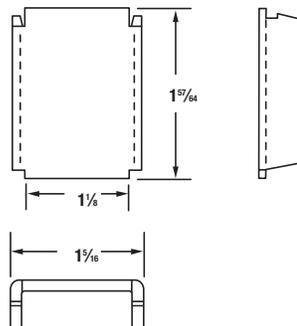
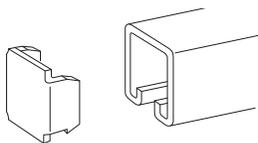


| CAT. NO.               | DESCRIPTION        | JOINER  | END CAP |
|------------------------|--------------------|---------|---------|
| <b>1 1/2" x 1 7/8"</b> |                    |         |         |
| G-965                  | 12 ga., 190#/C ft. | G-978-C | 6959    |

UL Listed for raceway.

1/2" knockouts on 6" centers.

Standard finish: Galv-Krom®.



### G-966 Blank End Cap

For 1 7/8" deep channel.



| CAT. NO. | WT. LBS./C |
|----------|------------|
| G-966    | 8          |

UL Listed for raceway.

Galv-Krom® finish.

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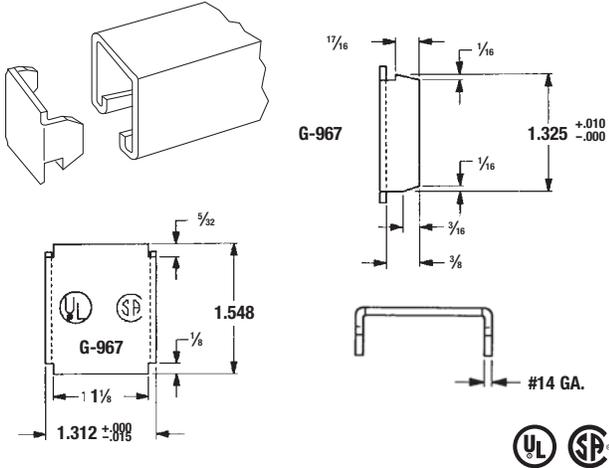
## Surface Raceway and Lighting Support Systems



Kindorf® Modular Metal Framing and Support System

### G-967 Blank End Cap

- For use with 1/2" deep channel

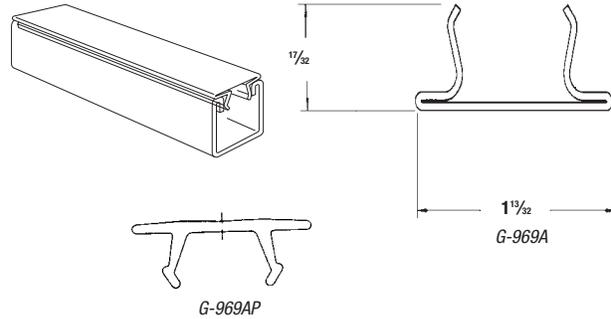


| CAT. NO. | WT. LBS./C |
|----------|------------|
| G 967    | 6          |

UL Listed for raceway.  
Galv-Krom® finish.

### G-969A Closure Strip for Kindorf® Channel

- For use with all channel series to complete enclosure

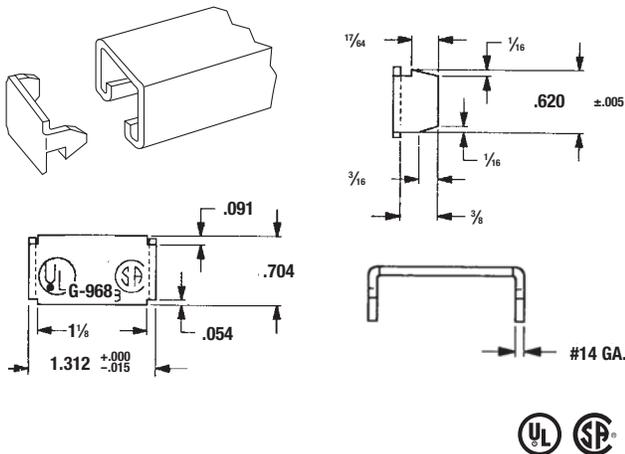


| CAT. NO. | DESCRIPTION                             |
|----------|---|
| G 969A   | Steel Closure Strip — Galv-Krom® finish |
| G-969AP  | Plastic Closure Strip — Gold            |

19 ga. steel. 35#/C.  
UL Listed for raceway.

### G-968 Blank End Cap

- For 3/4" deep channel

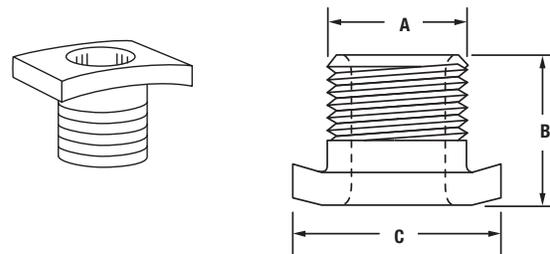


| CAT. NO. | WT. LBS./C |
|----------|------------|
| G 968    | 3          |

UL Listed for raceway.  
Galv-Krom® finish.

### G-972 Nipple Malleable Iron

The 1/2" size can nipple fixtures through channel knockouts. All sizes can be fastened to the open slot of all Kindorf® channels. Locknut supplied with nipple.

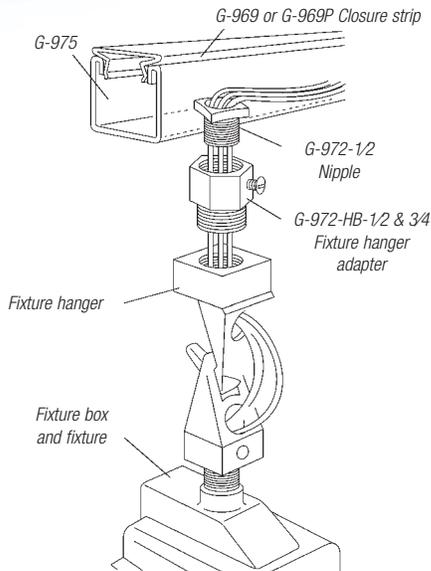


| CAT. NO.    | DIMENSIONS (IN.) |     |       | WT. IN LBS./C |
|-------------|------------------|-----|-------|---------------|
|             | A                | B   | C     |               |
| G 972 1/2   | 1/2 pipe size    | 7/8 | 1 1/4 | 7             |
| G-972-3/4   | 3/4 pipe size    | 1   | 1 1/4 | 11            |
| G 972 L 1/2 | 1/2 pipe size    | 2   | 1 1/4 | 9             |

The extra length of the G-972-L-1/2 permits its use as a spacing nipple when locked into knockout or continuous slot.

Load rating 750#, with a safety factor of 3.

Galv-Krom® finish.

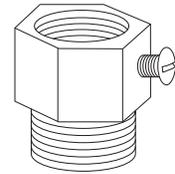


### G-972-HB-1/2 Steel Fixture Hanger Adapter

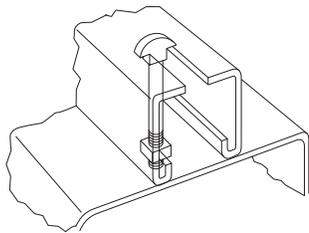
The Fixture Hanger Adapter extends the flexibility of the Kindorf® System by easily adapting the 3/4" hanger size of high-intensity fixtures to channel mounting.

The hanger adapter securely mounts the fixture hanger or box to the channel through the 1/2" KO in the base. No special tools are needed for installation of fittings and fixtures.

Kindorf® channel, with 1/2" KOs every 6", hangs and feeds the fixtures — thus simplifying installation.



| CAT. NO.     | DESCRIPTION       | WT. LBS./C |
|--------------|-------------------|------------|
| G 972 HB 1/2 | Galv-Krom® finish | 17         |

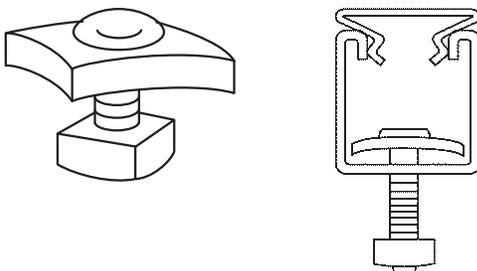


### G-973 Shoulder Type Fixture Bolt and Nut

For use in fastening fixtures to slotted channels. Permits the preassembly of hardware to the fixture. The head of the G-973 is simply inserted into the channel slot and twisted 90° to seat. The fixture is secured tightly when the nut is run home.

| CAT. NO.    | USED WITH CHANNEL | SIZE (IN.)  | WT. LBS./C |
|-------------|-------------------|-------------|------------|
| G 973 1 1/2 | G-956             | 1/2 x 1 1/2 | 7          |
| G 973 2 1/4 | G-953             | 3/8 x 2 1/4 | 10         |

Galv-Krom® finish.



### G-974 Fastener

Will fasten fluorescent fixtures to G-975 through knockouts or to the open slot of all Kindorf® channels when installed slot down.

| CAT. NO.    | SIZE (IN.)  | WT. LBS./C |
|-------------|-------------|------------|
| G-974-1/2   | 1/4 x 1/2   | 8          |
| G-974-3/4   | 1/4 x 3/4   | 8 1/2      |
| G-974-1     | 1/4 x 1     | 9          |
| G 974 1 1/4 | 1/4 x 1 1/4 | 10         |
| G-974-1-1/2 | 1/4 x 1 1/2 | 11         |

Galv-Krom® finish.

## Surface Raceway and Lighting Support Systems



Modular Metal Framing and Support System

### G-975 Fixture Hanging Channel

Designed to provide a combination fixture support and surface raceway. Fixture attaches to KOs by G-972-1/2 nipple for wiring, or a G-974 stud nut where wiring is not required.

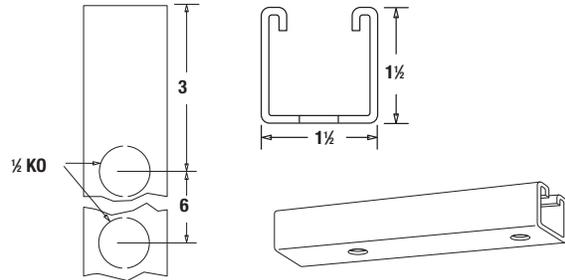


| CAT. NO.          | DESCRIPTION | JOINER  | END CAP |
|-------------------|-------------|---------|---------|
| <b>1½" x 1½"</b>  |             |         |         |
| <b>G 975 10</b>   | 12 ga.      | G978A   | G967    |
| <b>G 975 20</b>   | 12 ga.      | G978A   | G967    |
| <b>G 975 M 10</b> | 14 ga.      | G1503-S | G979    |
| <b>G 975 M 20</b> | 14 ga.      | G1503-S | G979    |

G-975: 160#/C ft. G-975-M: 107#/C ft. UL Listed for raceway.

½" knockouts on 6" centers.

Standard finish: Galv-Krom®.



### G-976 Connector

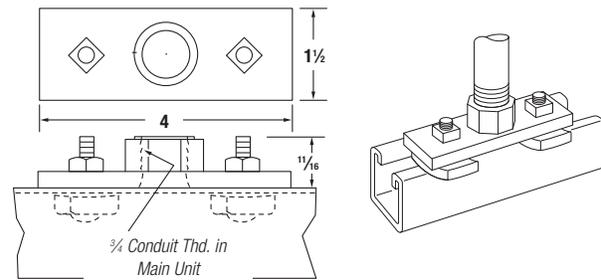
Accepts either ½" or ¾" conduit to feed control channel when used as a combination raceway and lighting fixture support. Includes two stud nuts. Malleable iron.



| CAT. NO.     | DESCRIPTION       | WT. LBS./C |
|--------------|-------------------|------------|
| <b>G 976</b> | Galv-Krom® finish | 54         |

Load rating 1,000# with a safety factor of 3.

UL Listed for raceway.



### G-977 Swing Connector (Channel Feed Hanger)

Provides a 15° swing in either direction to the channel run. Accepts ½" or ¾" conduit, or may be adapted for use with ¾" fixture stem when specified.



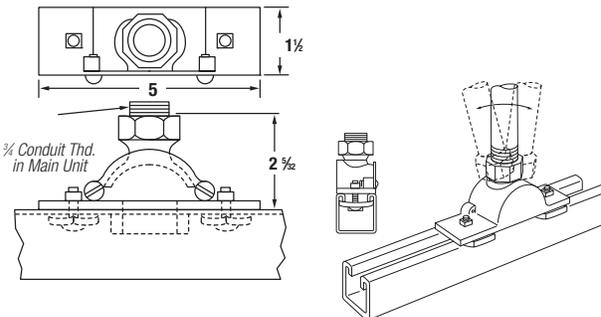
| CAT. NO.     | DESCRIPTION       | WT. LBS./C |
|--------------|-------------------|------------|
| <b>G 977</b> | Galv-Krom® finish | 130        |

Includes two stud nuts.

Malleable iron.

UL Listed for raceway.

Load rating of 1,300 lbs. with a safety factor of three.



### G-978 Joiners

To splice lengths of raceway channel. Installed by tightening nuts on ¼" studs which are permanently attached to a smooth inner plate.

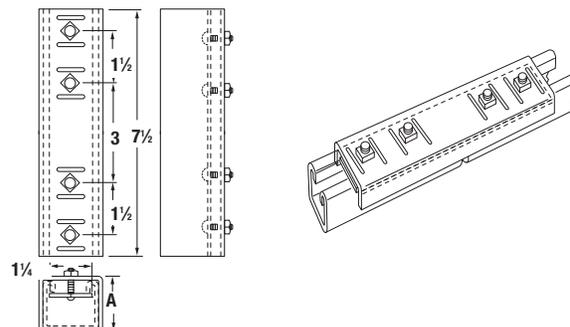


| CAT. NO.       | TYPE OF CHANNEL APPLICABLE                 | DIM. A (IN.) | WT. LBS./C |
|----------------|--|--------------|------------|
| <b>G 978</b>   | Use with G-975, G-975-M and B-900, B-900-M | 1½           | 107        |
| <b>G-978-L</b> | Use with B-906                             | ¾            | 87         |
| <b>G-978-D</b> | Use with G-955 and B-902                   | 3            | 137        |
| <b>G-978-C</b> | Use with B-901, G-950 and G-965            | 1½           | 122        |

Nuts included. 14 ga. steel.

UL Listed for raceway.

Galv-Krom® finish.



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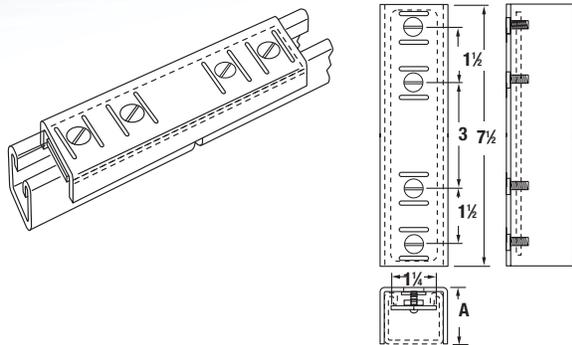
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### G-978-A Joiners

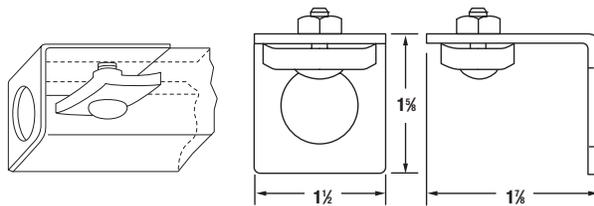
For installations where fixtures are mounted flush to slot-down channels. Fastening is accomplished by tightening flat head machine screws.



| CAT. NO.        | TYPE OF CHANNEL APPLICABLE                 | DIM. A (IN.) | WT. LBS./C |
|-----------------|--|--------------|------------|
| <b>G 978A</b>   | Use with G-975, G-975-M and B-900, B-900-M | 1 1/2        | 103        |
| <b>G-978-AL</b> | Use with B-906                             | 3/4          | 83         |

14 ga. steel.

Galv-Krom® finish.



### G-979 End Cap

Use with G-975 or B-900 channel to provide conduit entrance.



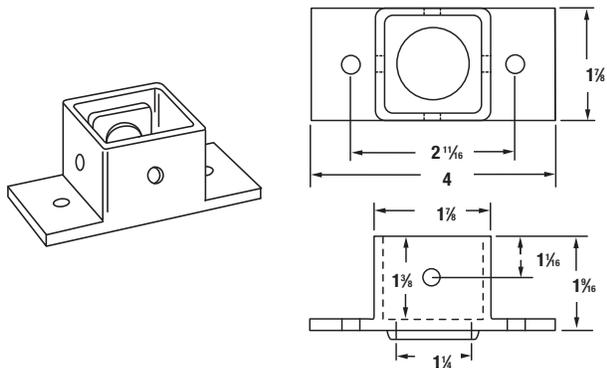
| CAT. NO.         | DESCRIPTION                   | WT. LBS./C |
|------------------|-------------------------------|------------|
| <b>G 979 1/2</b> | For 7/8" Hole, 1/2" Conduit   | 25         |
| <b>G-979-3/4</b> | For 1 1/2" Hole, 3/4" Conduit | 25         |

Furnished with stud nut.

12 ga. steel.

UL Listed for raceway.

Galv-Krom® finish.



### G-1007 Panel Adapter

Mounts 1 1/2" x 1 1/2" raceway channel to panel board.

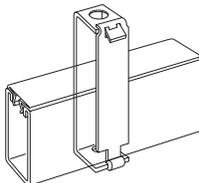


| CAT. NO.      | WT. LBS./C |
|---------------|------------|
| <b>G 1007</b> | 36         |

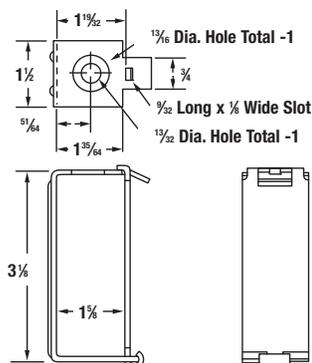
Complete with stud nuts.

UL Listed for raceway.

Galv-Krom® finish.



Hinged channel hanger for raceway channel.



### G-1012 "Lay-In" Channel Hanger



| CAT. NO.      | DESCRIPTION       | WT. LBS./C |
|---------------|-------------------|------------|
| <b>G 1012</b> | Galv-Krom® Finish | 33         |

14 ga. steel.

UL Listed for raceway.

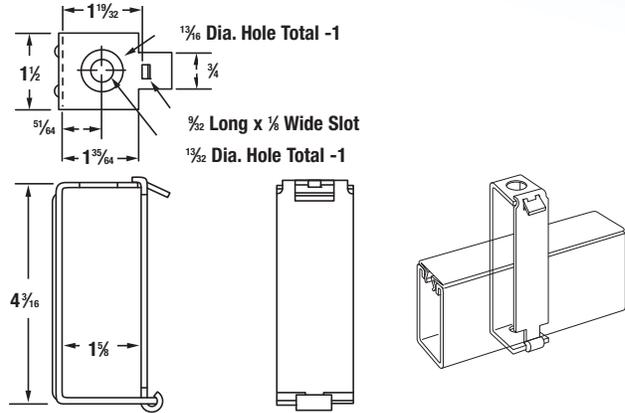
Load rating of 500 lbs. with a safety factor of three.

## Surface Raceway and Lighting Support Systems



### G-1012-D "Lay-In" Channel Hanger

Hinged channel hanger for 3" deep raceway channel.



| CAT. NO.        | DESCRIPTION       | WT. LBS./C |
|-----------------|-------------------|------------|
| <b>G 1012 D</b> | Galv-Krom® Finish | 40         |

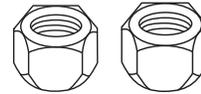
14 ga. steel.

UL Listed for raceway.

Load rating of 450 lbs. with a safety factor of three.

### G-1013 Hex Swivel Nuts

Two required for each G-1012 channel hanger to provide swivel action.



| CAT. NO.          | DESCRIPTION         | WT. LBS./C |
|-------------------|---------------------|------------|
| <b>G 1013 3/8</b> | For 3/8" Hanger Rod | 7          |
| <b>G-1013-1/2</b> | For 1/2" Hanger Rod | 7          |

### G-1016 Rubber Washer

Washers are 1" diameter, 1/4" thick with 5/16" hole.

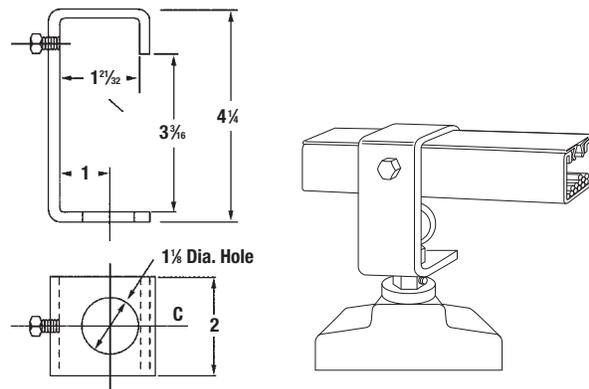
Use with G-1012 fixture hanger as cushion between fixture and hanger.



| CAT. NO.      | WT. LBS./C |
|---------------|------------|
| <b>G 1016</b> | 1          |

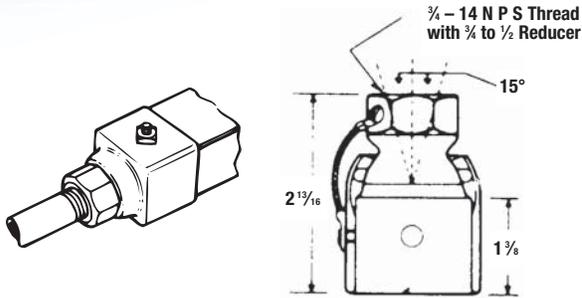
### G-1017 Mercury Vapor Hanger

To support high- or low-bay mercury vapor or heavy incandescent fixtures from raceway channels. Permits plug-in connections with G-1038 raceway outlets.



| CAT NO.       | USED WITH CHANNEL            | DEPTH SIZE (IN.) | WT. LBS./C |
|---------------|------------------------------|------------------|------------|
| <b>G 1017</b> | B-900, B-901<br>G-975, G-965 | 4 1/4            | 76         |

Galv-Krom® finish.



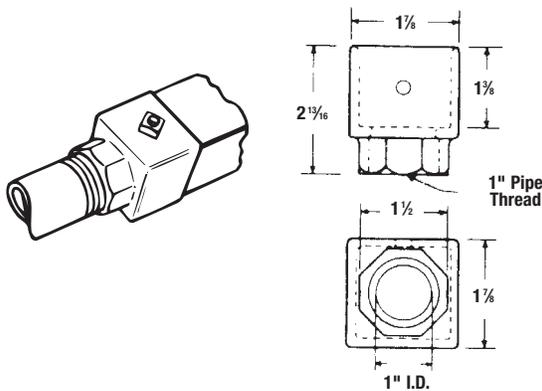
### G-1020 End Swivel Joint

Mounts to 1 1/2" x 1 1/2" raceway channel. Threaded for 3/4" conduit or fitting. Swivel action adapter for 1/2" conduit furnished.



| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G 1020   | Galv-Krom® Finish | 40         |

UL Listed for raceway.



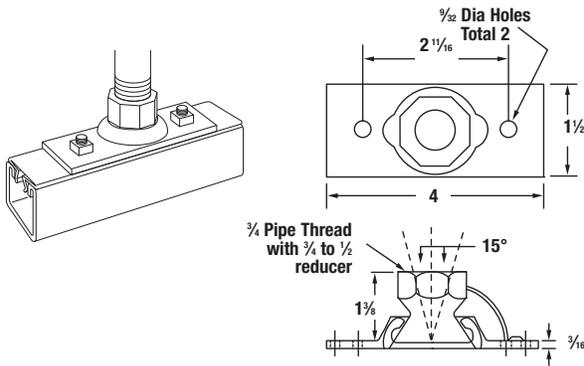
### G-1021 Threaded End Fitting

Mounts to 1 1/2" x 1 1/2" raceway channel. Threaded for 1" conduit or fitting. No swivel action.



| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G 1021   | Galv-Krom® Finish | 32         |

UL Listed for raceway.



### G-1032 Channel Swivel Joint

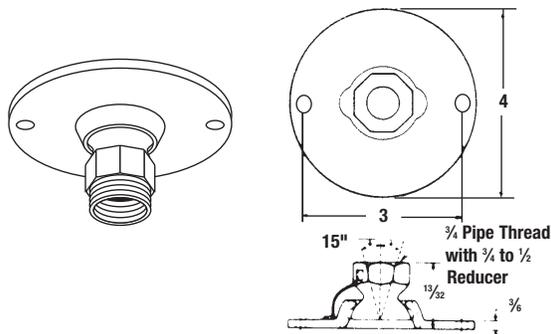
Provides a 15° swivel action (to offset possible movement) for connection of 1/2" or 3/4" conduit to raceway channels. May be accepted for use with 3/8" fixture stem when specified. Order two G-974 3/4" fasteners for channel mounting.



| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G 1032   | Galv-Krom® Finish | 25         |

Load rating 500# with a safety factor of 3.

UL Listed for raceway.



### G-1033 4" Diameter Swivel Cover

Cover for G-2000 through G-2004 junction boxes. Use with 3/4" or 1/2" conduit. Swivel action.



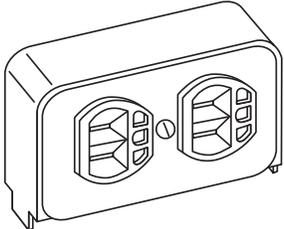
| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G 1033   | Galv-Krom® Finish | 35         |

Load rating 400 lbs. with a safety factor of three. UL Listed for raceway.

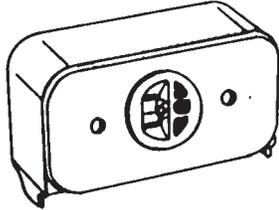
## Surface Raceway and Lighting Support Systems



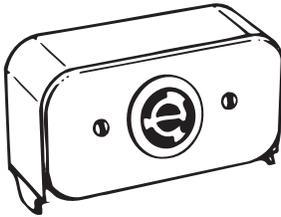
### Raceway Outlets



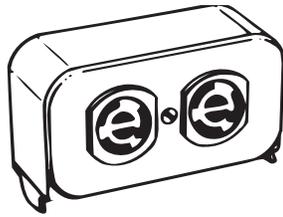
Complete unit including housing, standard duplex 3-wire, 15-amp. 125-volt NEMA ground receptacle and cover plate.



Complete unit including housing, standard single 3-wire, 15-amp. 125-volt NEMA ground receptacle and cover plate.



Complete unit including housing, duplex, 3-wire, 15-amp. 277-volt-twistlock receptacle and cover plate.



Complete unit including housing, single, 3-wire, 15-amp. 277-volt-twistlock receptacle and cover plate.



| CAT. NO. | DESCRIPTION | WT. LBS./C |
|----------|-------------|------------|
| G 1038   | Gold Finish | 55         |
| G 1038 A | Gold Finish | 50         |
| G-1038-D | Gold Finish | 60         |
| G 1038 E | Gold Finish | 50         |

UL Listed for raceway.

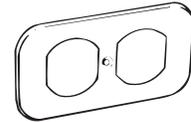
### G-1038-B Housing Only

| CAT. NO. | DESCRIPTION | WT. LBS./C |
|----------|-------------|------------|
| G 1038 B | Gold Finish | 25         |



### G-1038-C Duplex Cover Plate

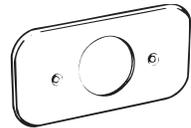
| CAT. NO. | DESCRIPTION | WT. LBS./C |
|----------|-------------|------------|
| G 1038 C | Gold Finish | 12         |



### G-1038-CA Single Cover Plate

| CAT. NO.  | DESCRIPTION | WT. LBS./C |
|-----------|-------------|------------|
| G 1038 CA | Gold Finish | 14         |

Size of opening: 1.391 diameter



### G-1038-CX Blank Cover Plate

| CAT. NO.  | DESCRIPTION | WT. LBS./C |
|-----------|-------------|------------|
| G 1038 CX | Gold Finish | 15         |



### G-1060 Nylon Bushing

| CAT. NO. | WT. LBS./C |
|----------|------------|
| G-1060   | 2          |

Strain relief bushing to protect lead from fluorescent fixture.



Modular Metal Framing and Support System

### Channel Joiners for Lay-In Wiring

The direction-change joiner fittings for Kindorf® Channels expand to three, the number of channel depths available for complete raceway wiring systems.

Joiner fittings are made for 1½", 1⅞" and 3" depths of 1½" wide channels. These three systems provide raceway conductor fill capacities for any lighting layout and with erected strength to spare for lighting fixture support.

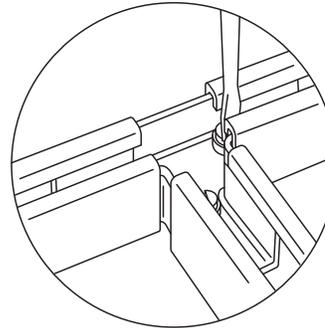
The joiner fitting rests inside the channel without obstructing the channel, or the lay-in of electrical conductors. No time-consuming "fishing" of conductors at the elbows, tee and crosses.

Installation is fast. Simply insert the fitting into the end of the channel and turn the captive set-screw. This "jack-screws" the fitting sidewalls beneath the channel lips for snug, strong joints. Standard Kindorf® Channel Closure Strip is used for a completely enclosed raceway.

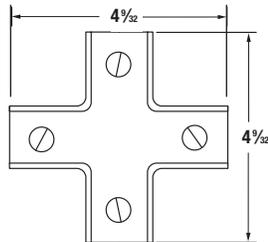
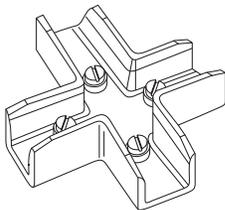
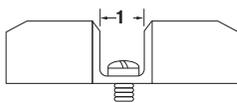
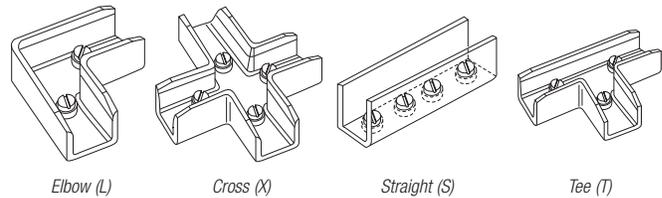
Listed by Underwriters Laboratories, Inc.

#### G-1500, G-1870 and G-3000 Series Direction Change Joiner Assemblies

Direction change joiners for 1½", 1⅞" and 3" deep raceway channels complete with screws and washers. Joiners fit into end of channel. When screws are tightened, joiner is forced up against channel lips for secure installation. Conductors can be laid in, no pulling required. No need for junction boxes. Available in X, T, L and S configurations. Support required within 12" of each joiner.



Channel should be supported a minimum of 12" from joiner.

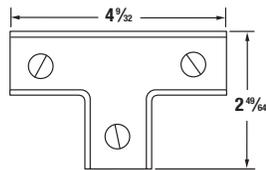
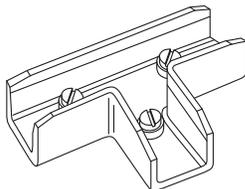
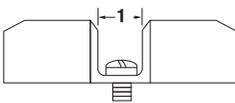


### X-Style — G-1500X, G-1870X and G-3000X



| CAT. NO.             | FOR USE WITH CHANNEL NO. | WT. LBS./C |
|----------------------|--------------------------|------------|
| <b>Cast Aluminum</b> |                          |            |
| G 1500 X             | B-900 & G-975            | 44         |
| G-1870X              | B-901 & G-965            | 51         |
| G-3000X              | B-902 & G-955            | 79         |

Galv-Krom® finish.



### T-Style — G-1501T, G-1871T and G-3001T



| CAT. NO.             | FOR USE WITH CHANNEL NO. | WT. LBS./C |
|----------------------|--------------------------|------------|
| <b>Cast Aluminum</b> |                          |            |
| G 1501 T             | B-900 & G-975            | 34         |
| G-1871T              | B-901 & G-965            | 45         |
| G-3001T              | B-902 & G-955            | 66         |

Galv-Krom® finish.

## Surface Raceway and Lighting Support Systems

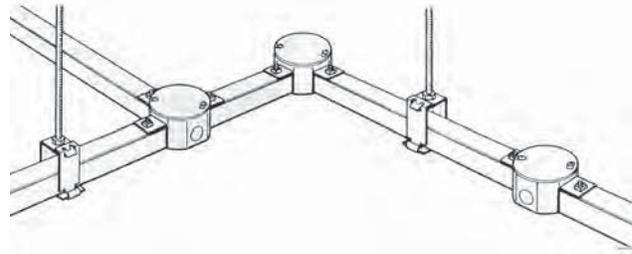


### Kindorf® Raceway System Fittings for 1½" x 1½" Channel Systems

The Kindorf® Channel system serves both as a raceway for electrical conductors and a support system for the electrical outlets or tap-offs.

Kindorf® is a complete wiring and support system with fittings and accessories for the design and installation of your electrical system.

A full line of direction change junction boxes are provided for use with the Kindorf® raceway system. These are made up of a standard Steel City® octagon box, box cover and attachment fittings. Assemblies as shown are available complete, or members can be purchased separately to make up a junction.



### Junction Boxes for 1½" x 1½" Raceway Channels — Galv-Krom® Finish

When purchased as an assembly, the octagon box and cover are Galv-Krom® finish to match the channel and end cap and all parts are factory fabricated.

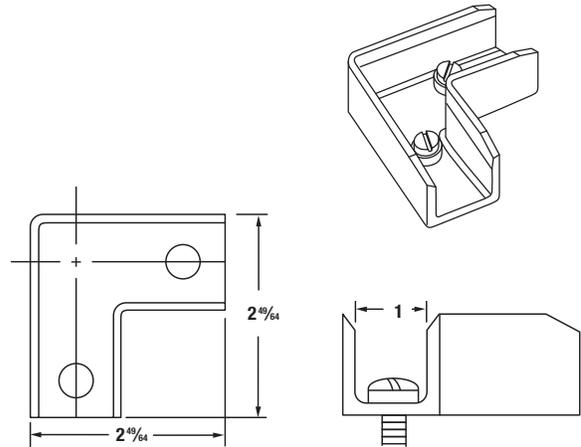
| ITEM  | QUANTITY                    |
|---|-----------------------------|
| <i>The assembly consists of the following components:</i> |                             |
| Octagon Box   | 1                           |
| Box Cover   | 1                           |
| Locknuts  | 1, 2, 3, or 4 (as required) |
| Nipples   | 1, 2, 3, or 4 (as required) |
| End Caps  | 1, 2, 3, or 4 (as required) |

### L-Style — G-1502L, G-1872L and G-3002L



| CAT. NO.             | FOR USE WITH CHANNEL NO. | WT. LBS./C |
|----------------------|--------------------------|------------|
| <i>Cast Aluminum</i> |                          |            |
| <b>G 1502 L</b>      | B-900 & G-975            | 25         |
| <b>G-1872L</b>       | B-901 & G-965            | 32         |
| <b>G-3002L</b>       | B-902 & G-955            | 51         |

Galv-Krom® finish.

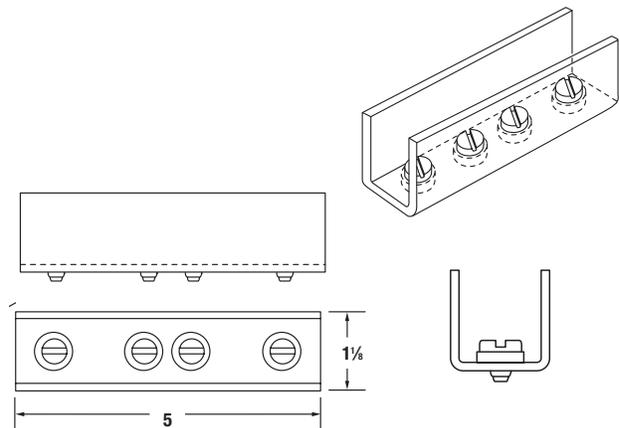


### S-Style — G-1503S, G-1873S and G-3003S



| CAT. NO.        | FOR USE WITH CHANNEL NO. | WT. LBS./C |
|-----------------|--------------------------|------------|
| <i>Steel</i>    |                          |            |
| <b>G 1503 S</b> | B-900 & G-975            | 21         |
| <b>G-1873S</b>  | B-901 & G-965            | 25         |
| <b>G-3003S</b>  | B-902 & G-955            | 36         |

Galv-Krom® finish.



### Raceway Junction Boxes

Kindorf® Raceway System Fittings  
for 1½" x 1½" Channel Systems.



G 2000  
Type "E" 100 lbs./C



G 2001  
Type "C" 121 lbs./C



G 2002  
Type "L" 90°



G 2003  
Type "T" 140 lbs./C



G 2004  
Type "X" 150 lbs./C



G-2001  
Junction Box with No.  
5402-LR outlet box cover  
and field mounted duplex  
receptacle.



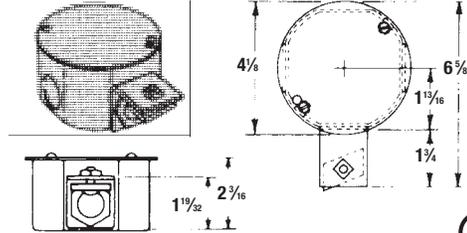
G-1007  
36 lbs./C



G-1033  
For ½" or ¾" conduit feed  
from outlet box 35 lbs./C

### G-2000 Junction Box

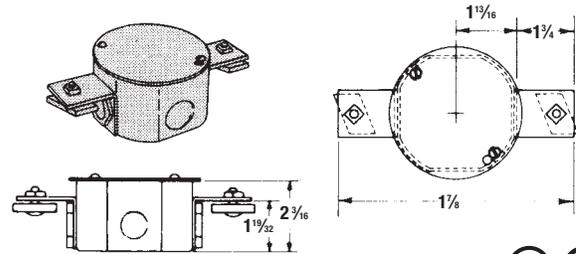
Complete with cover, locknuts, nipples and end caps. Type "E" dead-end junction box for raceway channel. Accepts standard devices and covers for 4" octagon outlet boxes.



| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G 2000   | Galv-Krom® Finish | 123        |

### G-2001 Junction Box

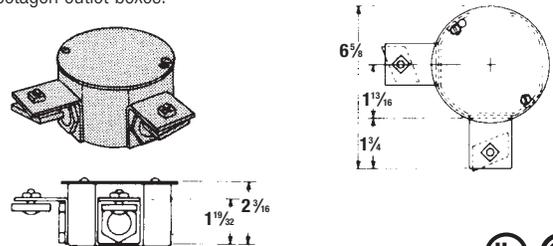
Complete with cover, locknuts, nipples and end caps. Type "C" straight-through junction box for two raceway channels. Accepts standard devices and covers for 4" octagon outlet boxes.



| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G 2001   | Galv-Krom® Finish | 147        |

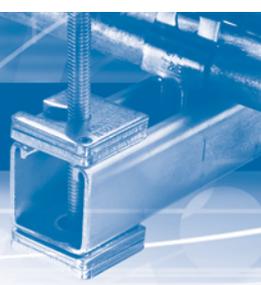
### G-2002 Junction Box

Complete with cover, locknuts, nipples and end caps. Type "L" 90° junction box for two raceway channels. Accepts standard devices and covers for 4" octagon outlet boxes.



| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G 2002   | Galv-Krom® Finish | 120        |

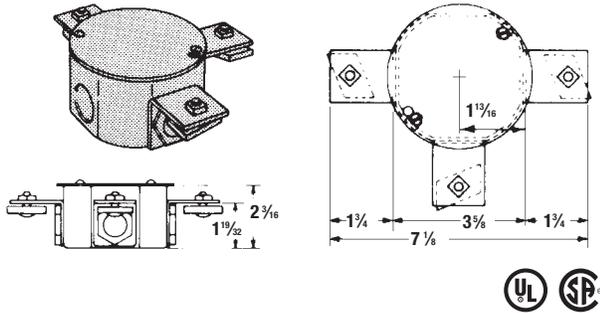
## Surface Raceway and Lighting Support Systems



Kindorf® Modular Metal Framing and Support System

### G-2003 Junction Box

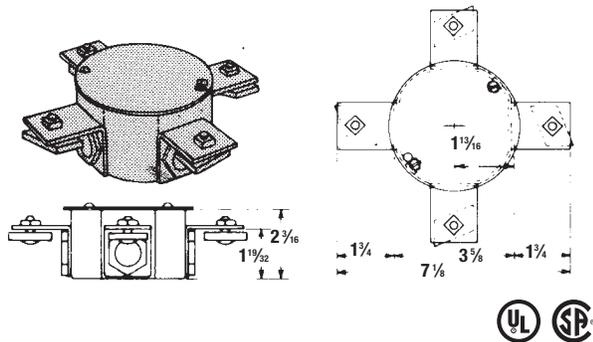
Complete with cover, locknuts, nipples and end caps. Type "T" junction box for three raceway channels. Accepts standard devices and covers for 4" octagon outlet boxes.



| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G 2003   | Galv-Krom® Finish | 140        |

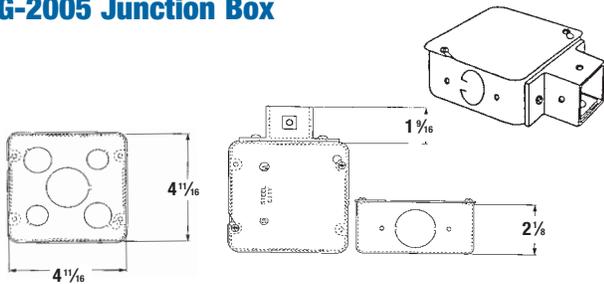
### G-2004 Junction Box

Complete with cover, locknuts, nipples and end caps. Type "X" junction box for four raceway channels. Accepts standard devices and covers for 4" octagon outlet boxes.



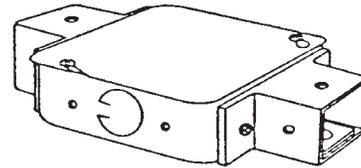
| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G 2004   | Galv-Krom® Finish | 150        |

### G-2005 Junction Box



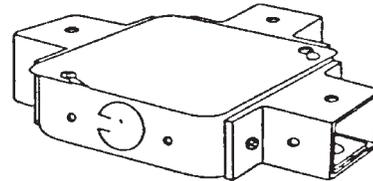
| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G2005    | Galv-Krom® Finish | 189        |

### G-2006 Junction Box



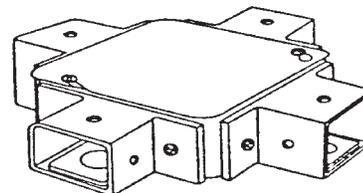
| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G2006    | Galv-Krom® Finish | 225        |

### G-2007 Junction Box



| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G2007    | Galv-Krom® Finish | 261        |

### G-2008 Junction Box



| CAT. NO. | DESCRIPTION       | WT. LBS./C |
|----------|-------------------|------------|
| G2008    | Galv-Krom® Finish | 290        |

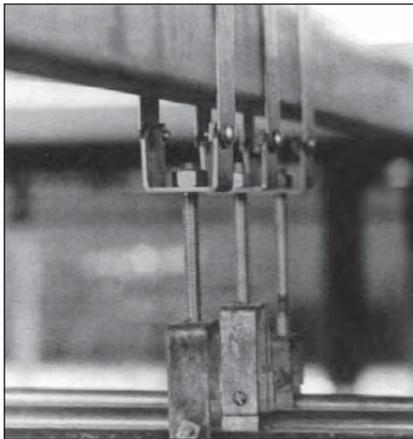
### Fast Installation and Low Maintenance

"Threads" are an integral part of erector systems because nearly everything hangs by or is secured by threaded fasteners. Kindorf® threaded hardware includes continuous rolled-thread hanger rod, and special and standard screws and nuts designed with the necessary holding power to serve the requirements of framing and hanging installations.

It is vital that each thread be fully protected against rust and corrosion because they are usually exposed to corrosive atmospheres. Kindorf® threaded hardware and accessories are completely protected by the same Galv-Krom® finish that protects Kindorf® channel and fittings. Kindorf® extra-quality threads are always:

- Free-running — clean, uniform
- Corrosion resistant — no paint required
- Burr-free — smooth finish

Trouble-free threaded hardware is an investment in fast installation and low maintenance. Free-running threads are a time saving asset on every job — saving fingers and tempers, and eliminating delays that result when threads must be specially treated before use. Threaded rod is packed in tubes to prevent damage during shipment. Kindorf® threaded hardware is produced from high-tensile strength carbon steel with Unified National Coarse (U.N.C.) threads. Galv-Krom® finish is standard.



H-193 Hanger Rod supports conduit from G-962-D hanger. ASTM Class 2.

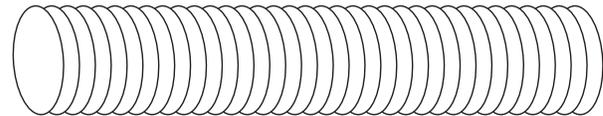
### H104 Hanger Rod, Continuous Thread — Galv-Krom®



| CAT. NO.    | SIZE    | WT./LBS. PER 100 PCS. |
|-------------|---------|-----------------------|
| H104 1/4X6  |         | 73                    |
| H104 1/4X10 | 1/4"-20 | 124                   |
| H104 1/4X12 |         | 148                   |
| H104 3/8X6  |         | 172                   |
| H104 3/8X10 | 3/8"-16 | 293                   |
| H104 3/8X12 |         | 348                   |
| H104 1/2X6  |         | 313                   |
| H104 1/2X10 | 1/2"-13 | 530                   |
| H104 1/2X12 |         | 648                   |
| H104 5/8X6  |         | 510                   |
| H104 5/8X10 | 5/8"-11 | 850                   |
| H104 5/8X12 |         | 1,020                 |

Suffix indicates rod size and length.

### R-Series Continuous Thread Rod — Electro-Galvanized



- 6-, 10- and 12-foot lengths continuous thread

| CAT. NO.     | SIZE    | WT./LBS. PER 100 PCS. |
|--------------|---------|-----------------------|
| R628-6 FT.   | 1/4"-20 | 74                    |
| R1028-10 FT. |         | 120                   |
| R638-6 FT.   | 3/8"-16 | 174                   |
| R1038-10 FT. |         | 290                   |
| R648-6 FT.   | 1/2"-13 | 324                   |
| R1048-10 FT. |         | 530                   |

Suffix indicates rod size and length.

#### NATIONAL COARSE THREAD

| SIZE (IN.) | THREADS PER INCH | LBS./100 FT. | DESIGN LOAD LBS. |
|------------|------------------|--------------|------------------|
| 1/4        | 20               | 12.5         | 150              |
| 3/8        | 16               | 29.0         | 610              |
| 1/2        | 13               | 53.5         | 1,130            |
| 5/8        | 11               | 85.0         | 1,810            |
| 3/4        | 10               | 123.0        | 2,710            |
| 7/8        | 9                | 130.0        | 3,770            |
| 1          | 8                | 214.0        | 4,960            |

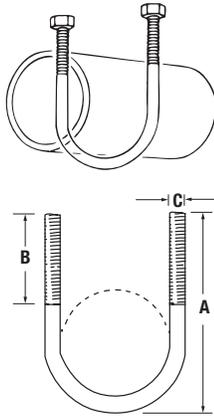
Grade ASTM A-510.



### H115 U-Bolts



"U" bolt to support, anchor or guide pipe lines. Sizes through 4" are furnished with one hex nut per leg in Galv-Krom®. H-286 sizes 5" and above are furnished with two hex nuts per leg in black.

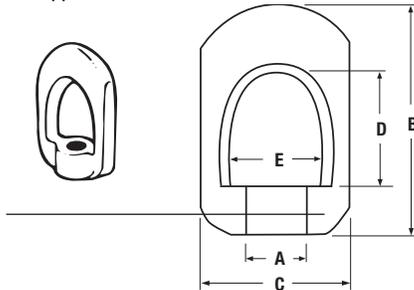


| CAT. NO.<br>AND PIPE SIZE | REC. MAX.<br>LOAD (LBS.) | DIMENSIONS (IN.) |       |     | WT. IN<br>LBS./C |
|---------------------------|--------------------------|------------------|-------|-----|------------------|
|                           |                          | A                | B     | C   |                  |
| H115 1/2                  | 1,500                    | 2 3/4            | 1 3/4 | 3/8 | 13               |
| H115 3/4                  | 2,000                    | 3 3/8            | 1 3/4 | 3/8 | 15               |
| H115 1                    | 2,500                    | 3 3/4            | 1 3/4 | 3/8 | 16               |
| H115 1 1/4                | 2,500                    | 3 1/2            | 1 3/4 | 3/8 | 17               |
| H115 1 1/2                | 2,500                    | 3 3/4            | 1 3/4 | 3/8 | 18               |
| H115 2                    | 3,300                    | 4 1/8            | 2 1/8 | 3/8 | 32               |
| H115 2 1/2                | 4,000                    | 5 1/8            | 2 1/8 | 3/8 | 34               |
| H115 3                    | 4,000                    | 5 1/4            | 2     | 3/8 | 38               |
| H115 3 1/2                | 4,000                    | 6 3/8            | 2     | 3/8 | 40               |
| H115 4                    | 4,000                    | 6 1/8            | 2 1/4 | 3/8 | 46               |
| H115 5                    | 4,000                    | 8 1/2            | 2 1/4 | 1/2 | 128              |
| H115 6                    | 4,000                    | 9 3/4            | 2 3/8 | 3/8 | 239              |
| H115 8                    | 4,000                    | 11 3/4           | 2 3/8 | 3/8 | 283              |

Complies with Fed. Spec. WW-H-171E and MSS SP-69 Type 24.

### M117 Swivel Eye

- H-272 swivel eye has 3/8" or 1/2" tapped hole for hanger rod applications

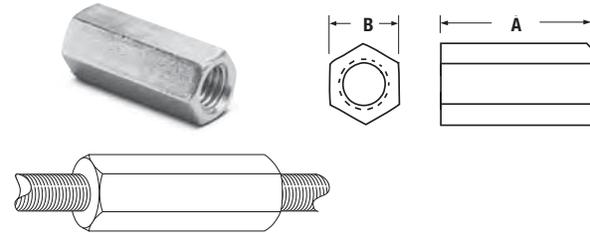


| CAT. NO.  | DIMENSIONS (IN.) |       |       |        |     | LOAD RATING<br>(LBS.) | WT.<br>LBS./C |
|-----------|------------------|-------|-------|--------|-----|-----------------------|---------------|
|           | A                | B     | C     | D      | E   |                       |               |
| M117 3/8B | 3/8-16           | 2 3/4 | 1 1/2 | 1 3/16 | 3/8 | 2,000                 | 19            |
| M117 1/2B | 1/2-13           | 2 3/4 | 1 1/2 | 1 3/16 | 3/8 | 2,000                 | 19            |

Safety factor of three.

### H119 Steel Rod Coupling

For coupling lengths of H-193 hanger rod. Right-hand threaded. Threads tapered to lock rods in place.

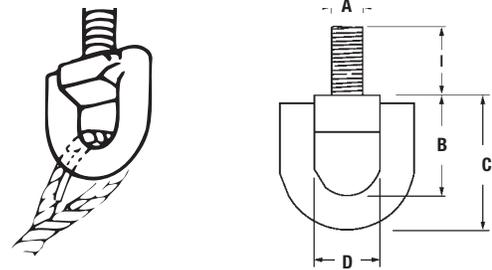


| CAT. NO. | THREADS | DIMENSIONS (IN.) |       | LOAD RATING<br>(LBS.) | WT.<br>LBS./C |
|----------|---------|------------------|-------|-----------------------|---------------|
|          |         | A                | B     |                       |               |
| H119 1/4 | 1/4-20  | 7/8              | 3/8   | 240                   | 2             |
| H119 3/8 | 3/8-16  | 1 1/2            | 1/2   | 610                   | 4             |
| H119 1/2 | 1/2-13  | 1 1/4            | 5/8   | 1,130                 | 5             |
| H119 5/8 | 5/8-11  | 1 1/8            | 13/16 | 1,810                 | 10            |

Galv-Krom® finish.

### E120, E130 Eyelet with 1/2" or 3/8" Stud

For bolting to a supporting member to furnish suspension for rope, chain or cable.



| CAT. NO. | DIMENSIONS (IN.) |       |       |     | LOAD RATING<br>(LBS.) | WT.<br>LBS./C |
|----------|------------------|-------|-------|-----|-----------------------|---------------|
|          | A                | B     | C     | D   |                       |               |
| E120 3/8 | 3/8-16           | 1 3/8 | 1 1/4 | 1/2 | 1,000                 | 23            |
| E130 1/2 | 1/2-13           | 1 1/2 | 2     | 3/4 | 1,800                 | 28            |

Safety factor of three.

Galv-Krom® finish.

### H-120 Saddle-Type Washer

- For rigid attachment of rod to channel
- For use with either 3/8" or 1/2" hanger rod



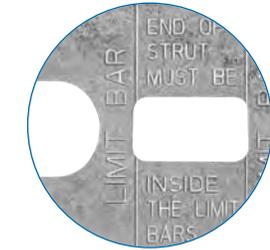
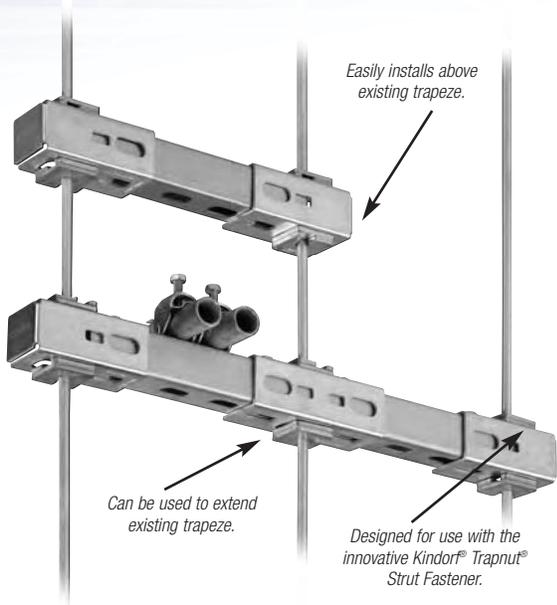
| CAT. NO. | WT.<br>LBS./C |
|----------|---------------|
| H-120    | 7             |

Standard finish: Galv-Krom® unless otherwise specified.

# Kindorf®

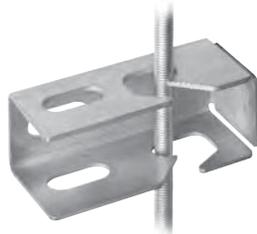
## Hardware and Threaded Components

Kindorf® Modular Metal Framing and Support System



View window provides strut length safety zone for rough cuts versus precision cuts.

Unique safety slot maintains bracket position on threaded rod and prevents disengagement of the trapeze system.



## Handle Retro-Fit Trapeze Applications with Ease! Trap-Eze™ Connector

The innovative Kindorf® Trap-Eze™ Connector changes a time-consuming retro-fit trapeze application into a streamlined process. Using a Kindorf® Trapnut® Strut Fastener, the new Trap-Eze™ Connector can be easily installed above or to the side of an existing assembly, eliminating the need to disassemble and reassemble the trapeze. It is designed for use with shorter strut lengths that can vary in length by as much as an inch, so the strut can be rough cut versus labor-intense precision cuts.

- Easily installs above or to the side of an existing assembly, eliminating the need to disassemble and reassemble the trapeze
- Connectors can be reused upon disassembly of a trapeze
- Designed for either 3/8" and 1/2" threaded rod
- Designed for use with the innovative Kindorf® Trapnut® Strut Fastener, which can take up to 43% less time than standard nuts and washers on retro-fit trapeze applications
- View window provides safety zone for strut length

| CAT. NO.              | DESCRIPTION                       | STD. CTN. |
|-----------------------|-----------------------------------|-----------|
| <b>For 1/2" Strut</b> |                                   |           |
| B998                  | Trap-Eze™ End Connector Gold-Galv | 20        |
| B999                  | Trap-Eze™ Mid Connector Gold-Galv | 10        |
| B998EG                | Trap-Eze™ End Connector EG        | 20        |
| B999EG                | Trap-Eze™ Mid Connector EG        | 10        |

## Trapnut® Strut Fastener



H 122 3/8  
Trapnut® Strut  
Fastener Galv-Krom®



H 122 3/8 EG  
Trapnut® Strut  
Fastener SilverGalv®

| CAT. NO.      | DESCRIPTION                   | SIZE (IN.) | DESIGN LOAD LBS. | STD. CTN. |
|---------------|-------------------------------|------------|------------------|-----------|
| H 122 1/4     | 1/4" Galv-Krom®               | 1/4        | 150              | 50        |
| H 122 3/8     | 3/8" Galv-Krom®               | 3/8        | 590              | 50        |
| H 122 1/2     | 1/2" Galv-Krom®               | 1/2        | 1,080            | 50        |
| H 122 1/4 EG  | 1/4" SilverGalv®              | 1/4        | 150              | 50        |
| H 122 3/8 EG  | 3/8" SilverGalv®              | 3/8        | 590              | 50        |
| H 122 1/2 EG  | 1/2" SilverGalv®              | 1/2        | 1,080            | 50        |
| H 122 1/4 SS6 | 1/4" Type 316 Stainless Steel | 1/4        | 150              | 50        |
| H 122 3/8 SS6 | 3/8" Type 316 Stainless Steel | 3/8        | 590              | 50        |
| H 122 1/2 SS6 | 1/2" Type 316 Stainless Steel | 1/2        | 1,080            | 50        |

**Thomas & Betts**

www.tnb.com

Corporate Office  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

Customer Service  
Tel: 800.816.7809  
Fax: 800.816.7810

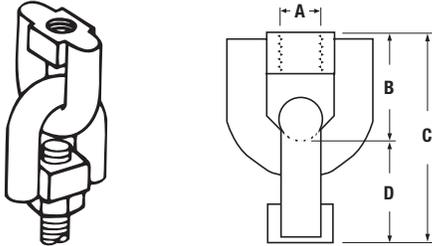
Technical Services  
Tel: 888.862.3289  
Fax: 901.252.1321

Tool Services  
Tel: 800.284.8665



### E122 Swivel Joint

Permits hanger rod to swing freely in any direction.



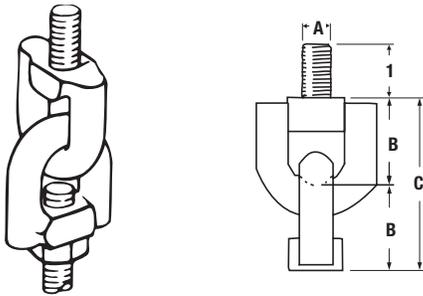
| CAT. NO. | DIMENSIONS (IN.) |       |       | LOAD RATING | WT. LBS./C |
|----------|------------------|-------|-------|-------------|------------|
|          | A                | B     | C     |             |            |
| E122 3/8 | 3/8-16           | 1 1/8 | 2 3/4 | 1,000       | 28         |
| E122 1/2 | 1/2-13           | 1 1/2 | 3     | 1,800       | 48         |

Safety factor of three.

Galv-Krom® finish.

### E131 Swivel Joint with Stud

Same as H-260 but with a 3/8" or 1/2" stud on one end.



| CAT. NO. | DIMENSIONS (IN.) |       |       | LOAD RATING | WT. LBS./C |
|----------|------------------|-------|-------|-------------|------------|
|          | A                | B     | C     |             |            |
| E131 3/8 | 3/8-16           | 1 1/8 | 2 3/4 | 1,000       | 25         |
| E131 1/2 | 1/2-13           | 1 1/2 | 3     | 1,800       | 52         |

Safety factor of three.

Galv-Krom® finish.

### H-134-S Spacer Assembly

Used for attaching fixture to channel with a uniform 1" clearance between fixture and supporting channel. Assembly includes a 1" spacer, a 5/8"-18 x 1 1/2" bolt and jam nut, all galvanized.



| CAT. NO. | WT. LBS./C |
|----------|------------|
| H-134-S  | 21         |

Approved for G.S.A. installations.

### E142 Hex Head Cap Screw — Less Nut



| CAT. NO.       | SIZES (IN.)    | WT. LBS./C |
|----------------|----------------|------------|
| E142 1/2 15/16 | 1/2-13 x 3/4   | 7.0        |
| E142 1/2 15/16 | 1/2-13 x 1     | 9.0        |
| E142 1/2 15/16 | 1/2-13 x 1     | 9.0        |
| E142 1/2 1 1/4 | 1/2-13 x 1 1/4 | 9.0        |
| E142 1/2 1 1/2 | 1/2-13 x 1 1/2 | 10.0       |
| E142 1/2 2     | 1/2-13 x 1 3/4 | 13.0       |
| E142 1/2 2     | 1/2-13 x 2     | 14.0       |
| E142 1/2 2 1/4 | 1/2-13 x 2 1/4 | 16.0       |
| E142 1/2 2 1/2 | 1/2-13 x 2 1/2 | 16.0       |
| E142 1/2 3     | 1/2-13 x 3     | 20.0       |
| E142 1/2 4     | 1/2-13 x 4     | 25.0       |
| E142 3/8 3/4   | 3/8-16 x 3/4   | 3.0        |
| E142 3/8 1     | 3/8-16 x 1     | 4.0        |
| E142 3/8 1 1/4 | 3/8-13 x 1 1/4 | 4.0        |
| E142 3/8 1 1/2 | 3/8-16 x 1 1/2 | 5.0        |
| E142 3/8 2 1/4 | 3/8-16 x 1 3/4 | 6.0        |
| E142 3/8 2 1/4 | 3/8-16 x 2 1/4 | 7.0        |
| E142 3/8 2 1/4 | 3/8-16 x 2 1/4 | 7.0        |
| E142 1/4 1     | 1/4 x 3/4      | 1.0        |
| E142 1/4 1     | 1/4 x 1        | 1.0        |
| E142 1/4 1 1/4 | 1/4 x 1 1/4    | 1.5        |
| E142 1/4 1 1/2 | 1/4 x 1 1/2    | 2.0        |

Standard finish: Galv-Krom® unless otherwise specified.

### E145 Hex Nut



| CAT. NO.  | SIZES (IN.) | WT. LBS./C |
|-----------|-------------|------------|
| E145 1/4  | 1/4-20      | 1.2        |
| E145 5/16 | 5/16-18     | 2.0        |
| E145 3/8  | 3/8-16      | 3.2        |
| E145 1/2  | 1/2-13      | 5.0        |
| E145 3/8  | 5/8-11      | 9.0        |

Standard finish: Galv-Krom® unless otherwise specified.

### E146 Square Nut



| CAT. NO.  | SIZES (IN.) | WT. LBS./C |
|-----------|-------------|------------|
| E146 1/4  | 1/4-20      | 1.00       |
| E146 5/16 | 5/16-18     | 2.40       |
| E146 3/8  | 3/8-16      | 2.37       |
| E146 1/2  | 1/2-13      | 6.00       |
| E146 5/8  | 5/8-11      | 11.00      |

Standard finish: Galv-Krom® unless otherwise specified.

### 54, E149 Round Head Machine Screw — Less Nut



| CAT. NO.       | SIZES (IN.)    | WT. LBS./C |
|----------------|----------------|------------|
| 54 571P        | 1/4-20 x 1/2   | 1.00       |
| 54-572-P       | 1/4-20 x 3/4   | 1.25       |
| 54-574         | 1/4-20 x 1 1/4 | 1.76       |
| 54-576         | 1/4-20 x 2     | 2.54       |
| E149 3/8 1 1/4 | 3/8-16 x 3/4   | 3.45       |

Standard finish: Galv-Krom® unless otherwise specified.

### E147 Flat Steel Washer



| CAT. NO.  | SIZES (IN.) | WT. LBS./C |
|-----------|-------------|------------|
| E147 1/4  | 1/4         | .67        |
| E147 5/16 | 5/16        | 1.20       |
| E147 3/8  | 3/8         | 2.00       |
| E147 1/2  | 1/2         | 3.85       |
| E147 5/8  | 5/8         | 7.70       |
| E147 3/4  | 3/4         | 9.00       |

Standard finish: Galv-Krom® unless otherwise specified.

### E148 Lock Washer



| CAT. NO.  | SIZES (IN.) | WT. LBS./C |
|-----------|-------------|------------|
| E148 1/4  | 1/4         | .259       |
| E148 5/16 | 5/16        | .550       |
| E148 3/8  | 3/8         | .630       |
| E148 1/2  | 1/2         | 1.436      |
| E148 5/8  | 5/8         | 2.587      |
| E148 3/4  | 3/4         | 4.293      |

Standard finish: Galv-Krom® unless otherwise specified.

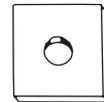
### AB241 Square Washer

| CAT. NO.   | DIMENSIONS (IN.) |           | WT. LBS./C |
|------------|------------------|-----------|------------|
|            | SIZE             | THICKNESS |            |
| AB241 1/4  | 1/4              | 1/8       | 8.10       |
| AB241 5/16 | 5/16             | 1/8       | 8.00       |
| AB241 3/8  | 3/8              | 3/16      | 11.50      |
| AB241 1/2  | 1/2              | 1/4       | 14.36      |
| AB241 5/8  | 5/8              | 1/4       | 13.50      |
| AB241 3/4  | 3/4              | 1/4       | 12.50      |
| AB241 7/8  | 7/8              | 1/4       | 13.00      |

Standard finish: Galv-Krom® unless otherwise specified.



1 1/2



### Located Square Washers

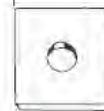
| CAT. NO.     | BOLT SIZE (IN.) | STD. CTN. |
|--------------|-----------------|-----------|
| AB-241L-1/4  | 1/4             | 100       |
| AB-241L-5/16 | 5/16            | 100       |
| AB-241L-3/8  | 3/8             | 100       |
| AB-241L-1/2  | 1/2             | 100       |
| AB-241L-5/8  | 5/8             | 100       |

GoldGalv® is standard finish.

Add "EG" suffix for SilverGalv®.

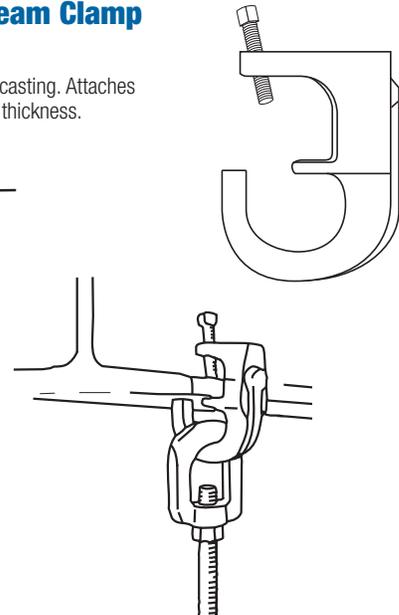
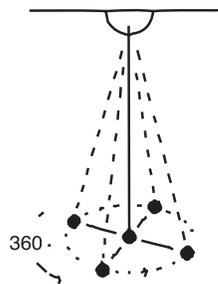


1 1/8



### H-550 Swivel Beam Clamp

One-piece malleable-iron casting. Attaches to beam flanges up to 3/4" thickness.



| CAT. NO. | DESCRIPTION   |
|----------|---|
| H-550    | Max. load rating 500 lbs. with a safety factor of 3.33#C. |

Galv-Krom® finish.



### Fast, Precise Installation Method.

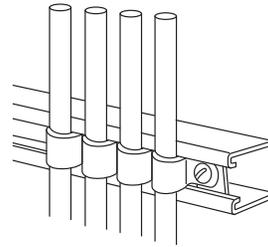
### Kindorf® J-800 System

Designed originally to eliminate costly and time-consuming methods of installing cables aboard ships, the Kindorf® J-800 series of straps, hangers and brackets has found ever-widening applications by mechanical and electrical contractors in general construction. The J-800 system has proven to be a work-saver when used to install tubing or cable. Tubing and cable of various construction and fabrication can be racked efficiently with built-in provisions for making additions or changes at a later date. They can be secured in all combinations and sequences of sizes. A variety of hangers and brackets secures multiple runs as well as single branch take-offs.

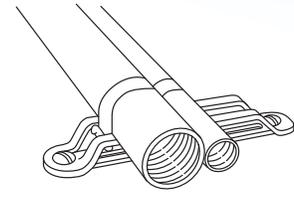
Installation of J-800 straps on Kindorf® supports is simple, requiring only a screwdriver or small wrench. Each run is gripped individually on a hanger and all runs are secured by tightening a single locking device. Loosening the locking device permits fast access to the runs, making it easy to add, remove or adjust them at any time.

J-800 installations have withstood the severe conditions of service at sea for many years. In countless installations, they have proven their ability to withstand the effects of salt air, moisture, shock and vibration.

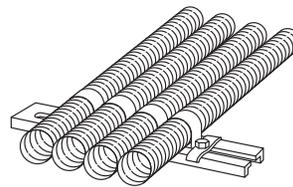
J-800 racking is well known for its fast, yet precise, installation method. A proven method that results in labor economy and neat, workman-like installation.



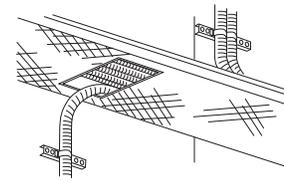
Copper Tubing



Shipboard Cables

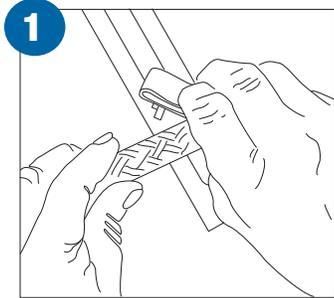


Flexible Tubing

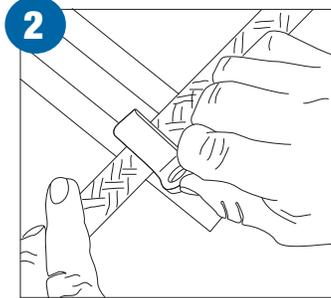


Armored Cable  
(Take-off from Cable Tray)

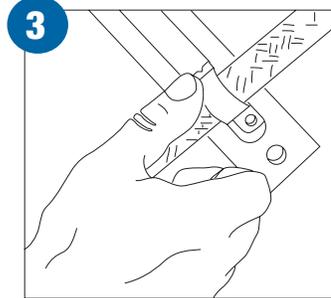
### Installation Steps



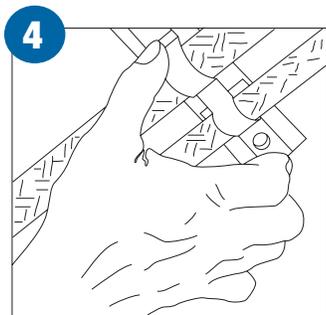
Insert pin of strap in slot of hanger.



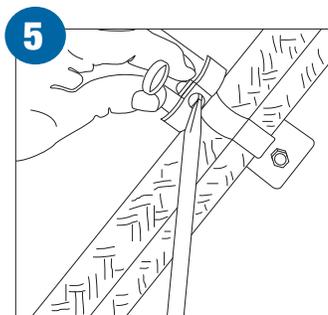
Close Kindorf® cable strap down over cable.



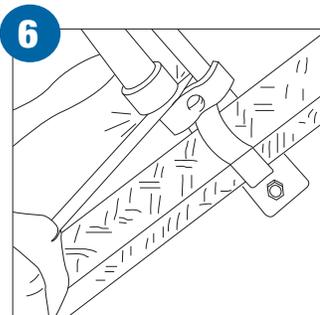
Push strap and cable to end of hanger slot so tongue of strap hooks below slot.



Apply second cable strap, hooking strap tongue under pin of first strap.



Apply locking device and tighten screw moderately.



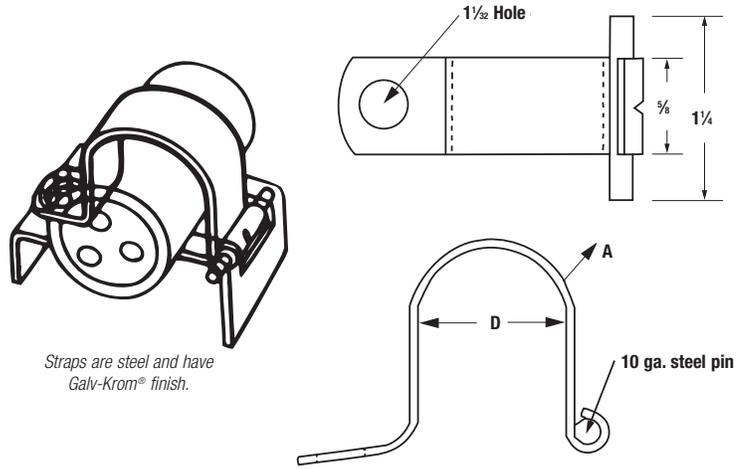
Drive locking device tight against cable strap. Tighten locking device screw.

### J-800 Interlocking Straps

One J-800 strap of the proper diameter is used to secure each run. All straps have a 1/4" pin. In multiple runs the pin is simply twist inserted into the supporting Kindorf® hanger, bracket or channel slot then the strap is closed over the cable or tube to lock the strap tongue under the pin of the adjacent strap.

The same procedure is used for single runs, except the strap tongue is secured directly to the hanger. When all multiple runs have been assembled, they are secured by a single locking device.

J-800 straps can be installed along the continuous slot of any Kindorf® channel. This increases their versatility and extends their possible applications.



Straps are steel and have Galv-Krom® finish.

### J-800 Interlocking Straps

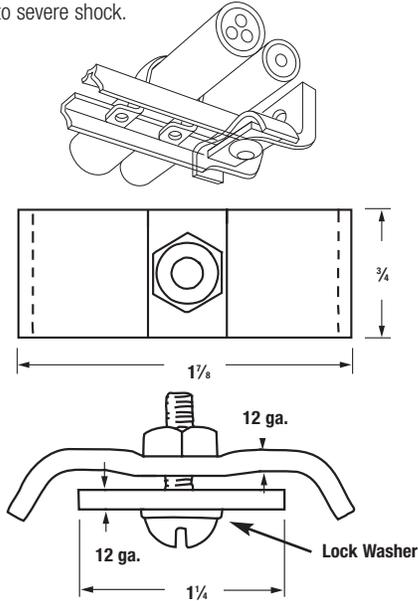
| CAT. NO. & SIZE | STRAP SIZE | A GAUGE | DIMENSIONS (IN.) D MAX. | WT. LBS./C | USE IN NEW KINDORF® CHANNEL | USE IN OLD KINDORF® CHANNEL | USE IN J SERIES MOUNTINGS |
|-----------------|------------|---------|-------------------------|------------|-----------------------------|-----------------------------|---------------------------|
| J 800 8         | 8          | 18      | .2500                   | 2.50       | —                           | 0.250                       | 0.250                     |
| J-800-10        | 10         | 18      | .3124                   | 2.60       | —                           | 0.313                       | 0.313                     |
| J-800-12        | 12         | 18      | .3750                   | 2.75       | 0.250                       | 0.375                       | 0.375                     |
| J-800-14        | 14         | 18      | .4375                   | 2.90       | 0.313                       | 0.438                       | 0.438                     |
| J-800-16        | 16         | 18      | .5000                   | 2.75       | 0.375                       | 0.500                       | 0.500                     |
| J-800-18        | 18         | 18      | .5625                   | 2.90       | 0.438                       | 0.563                       | 0.563                     |
| J-800-20        | 20         | 18      | .6250                   | 3.35       | 0.500                       | 0.625                       | 0.625                     |
| J-800-22        | 22         | 18      | .6875                   | 3.50       | 0.563                       | 0.688                       | 0.688                     |
| J-800-24        | 24         | 18      | .7500                   | 3.65       | 0.625                       | 0.750                       | 0.750                     |
| J-800-26        | 26         | 18      | .8125                   | 3.80       | 0.688                       | 0.813                       | 0.813                     |
| J-800-28        | 28         | 18      | .8750                   | 3.95       | 0.750                       | 0.875                       | 0.875                     |
| J-800-30        | 30         | 18      | .9375                   | 4.10       | 0.813                       | 0.938                       | 0.938                     |
| J-800-32        | 32         | 18      | 1.0000                  | 4.25       | 0.875                       | 1.000                       | 1.000                     |
| J-800-34        | 34         | 18      | 1.0625                  | 4.40       | 0.938                       | 1.063                       | 1.063                     |
| J-800-36        | 36         | 18      | 1.1250                  | 4.55       | 1.000                       | 1.125                       | 1.125                     |
| J-800-38        | 38         | 18      | 1.1875                  | 4.70       | 1.063                       | 1.188                       | 1.188                     |
| J-800-40        | 40         | 18      | 1.2500                  | 4.85       | 1.125                       | 1.250                       | 1.250                     |
| J-800-42        | 42         | 18      | 1.3125                  | 5.00       | 1.188                       | 1.313                       | 1.313                     |
| J-800-44        | 44         | 18      | 1.3750                  | 5.15       | 1.250                       | 1.375                       | 1.375                     |
| J-800-46        | 46         | 18      | 1.4375                  | 5.30       | 1.313                       | 1.438                       | 1.438                     |
| J-800-48        | 48         | 18      | 1.5000                  | 5.45       | 1.375                       | 1.500                       | 1.500                     |
| J-800-50        | 50         | 16      | 1.5625                  | 6.38       | 1.438                       | 1.563                       | 1.563                     |
| J-800-52        | 52         | 16      | 1.6250                  | 6.55       | 1.500                       | 1.625                       | 1.625                     |
| J-800-54        | 54         | 16      | 1.6875                  | 6.73       | 1.563                       | 1.688                       | 1.688                     |
| J-800-56        | 56         | 16      | 1.7500                  | 6.90       | 1.625                       | 1.750                       | 1.750                     |
| J-800-58        | 58         | 16      | 1.8125                  | 7.08       | 1.688                       | 1.813                       | 1.813                     |
| J-800-60        | 60         | 16      | 1.8750                  | 7.25       | 1.750                       | 1.875                       | 1.875                     |
| J-800-62        | 62         | 16      | 1.9375                  | 7.43       | 1.813                       | 1.938                       | 1.938                     |
| J-800-64        | 64         | 16      | 2.0000                  | 7.6        | 1.875                       | 2.000                       | 2.000                     |
| J-800-68        | 68         | 16      | 2.1250                  | 7.95       | 1.938                       | 2.063                       | 2.063                     |
| J-800-72        | 72         | 16      | 2.2500                  | 8.30       | 2.000                       | 2.250                       | 2.250                     |
| J-800-76        | 76         | 16      | 2.3750                  | 8.65       | 2.125                       | 2.375                       | 2.375                     |
| J-800-80        | 80         | 16      | 2.5000                  | 9.00       | 2.250                       | 2.500                       | 2.500                     |
| J-800-84        | 84         | 16      | 2.6250                  | 9.35       | 2.375                       | 2.625                       | 2.625                     |

Separate strap sizes rack 1/4" through 2 5/8" dia. rounds in 1/16" increments.



### J-850 Locking Device

Secures single or multiple interlocked assemblies on bar hangers, mounting brackets and continuous slot channel. For installations not subject to severe shock.

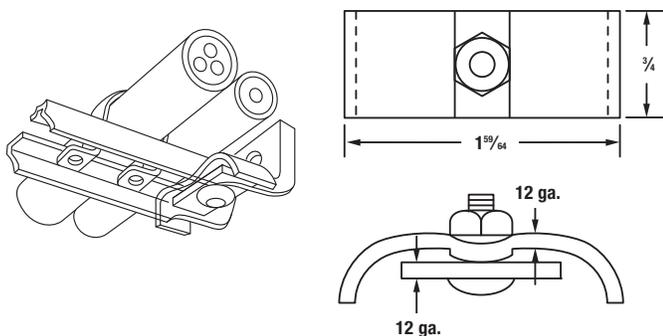


| CAT. NO. | DESCRIPTION                          |
|----------|--------------------------------------|
| J 850    | Steel, Galv-Krom® Finish, 11 lbs./C. |

Includes 1/4" screw, nut and lock washer.

### J-851 Locking Device

Secures single or multiple interlocked assemblies on bar hangers, mounting brackets and continuous slot channels. Similar to J-850 except stud replaces screw for easier assembly.

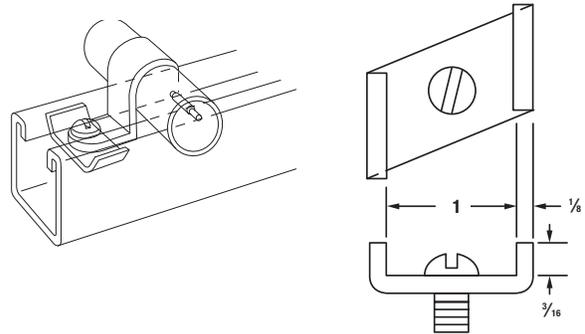


| CAT. NO. | DESCRIPTION                          |
|----------|--------------------------------------|
| J 851    | Steel, Galv-Krom® Finish, 11 lbs./C. |

Includes 1/4" screw, nut and lock washer.

### J-852 Locking Device

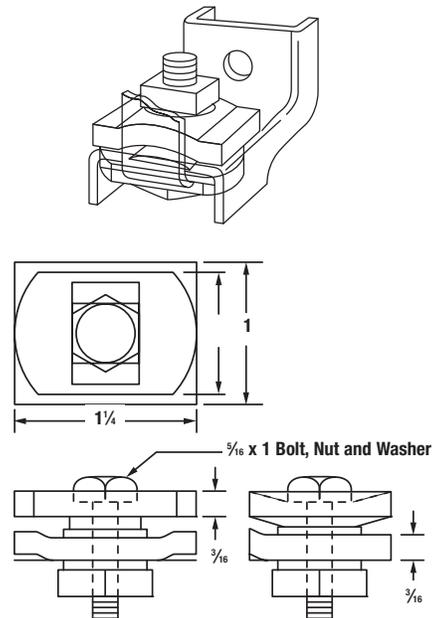
Secures single or multiple interlocked assemblies on bar hangers, mounting brackets and continuous slot channels. Designed for use with B-900 Kindorf channels.



| CAT. NO. | DESCRIPTION                          |
|----------|--------------------------------------|
| J 852    | Steel, Galv-Krom® Finish, 11 lbs./C. |

### J-855 Locking Device — Heavy-Duty

For use with channel-type hangers in installations subject to extreme shock.

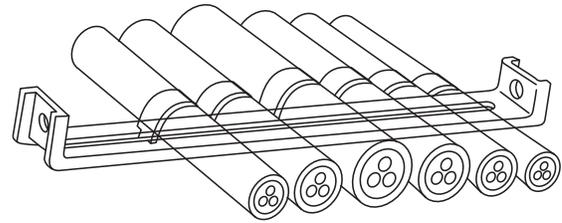
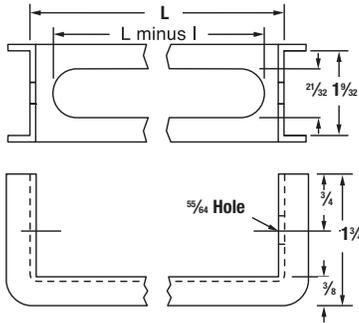


| CAT. NO. | DESCRIPTION                          |
|----------|--------------------------------------|
| J 855    | Steel, Galv-Krom® Finish, 11 lbs./C. |

Includes 3/16" bolt, nut and washer.

### J-860 Mounting Brackets

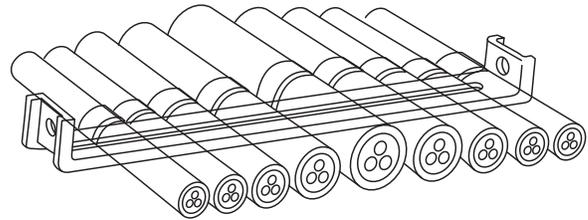
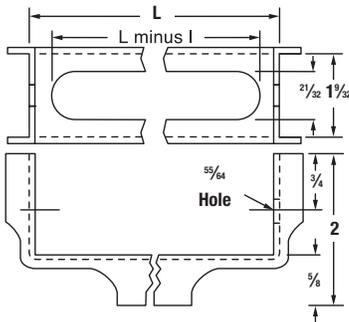
U-style channel, 12-ga. steel, with Galv-Krom® finish, 3/8" turned edge. Three sizes.



| CAT. NO. | DIMENSIONS<br>L (IN.) | WT.<br>LBS./C |
|----------|-----------------------|---------------|
| J 860 6  | 6                     | 42            |
| J-860-9  | 9                     | 48            |
| J-860-12 | 12                    | 59            |

### J-861 Mounting Brackets

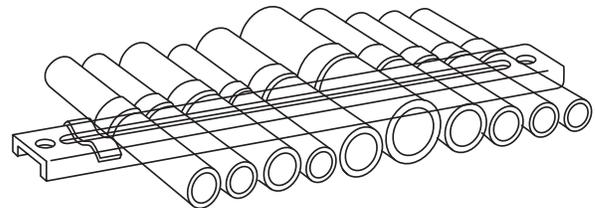
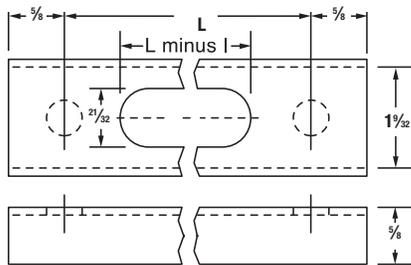
U-style channel, 12-ga. steel, with Galv-Krom® finish, 3/8" turned edge. Six sizes.



| CAT. NO. | DIMENSIONS<br>L (IN.) | WT.<br>LBS./C |
|----------|-----------------------|---------------|
| J 861 10 | 10                    | 64            |
| J-861-12 | 12                    | 73            |
| J-861-14 | 14                    | 86            |
| J-861-15 | 15                    | 89            |
| J-861-16 | 16                    | 96            |
| J-861-18 | 18                    | 100           |

### J-863 Mounting Brackets

Straight, heavy-duty channel. 12-ga. steel, with Galv-Krom® finish. Five sizes.

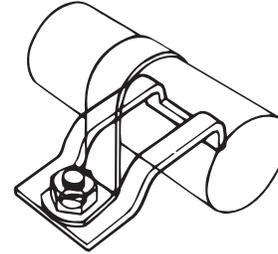
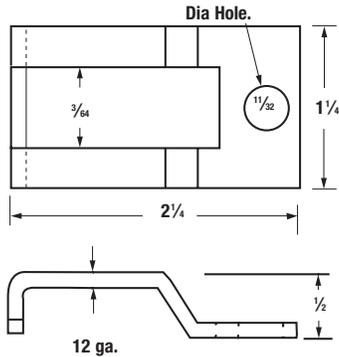


| CAT. NO. | DIMENSIONS<br>L (IN.) | WT.<br>LBS./C |
|----------|-----------------------|---------------|
| J 863 6  | 6                     | 42            |
| J-863-9  | 9                     | 57            |
| J-863-12 | 12                    | 73            |
| J-863-15 | 15                    | 85            |
| J-863-18 | 18                    | 106           |



### J-865 Bar Hanger

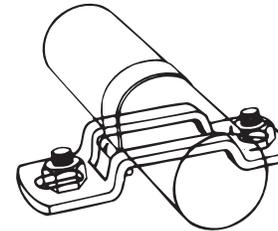
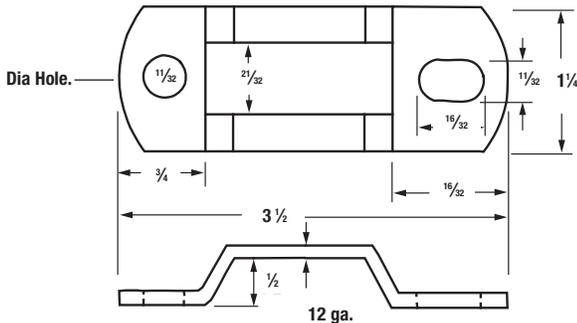
Supports one cable or tube up to  $1\frac{1}{16}$ " O.D. Only one stud or screw necessary for mounting.



| CAT. NO. | DESCRIPTION                           |
|----------|---------------------------------------|
| J 865    | Steel, Galv-Krom® Finish, 6.7 lbs./C. |

### J-866 Bar Hanger

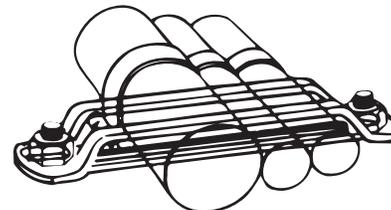
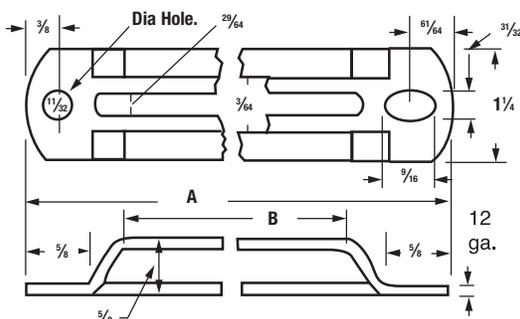
Supports one large or two small cables or tubes up to a total of  $1\frac{5}{16}$ " O.D.



| CAT. NO. | DESCRIPTION                         |
|----------|-------------------------------------|
| J 866    | Steel, Galv-Krom® Finish, 9 lbs./C. |

### J-867 Bar Hanger

- Cable or tube assembly locks in place with one short  $\frac{1}{4}$ " screw and nut
- Use two studs, welding pads or bolts to mount

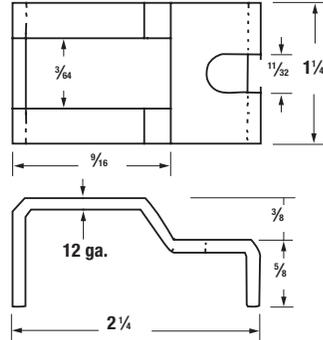
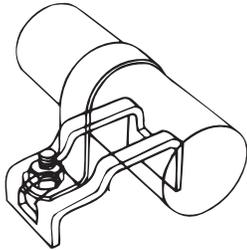


| CAT. NO. | DIMENSIONS (IN.) |       | WT. LBS./C |
|----------|------------------|-------|------------|
|          | A                | B     |            |
| J 867 1  | 5 5/8            | 2 5/8 | 15         |
| J-867-2  | 7 1/8            | 4 1/8 | 20         |
| J-867-3  | 9 1/8            | 6 1/8 | 27         |

Steel, Galv-Krom® finish.

### J-868 Bar Hanger

Supports one cable or tube up to 1 1/16" O.D. Strap fastens to hanger by short machine screw and nut.

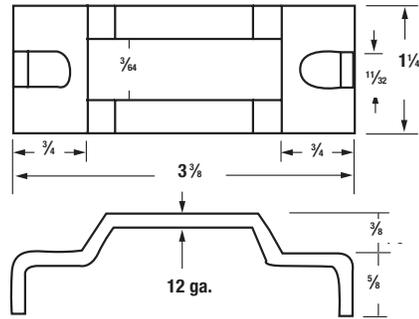
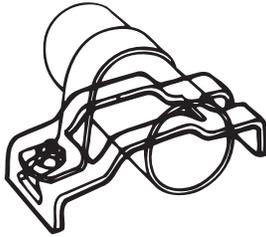


| CAT. NO. | DESCRIPTION                           |
|----------|---------------------------------------|
| J 868    | Steel, Galv-Krom® Finish, 8.3 lbs./C. |

Use one stud or weld to mount.

### J-869 Bar Hanger

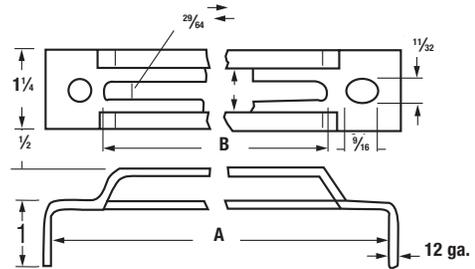
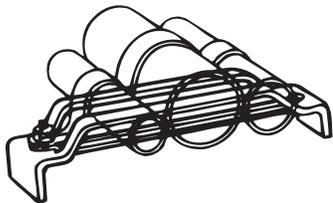
- Supports one large or two small cables or tubes up to a total of 1 5/16" O.D.
- Both ends of hanger have nut-engaging slot



| CAT. NO. | DESCRIPTION                            |
|----------|--|
| J 869    | Steel, Galv-Krom® Finish, 11.2 lbs./C. |

### J-870 Bar Hanger

- Supports cable or tube assembly, locked in place with one short 1/4" screw and nut
- Mount by welding



| CAT. NO. & SIZE | DIMENSIONS (IN.) |        | WT. LBS./C |
|-----------------|------------------|--------|------------|
|                 | A                | B      |            |
| J 870 1         | 5 1/8            | 3 3/16 | 22.5       |
| J-870-2         | 7 1/8            | 5 1/16 | 28.0       |
| J-870-3         | 9 1/8            | 7 1/16 | 33.3       |

Steel, Galv-Krom® finish.



# Kindorf®

## Stainless Steel Channels

### B-900 Channel — Stainless Steel — 1½" x 1½"

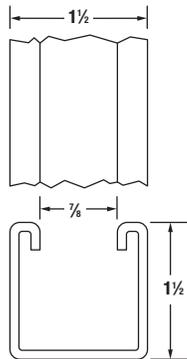
- Connection by means of continuous slot



| CAT. NO.       | DESCRIPTION |
|----------------|-------------|
| B-900-10SS     | Type 304    |
| B-900-10316-SS | Type 316    |

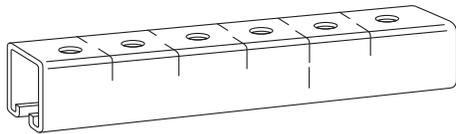
Use H-113-B bolts and B-910-1/2 or B-911-1/2 stainless steel nuts for mounting fittings.

Available 20 Ft. lengths.



### B-905 Channel — Stainless Steel — 1½" x 1½"

- ⅝" holes on 1½" centers punched in channel base. Connection also by means of continuous slot

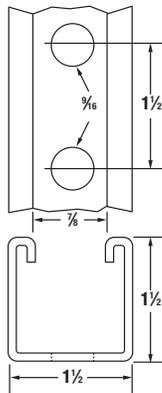


| CAT. NO.       | DESCRIPTION |
|----------------|-------------|
| B-905-10SS     | Type 304    |
| B-905-10-316SS | Type 316    |

Use H-113-B bolts and B-910-1/2 or B-911-1/2 stainless steel nuts for mounting fittings.

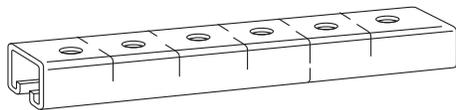
Scribe marks designate mid-point between holes for accurate field cutting.

Available 20 Ft. lengths.



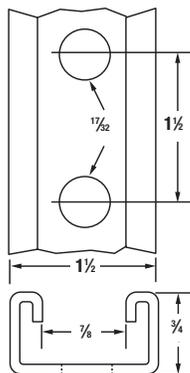
### B-907 Channel — Stainless Steel

- Connection by means of continuous slot or ⅝" holes on 1½" centers



| CAT. NO.      | DESCRIPTION |
|---------------|-------------|
| B-907-10SS    | Type 304    |
| B-907-10316SS | Type 316    |

Available 20 Ft. lengths.



### B-911 Channel — Stainless Steel



| CAT. NO.      | SIZE (IN.) | THICKNESS (IN.) | LBS./C |
|---------------|------------|-----------------|--------|
| B-911-3/8-SS† | ⅜-16       | ⅜               | 12.5   |
| B-911-1/2-SS† | ½-13       | ⅜               | 16.0   |

†Self-holding clamping nut with spring attached. For use with 1½" deep channels.

### Pipe Supports — Stainless Steel



C-105

### Kindorf Straps for Rigid Conduit and Pipe — Type 304

| CAT. NO.      | RIGID CONDUIT OR PIPE SIZE (IN.) | CAT. NO.      | RIGID CONDUIT OR PIPE SIZE (IN.) |
|---------------|----------------------------------|---------------|----------------------------------|
| C-105-1/2SS   | ½                                | C-105-2SS     | 2                                |
| C-105-3/4SS   | ¾                                | C-105-2-1/2SS | 2½                               |
| C-105-1SS     | 1                                | C-105-3SS     | 3                                |
| C-105-1-1/4SS | 1¼                               | C-105-3-1/2SS | 3½                               |
| C-105-1-1/2SS | 1½                               | C-105-4SS     | 4                                |

### Cobra®



| CAT. NO. | FOR EMT AND RIGID CONDUIT TRADE SIZE (IN.) | CABLE O.D. RANGE (IN.) | STATIC LOAD LIMIT (LB) SAFETY FACTOR = 4 | STD. CTN. |
|----------|--|------------------------|--|-----------|
|----------|--|------------------------|--|-----------|

#### Electro-Galvanized Steel

|           |    |             |     |     |
|-----------|----|-------------|-----|-----|
| CPC025SS6 | ¼  | 0.312-0.600 | 200 | 100 |
| CPC050SS6 | ½  | 0.650-0.890 | 200 | 100 |
| CPC075SS6 | ¾  | 0.860-1.110 | 200 | 100 |
| CPC100SS6 | 1  | 1.100-1.400 | 200 | 100 |
| CPC125SS6 | 1¼ | 1.400-1.725 | 200 | 50  |
| CPC150SS6 | 1½ | 1.690-1.980 | 200 | 50  |
| CPC200SS6 | 2  | 1.980-2.576 | 200 | 50  |
| CPC250SS6 | 2½ | 2.576-3.060 | 350 | 25  |
| CPC300SS6 | 3  | 3.060-3.626 | 350 | 25  |
| CPC350SS6 | 3½ | 3.626-4.126 | 350 | 25  |
| CPC400SS6 | 4  | 4.126-4.626 | 350 | 25  |

Standard Finish — GoldGalv®, unless otherwise stated.

Stainless Steel: add suffix SS or 556.

Kindorf® Modular Metal Framing and Support System

Thomas & Betts

www.tnb.com

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800.816.7809  
Fax: 901.252.1354

Customer Service  
Tel: 800.816.7809  
Fax: 800.816.7810

Technical Services  
Tel: 888.862.3289  
Fax: 901.252.1321

Tool Services  
Tel: 800.284.8665



### B-900-AL Channel

- Connection by means of continuous slot

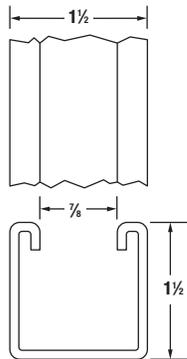


Aluminum (Extruded 6063-T6)

| CAT. NO. | DESCRIPTION                       |
|----------|-----------------------------------|
| B-900-AL | 1½" x 1½" x .1046; 58 lbs./C. ft. |

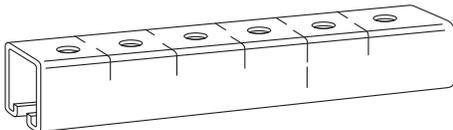
Use H-113-B bolts and B-910-1/2, B-911-1/2 or B-911-1/2-TL steel nuts for mounting fittings.

10 ft. lengths only.



### B-905-AL Channel

- ⅝" holes on 1½" centers punched in channel base. Connection also by means of continuous slot

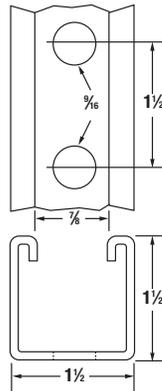


Aluminum (Extruded 6063-T6)

| CAT. NO. | DESCRIPTION                       |
|----------|-----------------------------------|
| B-905-AL | 1½" x 1½" x .1046; 56 lbs./C. ft. |

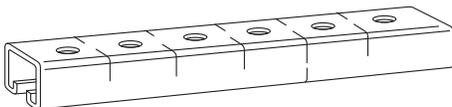
Use H-113-B bolts and B-910-1/2 or B-911-1/2 steel nuts for mounting fittings.

10 ft. lengths only.



### B-907-AL Channel

- Connection by means of continuous slot or ⅜" holes on 1½" centers

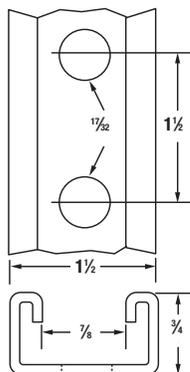


Aluminum (Extruded 6063-T6)

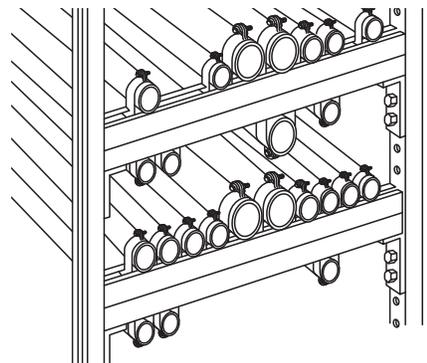
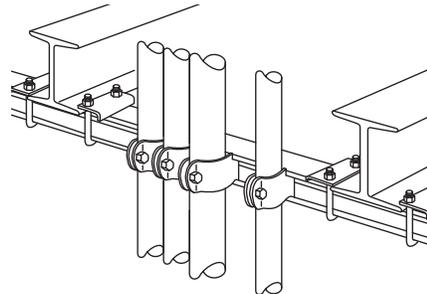
| CAT. NO. | DESCRIPTION                       |
|----------|-----------------------------------|
| B-907-AL | 1½" x ¾" x .1046; .37 lbs./C. ft. |

Use H-113-A bolts and B-910-1/2 or B-912-1/2 steel nuts for mounting fittings.

Holes on B-900 series fittings match channel holes.



### Pipe Supports — Aluminum



Steel beam mounting application. Aluminum straps with stainless steel hardware. Frame assembly carries multiple conduit runs.

### Kindorf Straps for Rigid Conduit and Pipe — Aluminum

| CAT. NO.      | RIGID CONDUIT OR PIPE SIZE (IN.) | ALUMINUM STRAP MATERIAL THICKNESS | WT. LBS./C |
|---------------|----------------------------------|-----------------------------------|------------|
| C-105AL-1/2   | ½                                | 14                                | 7          |
| C-105AL-3/4   | ¾                                | 14                                | 8          |
| C-105AL-1     | 1                                | 14                                | 9          |
| C-105AL-1-1/4 | 1¼                               | 14                                | 10         |
| C-105AL-1-1/2 | 1½                               | 12                                | 12         |
| C-105AL-2     | 2                                | 12                                | 14         |
| C-105AL-2-1/2 | 2½                               | 12                                | 16         |
| C-105AL-3     | 3                                | 12                                | 18         |
| C-105AL-3-1/2 | 3½                               | ⅛"                                | 22         |
| C-105AL-4     | 4                                | ⅛"                                | 24         |



## Steel PVC Coated Channels

### PVC Coated Steel Channel and Fittings for Highly Corrosive Atmospheres

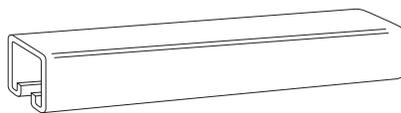
The complete and lasting corrosion protection of conduit with polyvinyl chloride coating is now extended to the supporting system. No longer will installers be faced with the problem of installing PVC coated conduit or other corrosion-resistant material only to have the support system require constant maintenance or replacement.

PVC coated Kindorf® channel and fittings complement other corrosion-resistant services installed in chemical plants, foundries, meat packing plants, oil refineries, paper mills, sewage treatment plants and other locations.

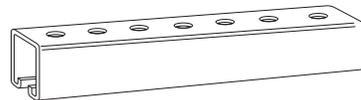
### PVC Plastic-Coated Kindorf® Channel Support System for Installations in Severely Corrosive Atmospheres

#### PVC Coating

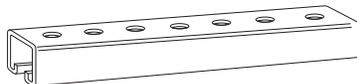
The coating is a polyvinyl chloride (PVC) plastic coating that is permanently fused to the Kindorf® Galv-Krom® galvanized steel channels, fittings and accessories. The fused-melt mixed powder (PVC) coating is 15 mils (.015") ±5 mils thickness.



PB-900-10



PB-905-10



PB-907-10



PBH-193

The physical properties of the PVC coating material are as follows:

|  |                                     |
|--|-------------------------------------|
| <b>Hardness</b>                                    | 90+ Shore A Durometer               |
| <b>Dielectric Strength (volts/mil @ 60 cycles)</b> | 1100                                |
| <b>Flammability</b>                                | Self-extinguishing                  |
| <b>Tensile strength</b>                            | 2000 p.s.i.                         |
| <b>Percent elongation</b>                          | 180%                                |
| <b>Aging</b>                                       | 14,000 hours<br>Atlas Weatherometer |

The material is a thermoplastic and will soften in high temperatures. Service life will be decreased if the normal operating temperature of the support system is in excess of 225°F.

The service life expectancy is 20 years in normal weathering, with no indication of hardening, softening or other physical change.

The Kindorf® plastic-coated support system has excellent resistance to the corrosive atmospheres created in modern processing industries which materially reduce the life of standard products and cause high maintenance costs. The fused-on coating of PVC plastic to a pre-galvanized steel effectively bars corrosive action by eliminating "undercreep" or "corrosion travel". There is practically no maintenance. No special tools are required for installation of the Kindorf® PVC system.

The Kindorf® PVC coated support system, combining the strength of steel and the corrosion resistance of plastic, is designed for mechanical support of plastic and plastic-coated conduits and pipes. Kindorf® PVC meets the requirements for corrosion resistance in those environments generally found in chemical processing plants, oil refineries, steel mills, foundries, meat packing and other food processing plants, fertilizer plants, textile and paper processing industries.

### PVC Coated Steel Channel

| CAT. NO.  | DESCRIPTION                                   | WT. LBS./C |
|-----------|---|------------|
| PB-900-10 | 1½" x 1½" x 12 ga.<br>Solid Base              | 168        |
| PB-905-10 | 1½" x 1½" x 12 ga.<br>¾" Holes on 1½" Centers | 160        |
| PB-907-10 | 1½" x ¾" x 14 ga.<br>¾" Holes on 1½" Centers  | 82         |

Standard 10 ft. lengths.

### PVC Coated Steel Hanger Rod

| CAT. NO. & SIZE | DESCRIPTION | WT. LBS./C |
|-----------------|-------------|------------|
| PBH-193-3/8-6   | ¾" x 6'     | 174        |
| PBH-193-3/8-10  | ¾" x 10'    | 290        |
| PBH-193-1/2-6   | ½" x 6'     | 324        |
| PBH-193-1/2-10  | ½" x 10'    | 540        |

Kindorf® Modular Metal Framing and Support System

Thomas & Betts

www.tnb.com

Corporate Office  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

Customer Service  
Tel: 800.816.7809  
Fax: 800.816.7810

Technical Services  
Tel: 888.862.3289  
Fax: 901.252.1321

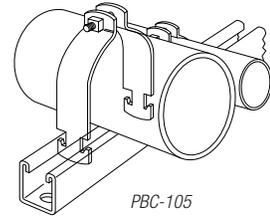
Tool Services  
Tel: 800.284.8665



### PVC Coated Steel Conduit Straps

| CAT. NO. & SIZE | DESCRIPTION (IN.) | WT. LBS./C |
|-----------------|-------------------|------------|
| PBC-105-3/4     | ¾                 | 16         |
| PBC-105-1       | 1                 | 18         |
| PBC-105-1-1/4   | 1¼                | 20         |
| PBC-105-1-1/2   | 1½                | 29         |
| PBC-105-2       | 2                 | 33         |

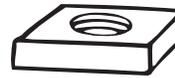
| CAT. NO. & SIZE | DESCRIPTION (IN.) | WT. LBS./C |
|-----------------|-------------------|------------|
| PBC-105-2-1/2   | 2½                | 38         |
| PBC-105-3       | 3                 | 45         |
| PBC-105-3-1/2   | 3½                | 58         |
| PBC-105-4       | 4                 | 64         |



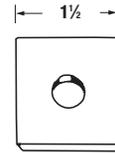
PBC-105

### PVC Coated Hardware

| CAT. NO. & SIZE | DESCRIPTION                       | WT. LBS./C |
|-----------------|-----------------------------------|------------|
| PB-910-3/8      | ¾-16 Steel Nut                    | 9          |
| PB-910-1/2      | ½-13 Steel Nut                    | 10         |
| PBH-119C-3/8    | 1½" Square Washer with 7/16" Hole | 12         |
| PBH-119D-1/2    | 1½" Square Washer with 7/32" Hole | 14         |
| PBH-120         | Saddle Washer for ¾" or ½" Rod    | 7          |



PB-910



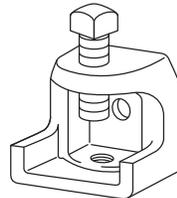
PBH-119



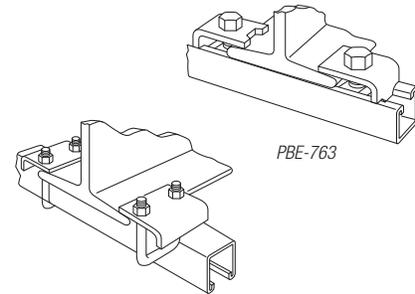
PBH-120

### PVC Coated Beam Clamps

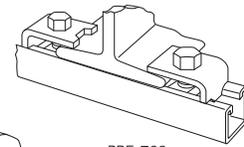
| CAT. NO. & SIZE | DESCRIPTION                                   | WT. LBS./C |
|-----------------|---|------------|
| PB-502          | 2"-7/8" Jaw Tapped ¾-16                       | 95         |
| PB-508          | 2½"-2" Jaw Tapped ½-13                        | 182        |
| PBE-760-2       | For Use with PB-900, PB-905, PB-906 or PB-907 | 80         |
| PBE-763         | For Use with all Channels                     | 25         |



PB-500 Series

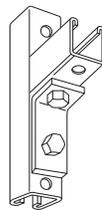


PBE-760

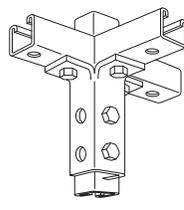


PBE-763

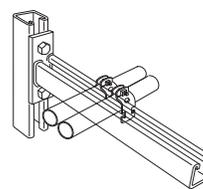
### PVC Coated Framing Fittings



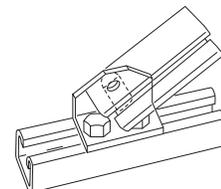
PB-915



PB-923

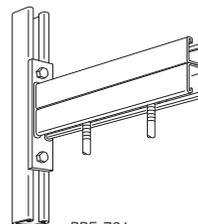


PBF-720

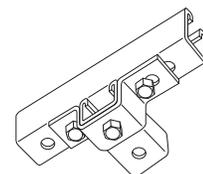


PB-943

| CAT. NO. & SIZE | DESCRIPTION                       | WT. LBS./C |
|-----------------|-----------------------------------|------------|
| PB-915          | 2-Hole Angle Connector            | 40         |
| PB-923          | 3-Side Angle Connector            | 137        |
| PB-927          | U Support                         | 53         |
| PB-943          | Double-Brace Connector            | 66         |
| PBF-720-18      | Single-Channel Wall Bracket — 18" | 275        |
| PBF-721-18      | Double-Channel Wall Bracket — 18" | 568        |

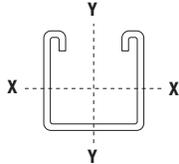


PBF-721

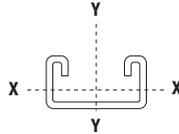


PB-927

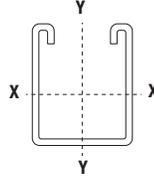
### Channel Load Data



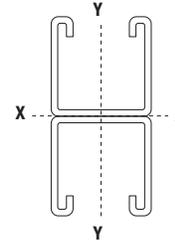
**B-900**  
1½" x 1½" x 12 ga. steel  
**B-900-M**  
1½" x 1½" x 14 ga. steel  
**B-900-AL**  
1½" x 1½" x .1046 aluminum



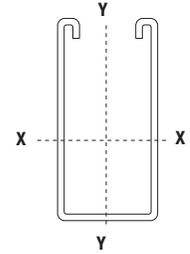
**B-906**  
1½" x ¾" x 14 ga. steel



**B-901**  
1½" x 1½" x 12 ga. steel



**B-900-2A**  
1½" x 3" x 12 ga. steel



**B-902**  
1½" x 3" x 12 ga. steel

| CHANNEL  | AREA  | LBS./FT. | X-X AXIS |       |       | Y-Y AXIS |       |       |
|--|-------|----------|----------|-------|-------|----------|-------|-------|
|  |       |          | I        | S     | R     | I        | S     | R     |
| <b>Steel Section Properties</b>                  |       |          |          |       |       |          |       |       |
| <b>Material Properties f=30,000 E=30,000,000</b> |       |          |          |       |       |          |       |       |
| <b>B-906</b>                                     | 0.217 | 0.740    | 0.018    | 0.041 | 0.272 | 0.077    | 0.105 | 0.559 |
| <b>B-900</b>                                     | 0.521 | 1.776    | 0.155    | 0.179 | 0.545 | 0.200    | 0.259 | 0.619 |
| <b>B-900-M</b>                                   | 0.354 | 1.206    | 0.101    | 0.123 | 0.535 | 0.129    | 0.175 | 0.603 |
| <b>B-901</b>                                     | 0.595 | 2.028    | 0.263    | 0.251 | 0.665 | 0.238    | 0.309 | 0.632 |
| <b>B-902</b>                                     | 0.837 | 2.852    | 0.909    | 0.552 | 1.042 | 0.363    | 0.471 | 0.658 |

| SPAN | CHANNEL        | SIMPLE BEAM UNIFORMLY DISTRIBUTED LOAD |            |             |             | SIMPLE BEAM CONCENTRATED CENTER LOAD |            |             |             |                   |
|------|----------------|--|------------|-------------|-------------|--------------------------------------|------------|-------------|-------------|-------------------|
|      |                | MAX LOAD                               | DEFLECTION | ½ SPAN LOAD | DESIGN LOAD | MAX LOAD                             | DEFLECTION | ½ SPAN LOAD | DESIGN LOAD | COL. LOAD FOR K=1 |
| 12"  | <b>B-906</b>   | 820                                    | 0.034      | 1,200       | 820         | 410                                  | 0.027      | 750         | 410         | 7,337             |
|      | <b>B-900</b>   | 3,580                                  | 0.017      | 10,333      | 3,580       | 1,790                                | 0.014      | 6,458       | 1,790       | 7,628             |
|      | <b>B-900-M</b> | 2,460                                  | 0.018      | 6,733       | 2,460       | 1,230                                | 0.015      | 4,208       | 1,230       | 7,625             |
|      | <b>B-901</b>   | 5,020                                  | 0.014      | 17,533      | 5,020       | 2,510                                | 0.011      | 10,958      | 2,510       | 7,660             |
|      | <b>B-902</b>   | 11,040                                 | 0.009      | 60,600      | 11,040      | 5,520                                | 0.007      | 37,875      | 5,520       | 7,699             |
| 18"  | <b>B-906</b>   | 547                                    | 0.077      | 533         | 533         | 273                                  | 0.062      | 333         | 273         | 6,852             |
|      | <b>B-900</b>   | 2,387                                  | 0.039      | 4,593       | 2,387       | 1,193                                | 0.031      | 2,870       | 1,193       | 7,507             |
|      | <b>B-900-M</b> | 1,640                                  | 0.041      | 2,993       | 1,640       | 820                                  | 0.033      | 1,870       | 820         | 7,499             |
|      | <b>B-901</b>   | 3,347                                  | 0.032      | 7,793       | 3,347       | 1,673                                | 0.026      | 4,870       | 1,673       | 7,579             |
|      | <b>B-902</b>   | 7,360                                  | 0.020      | 26,933      | 7,360       | 3,680                                | 0.016      | 16,833      | 3,680       | 7,665             |
| 24"  | <b>B-906</b>   | 410                                    | 0.137      | 300         | 300         | 205                                  | 0.109      | 188         | 188         | 6,172             |
|      | <b>B-900</b>   | 1,790                                  | 0.069      | 2,583       | 1,790       | 895                                  | 0.055      | 1,615       | 895         | 7,338             |
|      | <b>B-900-M</b> | 1,230                                  | 0.073      | 1,683       | 1,230       | 615                                  | 0.058      | 1,052       | 615         | 7,324             |
|      | <b>B-901</b>   | 2,510                                  | 0.057      | 4,383       | 2,510       | 1,255                                | 0.046      | 2,740       | 1,255       | 7,465             |
|      | <b>B-902</b>   | 5,520                                  | 0.036      | 15,150      | 5,520       | 2,760                                | 0.029      | 9,469       | 2,760       | 7,619             |
| 30"  | <b>B-906</b>   | 328                                    | 0.214      | 192         | 192         | 164                                  | 0.171      | 120         | 120         | 5,299             |
|      | <b>B-900</b>   | 1,432                                  | 0.108      | 1,653       | 1,432       | 716                                  | 0.067      | 1,033       | 716         | 7,121             |
|      | <b>B-900-M</b> | 984                                    | 0.114      | 1,077       | 984         | 492                                  | 0.091      | 673         | 492         | 7,098             |
|      | <b>B-901</b>   | 2,008                                  | 0.089      | 2,805       | 2,008       | 1,004                                | 0.072      | 1,753       | 1,004       | 7,319             |
|      | <b>B-902</b>   | 4,416                                  | 0.057      | 9,696       | 4,416       | 2,208                                | 0.046      | 6,060       | 2,208       | 7,560             |
| 36"  | <b>B-906</b>   | 273                                    | 0.308      | 133         | 133         | 137                                  | 0.246      | 83          | 83          | 4,231             |
|      | <b>B-900</b>   | 1,193                                  | 0.156      | 1,148       | 1,148       | 597                                  | 0.125      | 718         | 597         | 6,855             |
|      | <b>B-900-M</b> | 820                                    | 0.164      | 748         | 748         | 410                                  | 0.132      | 468         | 410         | 6,822             |
|      | <b>B-901</b>   | 1,673                                  | 0.129      | 1,948       | 1,673       | 837                                  | 0.103      | 1,218       | 837         | 7,140             |
|      | <b>B-902</b>   | 3,680                                  | 0.082      | 6,733       | 3,680       | 1,840                                | 0.066      | 4,208       | 1,840       | 7,487             |

For channel with holes in bottom, multiply load by 0.95.

For channel with holes in bottom and sides, multiply load by 0.90.

For extruded aluminum channel, multiply load by .33.

Column loads calculated in accordance with ANSI Light Gauge Cold-Formed Steel Design Manual, Section 3.6.



### Channel Load Data (continued)

| SPAN | CHANNEL | SIMPLE BEAM<br>UNIFORMLY DISTRIBUTED LOAD |            |                 |             | SIMPLE BEAM<br>CONCENTRATED CENTER LOAD |            |                 |             |                   |
|------|---------|---|------------|-----------------|-------------|---|------------|-----------------|-------------|-------------------|
|      |         | MAX LOAD                                  | DEFLECTION | 1/400 SPAN LOAD | DESIGN LOAD | MAX LOAD                                | DEFLECTION | 1/400 SPAN LOAD | DESIGN LOAD | COL. LOAD FOR K=1 |
| 42"  | B-906   | 234                                       | 0.419      | 98              | 98          | 117                                     | 0.335      | 61              | 61          | 3,125             |
|      | B-900   | 1,023                                     | 0.212      | 844             | 844         | 511                                     | 0.170      | 527             | 511         | 6,541             |
|      | B-900-M | 703                                       | 0.224      | 550             | 550         | 351                                     | 0.179      | 344             | 344         | 6,496             |
|      | B-901   | 1,434                                     | 0.175      | 1,431           | 1,431       | 717                                     | 0.140      | 895             | 717         | 6,929             |
|      | B-902   | 3,154                                     | 0.112      | 4,947           | 3,154       | 1,577                                   | 0.089      | 3,092           | 1,577       | 7,401             |
| 48"  | B-906   | 205                                       | 0.547      | 75              | 75          | 103                                     | 0.437      | 47              | 47          | 2,392             |
|      | B-900   | 895                                       | 0.277      | 646             | 646         | 448                                     | 0.222      | 404             | 404         | 6,178             |
|      | B-900-M | 615                                       | 0.292      | 421             | 421         | 308                                     | 0.234      | 263             | 263         | 6,120             |
|      | B-901   | 1,255                                     | 0.229      | 1,096           | 1,096       | 628                                     | 0.183      | 685             | 628         | 6,686             |
|      | B-902   | 2,760                                     | 0.146      | 3,788           | 2,760       | 1,380                                   | 0.117      | 2,367           | 1,380       | 7,302             |
| 54"  | B-906   | 182                                       | 0.692      | 59              | 59          | 91                                      | 0.554      | 37              | 37          | 1,890             |
|      | B-900   | 796                                       | 0.351      | 510             | 510         | 398                                     | 0.281      | 319             | 319         | 5,767             |
|      | B-900-M | 547                                       | 0.370      | 333             | 333         | 273                                     | 0.296      | 208             | 208         | 5,693             |
|      | B-901   | 1,116                                     | 0.290      | 866             | 866         | 558                                     | 0.232      | 541             | 541         | 6,410             |
|      | B-902   | 2,453                                     | 0.184      | 2,993           | 2,453       | 1,227                                   | 0.148      | 1,870           | 1,227       | 7,189             |
| 60"  | B-906   | 164                                       | 0.854      | 48              | 48          | 82                                      | 0.683      | 30              | 30          | 1,531             |
|      | B-900   | 716                                       | 0.433      | 413             | 413         | 358                                     | 0.346      | 258             | 258         | 5,308             |
|      | B-900-M | 492                                       | 0.457      | 269             | 269         | 246                                     | 0.365      | 168             | 168         | 5,216             |
|      | B-901   | 1,004                                     | 0.358      | 701             | 701         | 502                                     | 0.286      | 438             | 438         | 6,101             |
|      | B-902   | 2,208                                     | 0.228      | 2,424           | 2,208       | 1,104                                   | 0.182      | 1,515           | 1,104       | 7,064             |
| 72"  | B-906   | 137                                       | 1.230      | 33              | 33          | 68                                      | 0.984      | 21              | 21          | 1,063             |
|      | B-900   | 597                                       | 0.624      | 287             | 287         | 298                                     | 0.499      | 179             | 179         | 4,244             |
|      | B-900-M | 410                                       | 0.658      | 187             | 187         | 205                                     | 0.526      | 117             | 117         | 4,113             |
|      | B-901   | 837                                       | 0.515      | 487             | 487         | 418                                     | 0.412      | 304             | 304         | 5,387             |
|      | B-902   | 1,840                                     | 0.328      | 1,683           | 1,683       | 920                                     | 0.262      | 1,052           | 920         | 6,773             |
| 84"  | B-906   | 117                                       | 1.674      | 24              | 24          | 59                                      | 1.339      | 15              | 15          | 781               |
|      | B-900   | 511                                       | 0.849      | 211             | 211         | 256                                     | 0.679      | 132             | 132         | 3,136             |
|      | B-900-M | 351                                       | 0.895      | 137             | 137         | 176                                     | 0.716      | 86              | 86          | 3,022             |
|      | B-901   | 717                                       | 0.701      | 358             | 358         | 359                                     | 0.561      | 224             | 224         | 4,543             |
|      | B-902   | 1,577                                     | 0.446      | 1,237           | 1,237       | 789                                     | 0.357      | 773             | 773         | 6,429             |
| 96"  | B-906   | 103                                       | 2.187      | 19              | 19          | 51                                      | 1.749      | 12              | 12          | 598               |
|      | B-900   | 448                                       | 1.109      | 161             | 161         | 224                                     | 0.887      | 101             | 101         | 2,401             |
|      | B-900-M | 308                                       | 1.169      | 105             | 105         | 154                                     | 0.935      | 66              | 66          | 2,314             |
|      | B-901   | 628                                       | 0.916      | 274             | 274         | 314                                     | 0.733      | 171             | 171         | 3,575             |
|      | B-902   | 1,380                                     | 0.583      | 947             | 947         | 690                                     | 0.466      | 592             | 592         | 6,032             |
| 108" | B-906   | 91  | 2.768      | 15              | 15          | 46                                      | 2.214      | 9               | 9           | 473               |
|      | B-900   | 398                                       | 1.403      | 128             | 128         | 199                                     | 1.123      | 80              | 80          | 1,897             |
|      | B-900-M | 273                                       | 1.480      | 83              | 83          | 137                                     | 1.184      | 52              | 52          | 1,828             |
|      | B-901   | 558                                       | 1.160      | 216             | 216         | 279                                     | 0.928      | 135             | 135         | 2,825             |
|      | B-902   | 1,227                                     | 0.738      | 748             | 748         | 613                                     | 0.590      | 468             | 468         | 5,582             |
| 120" | B-906   | 82  | 3.417      | 12              | 12          | 41                                      | 2.733      | 8               | 8           | 383               |
|      | B-900   | 358                                       | 1.732      | 103             | 103         | 179                                     | 1.386      | 65              | 65          | 1,537             |
|      | B-900-M | 246                                       | 1.827      | 67              | 67          | 123                                     | 1.461      | 42              | 42          | 1,481             |
|      | B-901   | 502                                       | 1.432      | 175             | 175         | 251                                     | 1.145      | 110             | 110         | 2,288             |
|      | B-902   | 1,104                                     | 0.911      | 606             | 606         | 552                                     | 0.729      | 379             | 379         | 5,080             |

For channel with holes in bottom, multiply load by 0.95.

For channel with holes in bottom and sides, multiply load by 0.90.

For extruded aluminum channel, multiply load by .33.

Column loads calculated in accordance with ANSI Light Gauge Cold-Formed Steel Design Manual, Section 3.6.

Modular Metal Framing and Support System

### Beam Formula

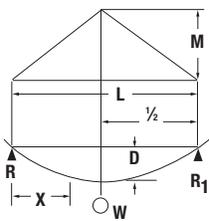
For calculating deflection and maximum safe load (Beams of uniform cross section)

- I** = Moment of inertia, in position of load, in inches 4.
- S** = Section modulus – in position of load  $I/n$ , in inches 3.
- f** = Bending stress in extreme fiber, in pounds per square inch.
- E** = Modulus of elasticity, in pounds per square inch.
- L** = Length of section, in inches.
- W** = Superimposed loads supported by beam, in pounds.
- W Max.** = Maximum safe load at point given, in pounds.
- M** = Maximum bending moment, in inch pounds.
- D, D1** = Deflections at points given, in inches.
- D Max.** = Maximum deflection at point given, in inches.

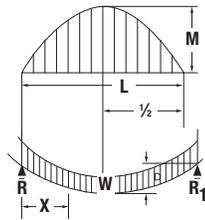
### Steel and Aluminum

#### Modulus of Elasticity (E)

- Steel — 29,500,000 pounds per square inch
- Aluminum — 10,000,000 pounds per square inch



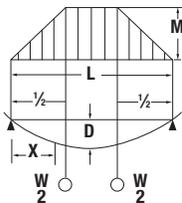
**Beam supported at ends**  
Concentrated load at center  
 $W \text{ max.} = 4fS/L$   
 $D \text{ max.} = WL^3/48EI$



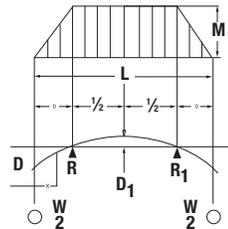
**Beam supported at ends**  
Uniformly distributed load  
 $W \text{ max.} = 8fS/L$   
 $D \text{ max.} = 5WL^3/384EI$

#### Maximum Fiber Stress (f)

- Steel — 30,000 pounds per square inch
- Aluminum — 10,000 pounds per square inch



**Beam supported at ends**  
Two symmetrical concentrated loads  
 $W \text{ max.} = 2fS/a$   
 $D \text{ max.} = Wa/12EI (4L^2 - a^2)$



**Beam continuous over two supports**  
Two exterior symmetrical loads  
 $W \text{ max.} = 2fS/a$   
 $D$ , distance  $a = Wa(3aL - 4a^2)/12EI$   
 $D1$ , distance  $L/2 - a = Wa(2 - 2a)^2/16EI$

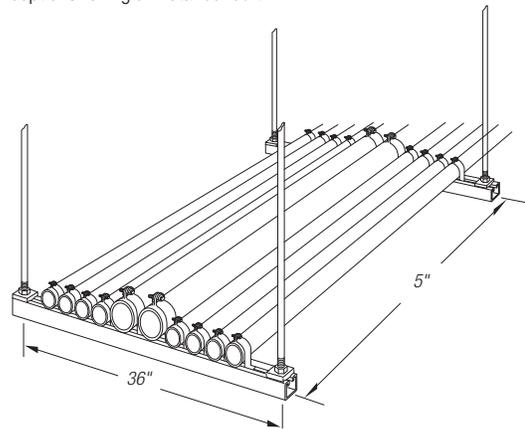
### Conclusion

Referring to the load span tables on pages C-84–C-85 for B-905 channel, a 36-inch span has a uniformly distributed load rating of 1,133 lbs., which is greater than the 390 lb. load calculated above, and is therefore satisfactory.

On longer spans or spans with greater loads, use B-901, B-900-2A or B-905-2A channel or provide an intermediate support

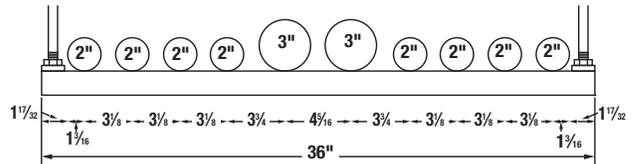
### Note on Conduit Support

The 1987 edition of the National Electrical Code® states the rigid metal conduit, intermediate metal conduit, and electrical metallic tubing shall be supported at least every 10 feet. See Article 346, Section 346-12 for exceptions for rigid-metal conduit.



### Problem

Design trapeze to support 8–2" rigid steel conduits and 2–3" rigid steel conduits on a No. B-905 channel span with hangers spaced five (5) feet apart.



### Weight per Hanger Equals

2" rigid steel conduit with heaviest conductor combination = 6.625 lbs. per foot.

3" rigid steel conduit with heaviest conductor combination = 13.415 lbs. per foot.

$$\begin{aligned} 8 \times 6.625 \times 5 &= 265 \text{ lbs.} = \text{weight of 2" conduits per hanger} \\ 2 \times 13.415 \times 5 &= 134 \text{ lbs.} = \text{weight of 3" conduits per hanger} \\ \text{Total} &= 399 \text{ lbs.} = \text{weight of conduits per hanger} \end{aligned}$$



### Conduit Spacings

Spacings in inches between centers of conduits.

The light face figures are the minimum dimensions to provide clearance between locknuts.  
The more liberal spacings printed in bold face type should be used whenever possible.

| SIZE (IN.) | ½         | ¾         | 1         | 1¼        | 1½        | 2         | 2½        | 3         | 3½        | 4         | 4½        | 5         | 6         |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ½          | 1⅙        | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         |
|            | <b>1⅙</b> | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         |
| ¾          | 1⅙        | 1⅙        | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         |
|            | <b>1½</b> | <b>1⅙</b> | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         |
| 1          | 1½        | 1½        | 1¼        | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         |
|            | <b>1½</b> | <b>1½</b> | <b>2</b>  | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         |
| 1¼         | 1¾        | 1¾        | 2         | 2¼        | —         | —         | —         | —         | —         | —         | —         | —         | —         |
|            | <b>2</b>  | <b>2¼</b> | <b>2¼</b> | <b>2¼</b> | —         | —         | —         | —         | —         | —         | —         | —         | —         |
| 1½         | 1⅝        | 2⅙        | 2⅙        | 2⅙        | 2⅙        | —         | —         | —         | —         | —         | —         | —         | —         |
|            | <b>2¼</b> | <b>2¼</b> | <b>2½</b> | <b>2½</b> | <b>2½</b> | —         | —         | —         | —         | —         | —         | —         | —         |
| 2          | 2⅙        | 2⅙        | 2½        | 2½        | 2½        | 3⅞        | —         | —         | —         | —         | —         | —         | —         |
|            | <b>2½</b> | <b>2½</b> | <b>2½</b> | <b>3</b>  | <b>3⅞</b> | <b>3⅞</b> | —         | —         | —         | —         | —         | —         | —         |
| 2½         | 2⅞        | 2⅞        | 2¾        | 3         | 3⅞        | 3⅞        | 3⅞        | —         | —         | —         | —         | —         | —         |
|            | <b>2¾</b> | <b>2¾</b> | <b>3</b>  | <b>3¼</b> | <b>3⅞</b> | <b>3⅞</b> | <b>4</b>  | —         | —         | —         | —         | —         | —         |
| 3          | 2⅞        | 2⅞        | 3⅞        | 3⅞        | 3⅞        | 3⅞        | 4         | 4⅞        | —         | —         | —         | —         | —         |
|            | <b>3</b>  | <b>3⅞</b> | <b>3⅞</b> | <b>3⅞</b> | <b>3⅞</b> | <b>4</b>  | <b>4⅞</b> | <b>4⅞</b> | —         | —         | —         | —         | —         |
| 3½         | 3⅞        | 3⅞        | 3⅞        | 3⅞        | 3⅞        | 4⅞        | 4⅞        | 4⅞        | 4⅞        | —         | —         | —         | —         |
|            | <b>3⅞</b> | <b>3⅞</b> | <b>3⅞</b> | <b>3⅞</b> | <b>4</b>  | <b>4⅞</b> | <b>4⅞</b> | <b>5</b>  | <b>5⅞</b> | —         | —         | —         | —         |
| 4          | 3⅞        | 3⅞        | 3⅞        | 3⅞        | 4⅞        | 4⅞        | 4⅞        | 4⅞        | 4⅞        | 5⅞        | —         | —         | —         |
|            | <b>3⅞</b> | <b>3⅞</b> | <b>4</b>  | <b>4⅞</b> | <b>4⅞</b> | <b>4⅞</b> | <b>5</b>  | <b>5⅞</b> | <b>5⅞</b> | <b>6</b>  | —         | —         | —         |
| 4½         | 3⅞        | 3⅞        | 4         | 4⅞        | 4⅞        | 4⅞        | 4⅞        | 5⅞        | 5⅞        | 5⅞        | 6⅞        | —         | —         |
|            | <b>4</b>  | <b>4⅞</b> | <b>4⅞</b> | <b>4⅞</b> | <b>4⅞</b> | <b>5</b>  | <b>5⅞</b> | <b>5⅞</b> | <b>6</b>  | <b>6⅞</b> | <b>6⅞</b> | —         | —         |
| 5          | 4⅞        | 4⅞        | 4⅞        | 4⅞        | 4⅞        | 5         | 5         | 5⅞        | 5⅞        | 5⅞        | 6⅞        | 6⅞        | —         |
|            | <b>4⅞</b> | <b>4⅞</b> | <b>4⅞</b> | <b>4⅞</b> | <b>5</b>  | <b>5⅞</b> | <b>5⅞</b> | <b>6</b>  | <b>6⅞</b> | <b>6⅞</b> | <b>7</b>  | <b>7⅞</b> | —         |
| 6          | 4⅞        | 4⅞        | 5         | 5⅞        | 5⅞        | 5⅞        | 5⅞        | 6⅞        | 6⅞        | 6⅞        | 7⅞        | 7⅞        | 8⅞        |
|            | <b>5</b>  | <b>5⅞</b> | <b>5⅞</b> | <b>5⅞</b> | <b>5⅞</b> | <b>6</b>  | <b>6⅞</b> | <b>6⅞</b> | <b>7</b>  | <b>7⅞</b> | <b>7⅞</b> | <b>8</b>  | <b>8⅞</b> |

Modular Metal Framing and Support System

### Pipe Data

#### RIGID CONDUIT – ALUMINUM AND STEEL

| TRADE SIZE (IN.) | NOMINAL OUTSIDE DIAMETER (IN. PER UL-6) |       | OUTSIDE DIAMETER OF COUPLING (IN. PER UL-6) |       | WEIGHT OF CONDUIT (LBS. PER FT.) |       | MAX. WEIGHT OF CONDUIT AND CONDUCTOR (LBS. PER FOOT) NOT LEAD COVERED |        |
|------------------|---|-------|---|-------|----------------------------------|-------|---|--------|
|                  | STEEL                                   | ALUM. | STEEL                                       | ALUM. | STEEL                            | ALUM. | STEEL   | ALUM.  |
|                  | 1/2                                     | 0.840 | 0.840                                       | 1.010 | 1.078                            | 0.790 | 0.274   | 1.040  |
| 3/4              | 1.050                                   | 1.050 | 1.250                                       | 1.328 | 1.050                            | 0.364 | 1.760   | 1.074  |
| 1                | 1.315                                   | 1.315 | 1.525                                       | 1.563 | 1.530                            | 0.530 | 2.695   | 1.695  |
| 1 1/4            | 1.660                                   | 1.660 | 1.869                                       | 1.953 | 2.010                            | 0.696 | 3.975   | 2.661  |
| 1 1/2            | 1.900                                   | 1.900 | 2.155                                       | 2.219 | 2.490                            | 0.822 | 5.000   | 3.332  |
| 2                | 2.375                                   | 2.375 | 2.650                                       | 2.750 | 3.320                            | 1.157 | 6.625   | 4.462  |
| 2 1/2            | 2.875                                   | 2.875 | 3.250                                       | 3.281 | 5.270                            | 1.825 | 9.460   | 6.015  |
| 3                | 3.500                                   | 3.500 | 3.870                                       | 3.812 | 6.830                            | 2.389 | 13.415  | 8.974  |
| 3 1/2            | 4.000                                   | 4.000 | 4.500                                       | 4.438 | 8.310                            | 2.877 | 16.690  | 11.257 |
| 4                | 4.500                                   | 4.500 | 4.875                                       | 5.000 | 9.720                            | 3.400 | 20.410  | 14.090 |
| 5                | 5.563                                   | 5.563 | 6.000                                       | 6.219 | 13.140                           | 4.654 | 29.350  | 20.864 |
| 6                | 6.625                                   | 6.625 | 7.200                                       | 7.313 | 17.450                           | 6.120 | 41.910  | 30.580 |

#### THINWALL CONDUIT (EMT) PER UL-797

| TRADE SIZE (IN.) | INTERMEDIATE METAL CONDUIT (IMC)      |   |                                   | THINWALL CONDUIT (EMT) PER UL-797                   |                                |                              |   |
|------------------|---------------------------------------|---|-----------------------------------|---|--------------------------------|------------------------------|---|
|                  | NOMINAL OUTSIDE DIAMETER (IN. PER UL) | OUTSIDE DIAMETER OF COUPLING (IN. PER UL) | WEIGHT OF CONDUIT (LBS. PER FOOT) | MAX. WEIGHT OF CONDUIT AND CONDUCTOR (LBS. PER FT.) | NOMINAL OUTSIDE DIAMETER (IN.) | WEIGHT OF EMT (LBS. PER FT.) | MAX. WEIGHT OF EMT AND CONDUCTOR (LBS. PER FT.) |
| 1/2              | 0.815                                 | 1.010                                     | .6                                | 0.850   | 0.706                          | 0.285                        | 0.538   |
| 3/4              | 1.029                                 | 1.250                                     | .8                                | 1.530   | 0.922                          | 0.435                        | 1.160   |
| 1                | 1.290                                 | 1.525                                     | 1.1                               | 2.325   | 1.163                          | 0.640                        | 1.825   |
| 1 1/4            | 1.638                                 | 1.869                                     | 1.5                               | 3.465   | 1.510                          | 0.950                        | 2.950   |
| 1 1/2            | 1.883                                 | 2.155                                     | 1.8                               | 4.330   | 1.740                          | 1.100                        | 3.674   |
| 2                | 2.360                                 | 2.650                                     | 2.4                               | 5.725   | 2.197                          | 1.400                        | 4.436   |
| 2 1/2            | 2.857                                 | 3.250                                     | 4.2                               | 8.470   | 2.875                          | 2.050                        | 6.400   |
| 3                | 3.476                                 | 3.870                                     | 5.2                               | 11.845  | 3.500                          | 2.500                        | 9.262   |
| 3 1/2            | 3.971                                 | 4.500                                     | 6.1                               | 14.500  | 4.000                          | 3.400                        | 12.100  |
| 4                | 4.466                                 | 4.875                                     | 6.8                               | 17.510  | 4.500                          | 3.700                        | 15.355  |



### Column Loading-Structure Channel Maximum Load in Pounds — Column Loading

| COLUMN HEIGHT (FT.) | TYPE OF CHANNEL | MAX. COLUMN LOADING (LBS.) | NUMBER OF TIERS OR BRACES PER COLUMN |       |       |       |       |  |
|---------------------|-----------------|----------------------------|--------------------------------------|-------|-------|-------|-------|--|
|                     |                 |                            | 1                                    | 2     | 3     | 4     | 5     |  |
| 1                   | B-900           | 8,625                      | 2,590                                |       |       |       |       |  |
|                     | B-900-2A        | 17,400                     | 4,450                                |       |       |       |       |  |
|                     | B-906           | 4,170                      | 1,280                                |       |       |       |       |  |
|                     | B-906-2A        | 8,570                      | 2,160                                |       |       |       |       |  |
| 2                   | B-900           | 7,900                      | 2,520                                | 2,000 |       |       |       |  |
|                     | B-900-2A        | 16,500                     | 4,400                                | 3,650 |       |       |       |  |
|                     | B-906           | 3,450                      | 1,200                                | 980   |       |       |       |  |
|                     | B-906-2A        | 7,840                      | 2,100                                | 1,720 |       |       |       |  |
| 3                   | B-900           | 6,960                      | 2,420                                | 1,960 | 1,780 |       |       |  |
|                     | B-900-2A        | 15,000                     | 4,300                                | 3,520 | 2,960 |       |       |  |
|                     | B-906           | 2,250                      | 1,015                                | 950   | 795   |       |       |  |
|                     | B-906-2A        | 6,680                      | 2,020                                | 1,700 | 1,435 |       |       |  |
| 4                   | B-900           | 5,970                      | 2,280                                | 1,910 | 1,640 | 1,360 |       |  |
|                     | B-900-2A        | 13,095                     | 4,100                                | 3,480 | 2,930 | 2,520 |       |  |
|                     | B-906           | 1,270                      | 755                                  | 895   | 775   | 670   |       |  |
|                     | B-906-2A        | 4,980                      | 1,830                                | 1,660 | 1,420 | 1,230 |       |  |
| 5                   | B-900           | 5,055                      | 2,140                                | 1,850 | 1,560 | 1,340 | 1,180 |  |
|                     | B-900-2A        | 11,490                     | 3,950                                | 3,420 | 2,900 | 2,500 | 2,210 |  |
|                     | B-906           |                            |                                      | 830   | 745   | 650   | 575   |  |
|                     | B-906-2A        | 3,340                      | 1,550                                | 1,610 | 1,400 | 1,215 | 1,075 |  |

| COLUMN HEIGHT (FT.) | TYPE OF CHANNEL | MAX. COLUMN LOADING (LBS.) | NUMBER OF TIERS OR BRACES PER COLUMN |       |       |       |       |       |       |       |       |       |  |
|---------------------|-----------------|----------------------------|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
|                     |                 |                            | 1                                    | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |  |
| 6                   | B-900           | 4,275                      | 1,990                                | 1,790 | 1,540 | 1,325 | 1,150 | 1,035 |       |       |       |       |  |
|                     | B-900-2A        | 9,990                      | 3,750                                | 3,340 | 2,870 | 2,480 | 2,190 | 1,960 |       |       |       |       |  |
|                     | B-906           |                            |                                      | 700   | 710   | 635   | 565   | 505   |       |       |       |       |  |
|                     | B-906-2A        | 2,170                      | 1,240                                | 1,550 | 1,370 | 1,205 | 1,065 | 955   |       |       |       |       |  |
| 7                   | B-900           | 3,645                      | 1,840                                | 1,720 | 1,490 | 1,310 | 1,140 | 1,025 | 925   |       |       |       |  |
|                     | B-900-2A        | 8,715                      | 3,550                                | 3,240 | 2,820 | 2,470 | 2,170 | 1,945 | 1,760 |       |       |       |  |
|                     | B-906           |                            |                                      | 520   | 635   | 610   | 550   | 495   | 450   |       |       |       |  |
|                     | B-906-2A        |                            |                                      | 1,450 | 1,330 | 1,180 | 1,050 | 945   | 860   |       |       |       |  |
| 8                   | B-900           | 3,045                      | 1,670                                | 1,650 | 1,460 | 1,290 | 1,130 | 1,015 | 920   | 835   |       |       |  |
|                     | B-900-2A        | 7,395                      | 3,180                                | 3,140 | 2,780 | 2,450 | 2,160 | 1,930 | 1,750 | 1,600 |       |       |  |
|                     | B-906           |                            |                                      | 470   | 605   | 590   | 535   | 490   | 445   | 410   |       |       |  |
|                     | B-906-2A        |                            |                                      | 1,330 | 1,290 | 1,160 | 1,040 | 935   | 850   | 780   |       |       |  |
| 9                   | B-900           | 2,580                      | 1,520                                | 1,570 | 1,430 | 1,260 | 1,120 | 1,000 | 905   | 825   | 760   |       |  |
|                     | B-900-2A        | 6,190                      | 3,030                                | 3,040 | 2,730 | 2,420 | 2,140 | 1,920 | 1,745 | 1,595 | 1,465 |       |  |
|                     | B-906           |                            |                                      | 130   | 535   | 555   | 525   | 485   | 435   | 400   | 370   |       |  |
|                     | B-906-2A        |                            |                                      | 1,200 | 1,250 | 1,150 | 1,020 | 930   | 840   | 775   | 715   |       |  |
| 10                  | B-900           | 2,100                      | 1,340                                | 1,500 | 1,380 | 1,230 | 1,110 | 990   | 900   | 820   | 755   | 700   |  |
|                     | B-900-2A        | 5,580                      | 2,900                                | 2,940 | 2,665 | 2,380 | 2,135 | 1,910 | 1,730 | 1,580 | 1,460 | 1,350 |  |
|                     | B-906           |                            |                                      |       | 470   | 520   | 500   | 465   | 430   | 395   | 365   | 340   |  |
|                     | B-906-2A        |                            |                                      | 1,160 | 1,190 | 1,120 | 1,010 | 915   | 835   | 770   | 710   | 660   |  |

This table recognizes eccentricity on the column caused by usual connections.

Modular Metal Framing and Support System

### Examples for Using the Continuous Run Load Chart for Channel

#### Example Number 1

A total load of 500 lbs. is to be supported in an evenly distributed manner over a distance of 28 feet with the maximum deflection being not greater than  $\frac{1}{240}$  of the span between the supports.

Which Kindorf® channel should be used and how many supports are needed? On the chart, find the point of intersection for a total load of 500 lbs. and a total run of 28 feet.

Pick the next graph line vertically above this point. This B-900 or G-975 with 4 supports (4B) evenly spaced. By reading horizontally to the left from this point, it can be seen that up to 565 lbs. can be supported on B-900, (G-975) under these conditions and still maintain a deflection of  $\frac{1}{240}$  of the span.

#### Example Number 2

Four foot fixtures weighing 30 lbs. each are to be attached to a channel suspended from a ceiling in a continuous 20-foot run and maintain a deflection of less than  $\frac{1}{240}$  of the span between the supports.

Which Kindorf channel should be used and how many supports are needed?

$$\text{Number of fixtures} = \frac{20 \text{ ft.}}{4 \text{ ft./fixture}} = 5 \text{ fixtures}$$

$$\text{Total Load} = 5 \text{ fixtures} \times \frac{30 \text{ lbs.}}{\text{fixture}} = 150 \text{ lbs.}$$

On the chart, find the point of intersection for a total load of 150 lbs. and a total run of 20 feet.

Pick the next graph line vertically above this point. This is B-900-M (G-975-M) with 3 supports (3A) – one support on each end and one in the center of the run.

#### Example Number 3

A 20-foot run of B-901 or G-965 is supported by 3 hangers, one on each end and one in the center. How much evenly distributed weight can this system support and maintain a maximum deflection of  $\frac{1}{240}$  of the span between the supports?

On the chart, find the point of the intersection for a total run of 20 feet and the graph line for B-901 (G-965) with 3 supports (3C).

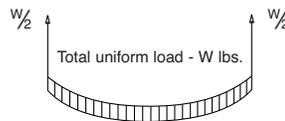
From this point, read horizontally to the left to find the total uniform load of 690 lbs. on the vertical scale.

### Selection of Hanger Rods

| USE H-193-3/8 OR 'R' SERIES HANGER ROD FOR | IF THE TOTAL UNIFORM LOAD IS: | USE H-193-1/2 OR 'R' SERIES HANGER ROD FOR | IF THE TOTAL UNIFORM LOAD IS BETWEEN |
|--|-------------------------------|--|--------------------------------------|
| 2 supports                                 | 1220 lbs. or less             | 2 supports                                 | 1220 lbs. and 2260 lbs.              |
| 3 supports                                 | 975 lbs. or less              | 3 supports                                 | 975 lbs. and 1810 lbs.               |
| 4 supports                                 | 1665 lbs. or less             | 4 supports                                 | 1665 lbs. and 3080 lbs.              |

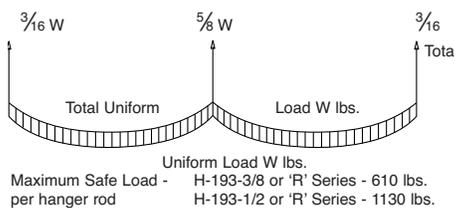
### Load Distribution on Hanger Rods

#### 2 Supports



Example – If the total uniformly distributed load W is 1,000 lbs., each hanger must be capable of supporting half of the load or 500 lbs. Therefore, H-193-3/8 or c 'R' series hanger rod would be sufficient to support this load.

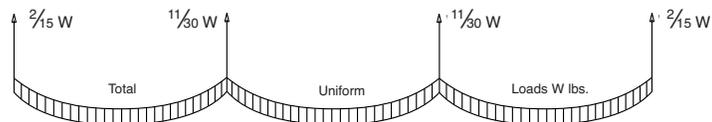
#### 3 Supports



Uniform Load W lbs.  
Maximum Safe Load - per hanger rod - H-193-3/8 or 'R' Series - 610 lbs.  
H-193-1/2 or 'R' Series - 1130 lbs.

Example – If the total uniformly distributed load W is 1,000 lbs., the load is distributed to each support in the following manner: 187d lbs. to each end support and 625 lbs. to the center support. In this case, the maximum load to be supported is 625 lbs., which exceeds the recommended safe load of 610 lbs. for H-193-3/8 hanger rod., therefore H-193-1/2, or d 'R' series supports should be used.

#### 4 Supports



Example – If the total uniformly distributed load W is 1,000 lbs., the load is distributed to each support in the following manner: 133 lbs. to each end support and 367 lbs. to each inner support. Therefore, H-193-3/8, or c 'R' series hanger rod would be sufficient to support this load.



### Kindorf® Channel Bars — Load Deflection Charts

#### Concentrated Center Loads

| CAT. NO. | BEAM SPAN (IN.) | LOAD AT 25,000 PSI STRESS (LBS.) | DEFLECTION AT 25,000 PSI STRESS (IN.) | LOAD AT MAX. DEFLECTION OF 1/40 SPAN (LBS.) |
|----------|-----------------|----------------------------------|---------------------------------------|---|
| 6013     |                 | 55                               | .038                                  | 55  |
| 6014     | 12              | 34                               | .048                                  | 34  |
| 6029     |                 | 180                              | .023                                  | 180   |
| 6029-H   |                 | 175                              | .024                                  | 175   |
| 6013     |                 | 27                               | .153                                  | 18  |
| 6014     | 24              | 17                               | .192                                  | 9   |
| 6029     |                 | 89                               | .093                                  | 89  |
| 6029-H   |                 | 87                               | .095                                  | 87  |
| 6013     |                 | 18                               | .345                                  | 8   |
| 6014     | 36              | 11                               | .433                                  | 4   |
| 6029     |                 | 59                               | .208                                  | 42  |
| 6029-H   |                 | 57                               | .213                                  | 40  |
| 6013     |                 | 13                               | .615                                  | 4   |
| 6014     | 48              | 8                                | .773                                  | 2   |
| 6029     |                 | 43                               | .367                                  | 23  |
| 6029-H   |                 | 42                               | .375                                  | 22  |
| 6013     |                 | 11                               | .963                                  | 2   |
| 6014     | 60              | 6                                | 1.216                                 | 1   |
| 6029     |                 | 34                               | .550                                  | 14  |
| 6029-H   |                 | 33                               | .581                                  | 13  |

Loads for lengths greater than 60" spans are available on request.

#### Uniformly Distributed Loads

| CAT. NO. | BEAM SPAN (IN.) | LOAD AT 25,000 PSI STRESS (LBS.) | DEFLECTION AT 25,000 PSI STRESS (LBS.) | LOAD AT MAX. DEFLECTION OF 1/40 SPAN (LBS.) |
|----------|-----------------|----------------------------------|--|---|
| 6013     |                 | 110                              | .049                                   | 110   |
| 6014     | 12              | 68                               | .060                                   | 57  |
| 6029     |                 | 361                              | .029                                   | 361   |
| 6029-H   |                 | 350                              | .030                                   | 350   |
| 6013     |                 | 55                               | .194                                   | 28  |
| 6014     | 24              | 34                               | .238                                   | 14  |
| 6029     |                 | 180                              | .117                                   | 154   |
| 6029-H   |                 | 174                              | .119                                   | 146   |
| 6013     |                 | 36                               | .437                                   | 12  |
| 6014     | 36              | 22                               | .536                                   | 6   |
| 6029     |                 | 119                              | .263                                   | 67  |
| 6029-H   |                 | 115                              | .268                                   | 64  |
| 6013     |                 | 27                               | .776                                   | 6   |
| 6014     | 48              | 16                               | .953                                   | 3   |
| 6029     |                 | 88                               | .467                                   | 37  |
| 6029-H   |                 | 86                               | .477                                   | 35  |
| 6013     |                 | 21                               | 1.213                                  | 4   |
| 6014     | 60              | 13                               | 1.490                                  | 1   |
| 6029     |                 | 70                               | .729                                   | 22  |
| 6029-H   |                 | 68                               | .746                                   | 21  |

Loads are rounded off to the nearest pound in all cases.

Kindorf® Modular Metal Framing and Support System

### To Select Proper Channel

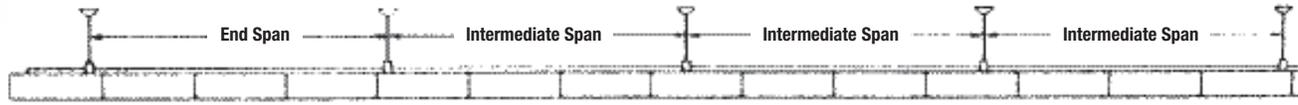


Figure 1 — Long Continuous Run

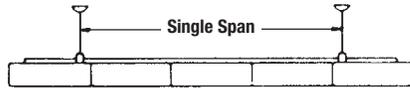


Figure 2 — Single Span

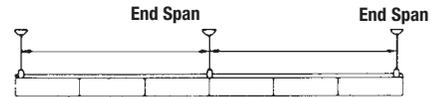


Figure 3 — Double Span

The hanger spacing is often determined by the type of building construction. The deflection then will determine the proper channel since this deflection should not exceed  $\frac{1}{240}$  of the span.

To estimate the deflection at the center of an intermediate span in long continuous runs (Figure 1), multiply the weight of a single fixture times

the applicable deflection constant (from table). This deflection also applies to the end span in Figure 1 and the single span in Figure 2 if the dimension "C" is between  $\frac{1}{4}$  and  $\frac{3}{4}$  of the length of the span. If a cantilever does not exist as in the double span (Figure 3), the deflection of end spans (Figure 3) will be doubled.

### Deflection Constants for Continuous Run, 4-Foot Fixtures\*

| SPAN FEET | B-906<br>G-956 | B-900-M<br>G-975-M | G-953 | B-900<br>G-975 | B-901<br>G-950, G-965 | B-900-2A | B-902<br>G-955 |
|-----------|----------------|--------------------|-------|----------------|-----------------------|----------|----------------|
| 6         | .004           | .000               | .000  | .000           | .000                  | .000     | .000           |
| 8         | .009           | .002               | .001  | .000           | .000                  | .000     | .000           |
| 10        | —              | .005               | .004  | .003           | .001                  | .000     | .000           |
| 12        | —              | .010               | .007  | .006           | .004                  | .001     | .001           |
| 14        | —              | —                  | —     | .012           | .007                  | .002     | .002           |
| 16        | —              | —                  | —     | .020           | .011                  | .004     | .004           |
| 18        | —              | —                  | —     | —              | .018                  | .007     | .006           |
| 20        | —              | —                  | —     | —              | —                     | .010     | .009           |

\* For 8-foot fixtures reduce the deflection constant by 50%. This table is for normal weight fixtures — the constant ".000" infers negligible deflection.

A long, continuous run of 30# 4-foot fixtures on G-975 channel is supported on 12" centers. The deflection at the center of an intermediate span will be the deflection constant (.006) times the fixture weight (30#) or 0.18 inches.



### Suggested Kindorf® Specifications

- I. For purposes of designating type and quality for work in this section, drawings and specifications are based upon products of standard Kindorf® product drawings. Whenever substitute products are to be considered, supporting technical literature, samples, drawings, and certified performance data must be submitted in order to make a valid comparison of products involved.
- II. Materials

Steel channel sections shall be rolled from AISI 1008 commercial grade steel and be in conformance with ASTM A569-72.

Aluminum channel sections shall be extruded from 6063-T6 aluminum alloy and be in conformance with ASTM-B221-80.
- III. Construction
  - A. Channel and Accessories for Support Systems.

The cross sectional width dimension of the channel shall be a minimum of 1½". The depth will be as required to satisfy the load requirements. Channel with 1½" depth or greater shall be rolled from Manufacturing Std. 12 gauge steel. Channel smaller than 1½" may be Manufacturing Std. 14 gauge.

Attachment holes, when required, shall be factory punched on hole centers equal to the channel cross sectional width dimension and shall be a maximum of ⅝" in diameter.

Channel attachment nuts shall be designed to prelocate in the channel and provide a bearing surface on the turned down lips while making positive contact with the side walls of the channel.

Straps for the support of conduit shall be designed such that the attachment nut is captivated on the shoulder of the strap when tightened, and the attachment bolt will allow tightening by either a slot-head screwdriver or wrench.

All nuts, bolts, straps, threaded rod and edges of punched holes shall be protected with the same finish as the channel as described in the FINISH section of this specification.
  - B. Channel and Accessories for Surface Raceway Systems.

Fluorescent fixtures, as designated on the drawings and according to the fixture schedule, shall be supported and supplied through a combination raceway and support system.

The cross sectional width dimension of the channel shall be a minimum of 1½". The depth will be as required to satisfy the load and wire carrying requirements.

The supporting channel shall have ½" diameter knockouts on 6" centers to accommodate ½" conduit fittings, and be listed by Underwriters' Laboratories Inc. as complying with Std. UL-5 for use as surface raceway and support for electric discharge type lighting fixture. The channel must also provide for ground continuity.

The combination raceway and support system shall be complete with channel joiners, end caps, closure strips, hangers, wiring entrance and all necessary fittings for electrical and mechanical connections.

When splicing or joining raceway channel at 90 degree angles, the joiners shall be designed such that they are concealed and fastened to the inside surface of the channel. Joiners shall be listed by Underwriters' Laboratories Inc. and allow wires to be directly laid in place.

All channel and fittings, including threaded components, shall be protected against corrosion as outlined in the finish section of this specification.

Installation of the system shall be in accordance with the National Electrical Code®, NFPA 70 and ANSI C1.
- IV. Galv-Krom® Zinc Dichromate Finish

The finish on steel components shall consist of a combination of .0005 inch electrogalvanizing on steel in accordance with ASTM B633-78 Type LS coating and a gold zinc dichromate barrier formed on the zinc. This coating shall be applied after factory fabrication of the material.

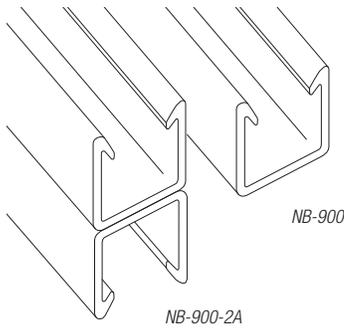
When tested in accordance with ASTM B117-73 procedure, there shall be no sign of red rust after 1,000 hours of testing. Certified test results to support this must be submitted upon request.

### Channels

Kindorf® strut is a complete corrosion-proof system, with a comprehensive selection of channels and accessories. Cost-efficient, extremely durable, easy to use, and made of the strongest non-metallic materials available.

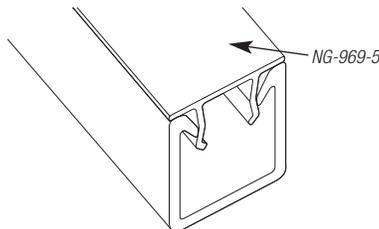
Kindorf®: Demanding products for demanding environments.

- Can't rust under the worst of conditions
- Cost effective
- Maintenance free
- Easy to use, cut and drill
- Ideal for a wide variety of applications
- Unsurpassed reliability



| CAT. NO.       | DESCRIPTION                            | MATERIAL   | COLOR | LBS.<br>WT./100 FT. |
|----------------|--|------------|-------|---------------------|
| NB 900 10 P    | 1½" x 1½" x 10'<br>Single Channel      | Polyester  | Gray  | 55                  |
| NB-900-10-V    | 1½" x 1½" x 10'<br>Single Channel      | Vinylester | Beige | 55                  |
| NB-900-2A-10-P | 3" x 1½" x 10'<br>Back-to-Back Channel | Polyester  | Gray  | 110                 |
| NB-900-2A-10-V | 3" x 1½" x 10'<br>Back-to-Back Channel | Vinylester | Beige | 110                 |

### Channel Closure Strip



| CAT. NO. | DESCRIPTION        | MATERIAL  | COLOR     | LBS.<br>WT./100 FT. |
|----------|--------------------|-----------|-----------|---------------------|
| NG-969-5 | Standard Length 5' | Rigid PVC | Dark gray | 20                  |

### Channel Simple Beam Loading Table

| CAT. NO.         | MAX UNIFORM BEAM LOAD |           | 1/360 SPAN |           | MAX COLUMN LOAD LBS. |
|------------------|-----------------------|-----------|------------|-----------|----------------------|
|                  | LBS.                  | DEF (IN.) | LBS.       | DEF (IN.) |                      |
| <b>12 inches</b> |                       |           |            |           |                      |
| NB 900 10 -P     | 1,430                 | 0.066     | 723        | 0.033     | 3439                 |
| NB-900-10-V      | 1,430                 | 0.066     | 723        | 0.033     | 3439                 |
| NB-900-2A-10-P   | 4231                  | 0.036     | 3940       | 0.033     | 7007                 |
| NB-900-2A-10-V   | 4231                  | 0.036     | 3940       | 0.033     | 7007                 |
| <b>18 inches</b> |                       |           |            |           |                      |
| NB 900 10 P      | 953                   | 0.148     | 321        | 0.050     | 3136                 |
| NB-900-10-V      | 953                   | 0.148     | 321        | 0.050     | 3136                 |
| NB-900-2A-10-P   | 2,821                 | 0.081     | 1751       | 0.050     | 6501                 |
| NB-900-2A-10-V   | 2,821                 | 0.081     | 1751       | 0.050     | 6501                 |
| <b>24 inches</b> |                       |           |            |           |                      |
| NB 900 10 P      | 715                   | 0.264     | 180        | 0.067     | 2778                 |
| NB-900-10-V      | 715                   | 0.264     | 180        | 0.067     | 2778                 |
| NB-900-2A-10-P   | 2,115                 | 0.143     | 985        | 0.067     | 5909                 |
| NB-900-2A-10-V   | 2,115                 | 0.143     | 985        | 0.067     | 5909                 |
| <b>30 inches</b> |                       |           |            |           |                      |
| NB 900 10 P      | 572                   | 0.412     | 115        | 0.083     | 2369                 |
| NB-900-10-V      | 572                   | 0.412     | 115        | 0.083     | 2369                 |
| NB-900-2A-10-P   | 1,692                 | 0.224     | 630        | 0.083     | 5236                 |
| NB-900-2A-10-V   | 1,692                 | 0.224     | 630        | 0.083     | 5236                 |
| <b>36 inches</b> |                       |           |            |           |                      |
| NB 900 10 P      | 476                   | 0.593     | 80         | 0.100     | 1,906                |
| NB-900-10-V      | 476                   | 0.593     | 80         | 0.100     | 1,906                |
| NB-900-2A-10-P   | 1,410                 | 0.322     | 437        | 0.100     | 4,482                |
| NB-900-2A-10-V   | 1,410                 | 0.322     | 437        | 0.100     | 4,482                |
| <b>48 inches</b> |                       |           |            |           |                      |
| NB 900 10 P      | 357                   | 1.055     | 45         | 0.133     | 1,091                |
| NB-900-10-V      | 357                   | 1.055     | 45         | 0.133     | 1,091                |
| NB-900-2A-10-P   | 1,057                 | 0.573     | 246        | 0.133     | 2,809                |
| NB-900-2A-10-V   | 1,057                 | 0.573     | 246        | 0.133     | 2,809                |
| <b>60 inches</b> |                       |           |            |           |                      |
| NB 900 10 P      | 286                   | 1.648     | 28         | 0.167     | 698                  |
| NB-900-10-V      | 286                   | 1.648     | 28         | 0.167     | 698                  |
| NB-900-2A-10-P   | 846                   | 0.895     | 157        | 0.167     | 1,798                |
| NB-900-2A-10-V   | 846                   | 0.895     | 157        | 0.167     | 1,798                |
| <b>72 inches</b> |                       |           |            |           |                      |
| NB 900 10 P      | 238                   | 2.373     | 20         | 0.200     | 485                  |
| NB-900-10-V      | 238                   | 2.373     | 20         | 0.200     | 485                  |
| NB-900-2A-10-P   | 705                   | 1.289     | 109        | 0.200     | 1,248                |
| NB-900-2A-10-V   | 705                   | 1.289     | 109        | 0.200     | 1,248                |

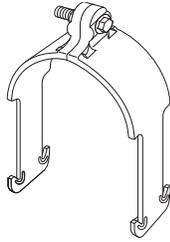
Deflection in excess of 3.00 inches; midspan support is recommended.  
Table lists the total allowable load for various simple spans based on a minimum safety factor of 3:1.

All beams should be supported in a manner to prevent rotation at supports. **For beams longer than 72 inches, contact manufacturer's engineering department.** Recommend sealing ends of channel with sealant after cutting.

## Non-Metallic Channels and Accessories



### Pipe Clamps



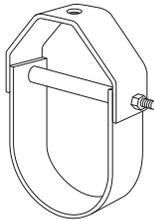
| CAT. NO.     | CONDUIT/PIPE STYLE |             |       |                         | RECOMMENDED    |              | WT. LBS./100 |
|--------------|--------------------|-------------|-------|-------------------------|----------------|--------------|--------------|
|              | NOMINAL IN.        | PVC SCH. 80 | RIGID | PVC COATED METAL (TYP.) | TORQUE IN LBS. | DESIGN LOAD* |              |
| NC-105-1/2   | 1/2                | .840        | .840  | .920                    | 5              | 100          | 4            |
| NC-105-3/4   | 3/4                | 1.050       | 1.050 | 1.130                   | 5              | 100          | 4            |
| NC-105-1     | 1                  | 1.315       | 1.315 | 1.395                   | 5              | 200          | 4.8          |
| NC-105-1 1/4 | —                  | —           | —     | —                       | —              | —            | —            |
| NC-105-1 1/2 | 1 1/2              | 1.900       | 1.900 | 1.980                   | 5              | 200          | 6.4          |
| NC-105-2     | 2                  | 2.375       | 2.375 | 2.455                   | 5              | 200          | 8            |
| NC-105-3     | 3                  | 3.500       | 3.500 | 3.580                   | 20             | 300          | 10           |
| NC-105-4     | 4                  | 4.500       | 4.500 | 4.580                   | 20             | 300          | 10           |
| NC-105-6     | 6                  | 6.625       | 6.625 | 6.705                   | 20             | 300          | 16.3         |

\* Design load is based on pullout values with a 3:1 factor of safety.

Material: Polyurethane.

Color: Gray.

### Clevis Hangers



| CAT. NO.     | NOMINAL DIAMETER | (A) MAX PIPE OD | (B) DIMENSION HEIGHT | (C) HANGER ROD SIZE | MAXIMUM LOAD | WT. LBS./100 |
|--------------|------------------|-----------------|----------------------|---------------------|--------------|--------------|
| NC-149-1     | 1                | 1 1/2           | 2 3/4                | 1/2                 | 60           | 20.8         |
| NC-149-1 1/2 | 1 1/2            | 2               | 3 1/2                | 1/2                 | 60           | 24           |
| NC-149-2     | 2                | 2 3/8           | 4 1/4                | 1/2                 | 90           | 38           |
| NC-149-2 1/2 | 2 1/2            | 3 1/4           | 5 1/2                | 1/2                 | 120          | 40           |
| NC-149-3     | 3                | 3 3/8           | 7                    | 5/8                 | 160          | 62.5         |
| NC-149-4     | 4                | 5 1/8           | 8 1/2                | 5/8                 | 250          | 88           |
| NC-149-6     | 6                | 7 1/8           | 10 7/8               | 5/8                 | 400          | 170          |
| NC-149-8     | 8                | 9 1/4           | 14                   | 5/8                 | 450          | 250          |
| NC-149-10    | 10               | 11 3/8          | 18                   | 5/8                 | 500          | 400          |
| NC-149-12    | 12               | 13 1/2          | 21 1/2               | 5/8                 | 600          | 550          |
| NC-149-14    | 14               | 15 3/4          | 24 1/2               | 3/4                 | 700          | 700          |
| NC-149-16    | 16               | 18              | 27 3/8               | 3/4                 | 800          | 1,150        |
| NC-149-19    | 19               | 21              | 34 1/4               | 3/4                 | 900          | 1,700        |

Design loads given are in pounds at 70°F with a 3:1 factor of safety.

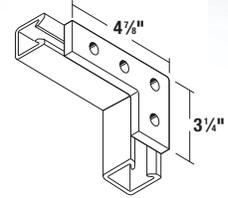
Insulate hangers from pipe at higher temperatures

Material: Polyester

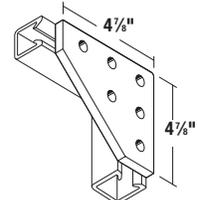
Color: Yellow and Gray

### Fittings

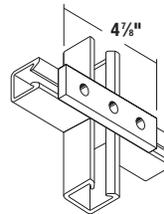
- Polyester and Vinylester Kindorf® fittings are suited for use with all 1 1/2" and 1 3/4" channels
- Kindorf® fittings are manufactured from 3/16" flat material
- Consult the Chemical Compatibility Chart to ensure material will withstand the specific chemical environment
- All holes in Kindorf® fittings are 1/32" in diameter



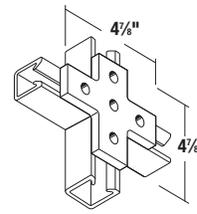
NB-936-P  
NB-936-V



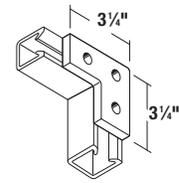
NB-944



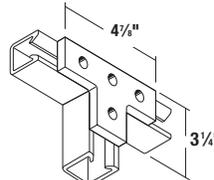
NB-935-P  
NB-935-V



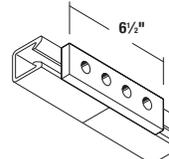
NB-947



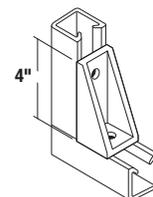
NB-931



NB-937-P  
NB-937-V

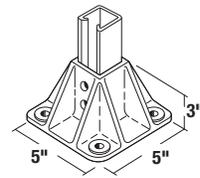


NB-949-P  
NB-949-V

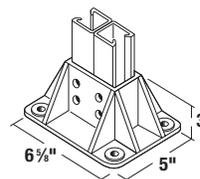


NB-918

| CAT. NO. | MATERIAL     | COLOR | WT LBS./100 |
|----------|--------------|-------|-------------|
| NB-935-P | Polyester    | Gray  | 13          |
| NB-935-V | Vinylester   | Beige | 13          |
| NB-931   | Polyurethane | Gray  | 14          |
| NB-947   | Polyurethane | Gray  | 24          |
| NB-949-P | Polyester    | Gray  | 22          |
| NB-936-P | Polyester    | Gray  | 28          |
| NB-936-V | Vinylester   | Beige | 28          |
| NB-937-P | Polyester    | Gray  | 20          |
| NB-924   | Polyurethane | Gray  | 56          |
| NB-944   | Polyurethane | Gray  | 34          |
| NB-925   | Polyurethane | Gray  | 70          |
| NB-918   | Polyurethane | Gray  | 4.6         |

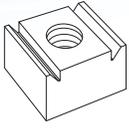


NB-924



NB-925

Modular Metal Framing and Support System



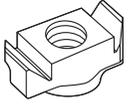
### Channel Nuts

| CAT. NO.      | THREAD SIZE (IN.) | MAXIMUM LOAD/LBS. | MAXIMUM TORQUE/LBS. | WT. LBS./100 |
|---------------|-------------------|-------------------|---------------------|--------------|
| NB-910-3/8    | 3/8               | 450               | 35                  | 1.8          |
| NB-910-3/8 HD | 3/8               | 1,370             | 100                 | 2.6          |
| NB-910-1/2    | 1/2               | 450               | 40                  | 1.8          |
| NB-910-1/2 HD | 1/2               | 1,500             | 130                 | 5.2          |

3:1 Factor of Safety.

Material: Glass fiber reinforced polyurethane.

Color: Gray.

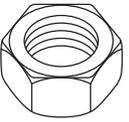
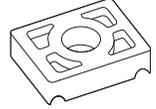


### Channel Washers

| CAT. NO. | SIZE (IN.) | WT. LBS./100 |
|----------|------------|--------------|
| NH-119-C | 3/8        | 4            |
| NH-119-D | 1/2        | 3.6          |
| NH-119-E | 5/8        | 3.6          |

Material: Glass fiber reinforced polyurethane.

Color: Gray.



### Hex Nuts

| CAT. NO. | SIZE (IN.) | MAXIMUM LOAD/LBS. | MAXIMUM TORQUE/LBS. | WT. LBS./100 |
|----------|------------|-------------------|---------------------|--------------|
| NH-114C  | 3/8        | 465               | 50                  | .33          |
| NH-114-D | 1/2        | 830               | 125                 | .8           |

3:1 Factor of Safety.

Material: Glass fiber reinforced polyurethane.

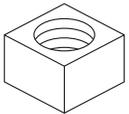
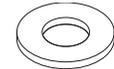
Color: Gray.

### Flat Washers

| CAT. NO. | SIZE (IN.) | WT. LBS./100 |
|----------|------------|--------------|
| NH-117-C | 3/8        | .6           |
| NH-117-D | 1/2        | .6           |
| NH-117-E | 5/8        | .8           |

Material: Rigid PVC.

Color: Gray.



### Square Nuts

| CAT. NO. | SIZE (IN.) | THREAD SHEAR/LBS. | MAX. TORQUE/LBS. | WT. LBS./100 |
|----------|------------|-------------------|------------------|--------------|
| NH-116C  | 3/8        | 1,300             | 125              | 1.8          |
| NH-116-D | 1/2        | 1,600             | 200              | 2.8          |
| NH-116-E | 5/8        | 1,600             | 200              | 5.6          |

3:1 Factor of Safety.

Material: Vinylester.

Color: Gray.

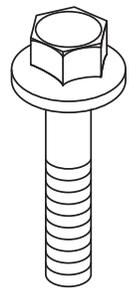
### Threaded Rod

| CAT. NO.     | THREAD SIZE | MAXIMUM SHEAR/LBS. | TORQUE/LBS. | WT. LBS./100 |
|--------------|-------------|--------------------|-------------|--------------|
| NH-193-3/8-4 | 3/8" x 4'   | 300                | 30          | 7.0          |
| NH-193-1/2-4 | 1/2" x 4'   | 510                | 80          | 12           |
| NH-193-5/8-4 | 5/8" x 4'   | 1,600              | 200         | 18           |

3:1 Factor of Safety.

Material: Vinylester.

Color: Gray.



### Hex Head Bolts

| CAT. NO.  | SIZE (IN.)  | MAXIMUM LOAD/LBS. | MAXIMUM TORQUE/LBS. | WT. LBS./100 |
|-----------|-------------|-------------------|---------------------|--------------|
| NH-113-P  | 3/8 x 1 1/4 | 360               | 30                  | 1.4          |
| NH-113-U  | 3/8 x 2 1/2 | 360               | 30                  | 2            |
| NH-113C*  | 1/2 x 1 1/4 | 600               | 90                  | 1.4          |
| NH-113-H* | 1/2 x 2 1/2 | 600               | 90                  | 2            |

3:1 Factor of Safety.

Material: Glass fiber reinforced polyurethane.

Color: Gray.

\* With molded washer.

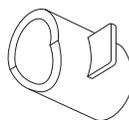
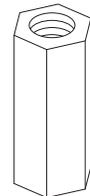
### Rod Couplers

| CAT. NO.   | SIZE (IN.) | MAXIMUM LOAD/LBS. | WT. LBS./100 |
|------------|------------|-------------------|--------------|
| NH-195-3/8 | 3/8        | 880               | 6.4          |
| NH-195-1/2 | 1/2        | 1,000             | 6.4          |
| NH-195-5/8 | 5/8        | 1,700             | 13.2         |

3:1 Factor of Safety.

Material: Glass fiber reinforced polyurethane.

Color: Gray.



### Channel Reinforcement Spacer

| CAT. NO. | HOLE SIZE (IN.) | WT. LBS./100 |
|----------|-----------------|--------------|
| NB-950   | 3/8-1/2         | 1.6          |

Material: Polyurethane

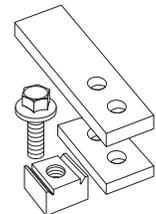
Color: Gray

### Channel to Beam Clamp Assembly

| CAT. NO.   | STD. WT. (LBS.) | MAXIMUM LOAD/LBS. |
|------------|-----------------|-------------------|
| NE-763-3/8 | 110             | 200               |
| NE-763-1/2 | 120             | 200               |

Kit consists of:

| DESCRIPTION  | STD. CTN. | MATERIAL     | COLOR |
|--------------|-----------|--------------|-------|
| Channel Nuts | 4         | Polyurethane | Gray  |
| Clips (set)  | 2         | Vinylester   | Beige |
| Bolts        | 4         | Polyurethane | Gray  |



## Non-Metallic Channels and Accessories



### Kindorf® Brush-On Fiberglass End Sealant

When fabricating Type "P" or "V" Series materials, Kindorf® Fiberglass End Sealant should be used. After cutting or drilling the channel, interior glass fibers may fray and lose strength due to exposure to the environment. Kindorf® sealant protects the exposed glass fibers and prevents deterioration. Kindorf® sealant exceeds Vinylester (V) material in corrosion resistance.



| CAT. NO. | DESCRIPTION      | SIZE  | WT. LBS./100 |
|----------|------------------|-------|--------------|
| NH-600   | Brush-on sealant | 1 qt. | 220          |

### Kindorf® Spray-On Fiberglass End Sealant

Kindorf® Spray-On Fiberglass End Sealant provides a quick and easy corrosion-resistant coating when applied to fiberglass channel and accessories. Kindorf® Spray-On Fiberglass End Sealant is a rubberized spray which is supplied in a 12 oz. pressurized can.



| CAT. NO. | DESCRIPTION      | SIZE   | WT. LBS./100 |
|----------|------------------|--------|--------------|
| NH-601   | Spray-on sealant | 12 oz. | 100          |

Modular Metal Framing and Support System

### Chemical Resistance

| CHEMICAL                 | POLYESTER |       | VINYLESTER |       | RIGID PVC |       | POLYURETHANE |       |
|--------------------------|-----------|-------|------------|-------|-----------|-------|--------------|-------|
|                          | 70°F      | 160°F | 70°F       | 160°F | 70°F      | 160°F | 70°F         | 160°F |
| Acetic Acid, <50%        | •         | •     | •          | •     | †         | †     | •            | —     |
| Acetone, <10%            | †         | †     | †          | †     | —         | —     | —            | —     |
| Aluminum Hydroxide       | •         | •     | •          | •     | —         | —     | —            | —     |
| Ammonium Hydroxide, <20% | †         | †     | •          | 150°  | •         | •     | •            | —     |
| Ammonium Nitrate         | •         | •     | •          | •     | —         | —     | —            | —     |
| Ammonium Phosphate       | •         | •     | •          | •     | —         | —     | —            | —     |
| Benzene                  | •         | •     | †          | †     | —         | —     | —            | —     |
| Benzoic Acid             | •         | •     | •          | •     | •         | •     | •            | —     |
| Bromine, Wet Gas         | †         | †     | •          | 100°  | •         | †     | —            | —     |
| Butylene Glycol          | •         | •     | •          | •     | —         | —     | —            | —     |
| Butyric Acid, <50%       | •         | •     | •          | •     | —         | —     | —            | —     |
| Chlorine, Dry Gas        | •         | •     | •          | •     | —         | —     | —            | —     |
| Chlorine, Wet Gas        | †         | †     | •          | •     | —         | —     | —            | —     |
| Chlorine, Liquid         | †         | †     | †          | †     | —         | —     | —            | —     |
| Chlorine, Water          | •         | •     | •          | •     | •         | •     | •            | —     |
| Chromic Acid, <5%        | †         | †     | •          | •     | —         | —     | —            | —     |
| Copper Chloride          | •         | •     | •          | •     | •         | •     | •            | —     |
| Copper Cyanide           | •         | •     | •          | •     | •         | •     | •            | —     |
| Copper Nitrate           | •         | •     | •          | •     | —         | —     | —            | —     |
| Copper Sulfate           | •         | •     | •          | •     | •         | •     | •            | —     |
| Esters, Fatty Acids      | •         | •     | •          | •     | —         | —     | —            | —     |
| Ferric Chloride          | •         | •     | •          | •     | •         | •     | —            | —     |
| Ferrous Chloride         | •         | •     | •          | •     | —         | —     | —            | —     |
| Fluoboric Acid           | •         | 120°  | •          | •     | •         | •     | •            | —     |
| Fluosilicic Acid, <32%   | †         | †     | •          | 100°  | —         | —     | —            | —     |
| Formic Acid, <50%        | †         | †     | •          | 100°  | †         | †     | •            | —     |

- Recommended for use
- ° Recommended up to temperature indicated
- † Not recommended for use
- No information available at this time

| CHEMICAL                   | POLYESTER |       | VINYLESTER |       | RIGID PVC |       | POLYURETHANE |       |
|----------------------------|-----------|-------|------------|-------|-----------|-------|--------------|-------|
|                            | 70°F      | 160°F | 70°F       | 160°F | 70°F      | 160°F | 70°F         | 160°F |
| Gasoline, Aviation         | •         | †     | •          | •     | —         | —     | —            | —     |
| Hydrochloric Acid, <37%    | •         | †     | •          | •     | •         | •     | •            | —     |
| Hydrofluoric Acid, <20%    | †         | †     | •          | 100°  | •         | †     | —            | —     |
| Hydrogen Chloride, Wet Gas | •         | †     | •          | •     | —         | —     | —            | —     |
| Hydrogen Sulfide, Wet Gas  | •         | †     | •          | •     | •         | •     | •            | —     |
| Lactic Acid                | •         | †     | •          | •     | •         | •     | •            | —     |
| Nickel Sulfate, low pH     | †         | †     | •          | •     | —         | —     | —            | —     |
| Nickel Sulfate, high pH    | †         | †     | •          | •     | —         | —     | —            | —     |
| Nitric Acid, <35%          | †         | †     | •          | 120°  | •         | •     | •            | —     |
| Perchloric Acid, <10%      | †         | †     | •          | 150°  | —         | —     | —            | —     |
| Phosphoric Acid            | •         | •     | •          | •     | •         | •     | •            | —     |
| Potassium Chloride         | •         | •     | •          | •     | •         | •     | •            | —     |
| Potassium Nitrate          | •         | •     | •          | •     | —         | —     | —            | —     |
| Potassium Persulfate       | †         | †     | •          | •     | —         | —     | —            | —     |
| Sodium Hydroxide, <50%     | †         | †     | •          | 180°  | •         | •     | •            | —     |
| Sodium Hypochlorite, <15%  | †         | †     | •          | 150°  | •         | •     | •            | —     |
| Sodium Nitrate             | •         | •     | •          | •     | —         | —     | —            | —     |
| Sodium Sulfate             | •         | †     | •          | •     | —         | —     | —            | —     |
| Sodium Sulfide             | †         | †     | •          | •     | •         | •     | •            | —     |
| Sulfuric Acid, <70%        | †         | †     | •          | •     | •         | •     | •            | —     |
| Sulfuric Acid >70%         | †         | †     | •          | 102°  | †         | †     | —            | —     |
| Trisodium Phosphate        | †         | †     | •          | •     | •         | •     | •            | —     |
| Urea                       | •         | †     | •          | 150°  | —         | —     | —            | —     |
| Vegetable Oils             | •         | •     | •          | •     | —         | —     | —            | —     |
| Vinegar                    | •         | •     | •          | •     | —         | —     | —            | —     |
| White Liquor               | —         | —     | •          | •     | •         | •     | •            | —     |

#### Type operating ranges for:

- Polyester -30° F–150° F
- Vinylester -35° F–200° F
- Polyurethane -40° F–130° F
- Nylon -20° F–150° F

NOTE: The guidelines presented in this table assume the typical application of Kindorf® products where exposure is limited to fumes, vapors, and occasional splashes from chemicals. This information is intended as a guideline and does not guarantee product performance for the applications listed. In special situations where chemical resistance is critical, the factory should be consulted. Some applications may require a screening test of samples in the chemical environment of interest. The user is advised to determine suitability of the product for its particular use.

Class I fire rated per ASTM E-84 and are UL-94 V-0.

**Corporate Office**  
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800.816.7809  
Fax: 901.252.1354

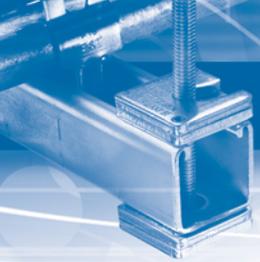
**Customer Service**  
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Fax: 800.816.7810

**Technical Services**  
Tel: 888.862.3289  
Fax: 901.252.1321

**Tool Services**  
Tel: 800.284.8665

**Thomas & Betts**

www.tnb.com



# Kindorf®

## Right Angle Slotted Angle

### With Right Angle, you get Flexibility — Simplicity — Economy!

#### Create the support framing you need.

Right Angle is manufactured from commercial-quality steel in three different sizes. The small sizes are 14-ga. steel, the larger size is 12-ga. steel. With this offering, an endless variety of metal framing requirements can be met, from lightweight supporting needs to larger shelving for inventory storage.

One of the legs on all sizes is 1½" wide, while the other is either 1½", 2½" or 3¼" long. Depending on the frame requirements, a single size can be utilized throughout, or the sizes can be interchanged to get the most efficient usage from the material.

This book will serve as a guide to plan and build your structure.

#### Installation time is reduced — inventory space is minimal.

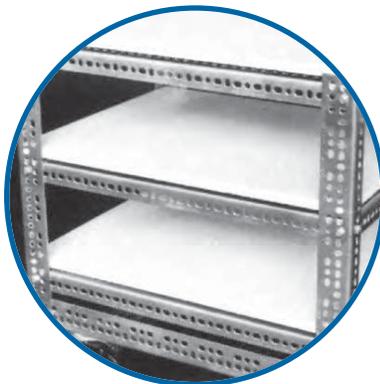
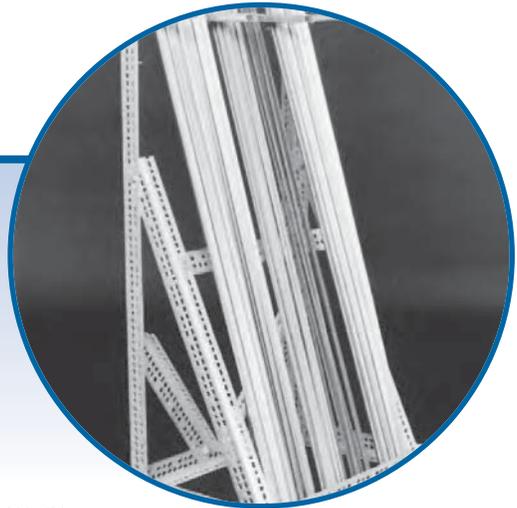
Scribe marks are placed every ¼" which saves planning, layout and cutting time and assures accuracy.

The exclusive slot and hole pattern, repeated every 3", is scientifically designed for ease of assembly and rigidity. No welding is necessary, no holes to drill. A ¾" wrench is the only tool required for assembly. The proper nuts and bolts are included with the material to ensure fast and easy erection.

Right Angle Metal Framing is packaged in 10' and 12' lengths to minimize cut offs and ensure maximum use of material.

120' (10 x 12' lengths) of Right Angle takes up the same amount of space as one 2 x 4. A standard package includes five pieces to a bundle, therefore handling and storage space are significantly reduced.

The importance of cutting Right Angle easily, quickly and accurately is the key to time saving assembly. The Steel City® Portable Cutter provides these advantages and make layout and erection of any structure a "light-work" job.



### Kindorf® Right Angle comes standard with our Galv-Krom® Finish, which ensures a long-lasting, durable installation.

The Galv-Krom® finish is a two-part finishing process that protects the entire system, including all nuts and bolts. The first part of the finish is electro-galvanized zinc that covers the bare steel. The second part is a gold zinc dichromate that is applied over the zinc base.

Three aspects of the Galv-Krom® process are worthy of note:

**1. Zinc Coating** — In the first part of the Galv-Krom® process, a .5 mil coating of zinc is placed on the bare steel. This assures the sacrificial quality of any galvanizing and becomes a working finish. The zinc literally sacrifices itself over bare steel and protects cut edges or scratches which may occur during construction.

Galv-Krom® is in compliance with ASTM B633-78 Type II coating.

**2. Electro galvanizing** — Because the zinc is applied through a temperature-controlled electrolytic process, a cohesive bond with the steel is assured. This prohibits chipping or peeling. It also distributes the zinc evenly so all components — including threads — can be equally protected.

**3. Trivalent Gold Chromate Barrier** — The second part of the Galv-Krom® finish is a gold zinc dichromate that is applied over the zinc base. This second layer of plating forms a non-porous barrier which protects the underlying zinc and adds additional resistance to corrosion. In addition, the gold zinc dichromate covering provides an excellent base if the surface is to be painted.

Kindorf® Modular Metal Framing and Support System

Thomas & Betts

www.tnb.com

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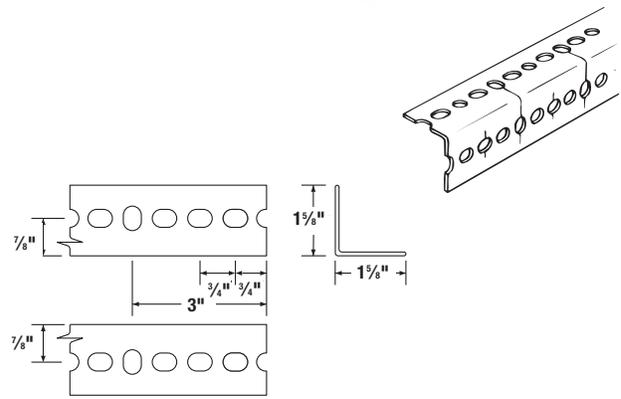
Tool Services  
Tel: 800.284.8665



### Type RA-160 Slotted Angle

- 1½" x 1½" x .080" (14 gauge)
- Designed for light-duty applications where extra strength is not a requirement
- Ideal material for light racking and shelving
- Packaged in five 10-ft. or 12-ft. lengths complete with thirty-six ¾" x ⅝" long hex head bolts and nuts
- Standard package 10' lengths: 39 lbs., 12' lengths: 48 lbs.

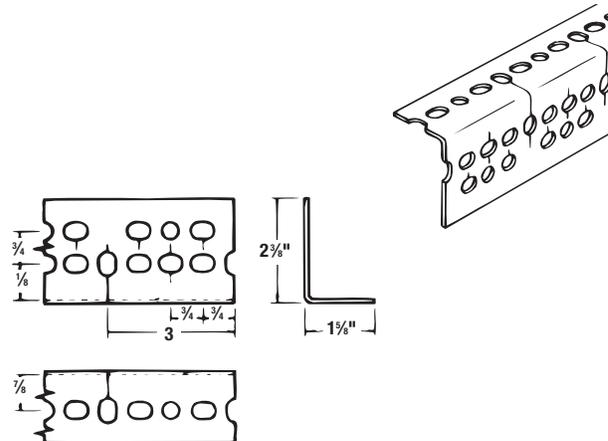
| CAT. NO.  | LENGTH | FT. PER PKG. | WT. PER 100 FT. |
|-----------|--------|--------------|-----------------|
| RA-160-10 | 10 ft. | 50           | 75 lbs.         |
| RA-160-12 | 12 ft. | 60           | 75 lbs.         |



### Type RA-225 — For Heavy-Duty

- 2½" x 1½" x .080" (14 gauge)
- Wide range versatility for nearly every type of framing
- Well suited for electrical applications
- Slot-and-hole pattern provides ready-made anchoring points for panel-board framing and fixtures of all kinds
- Packaged in five 10-ft. or 12-ft. lengths complete with thirty-six ¾" x ⅝" long hex head bolts and nuts
- Standard package 10' lengths: 48 lbs., 12' lengths: 56 lbs.

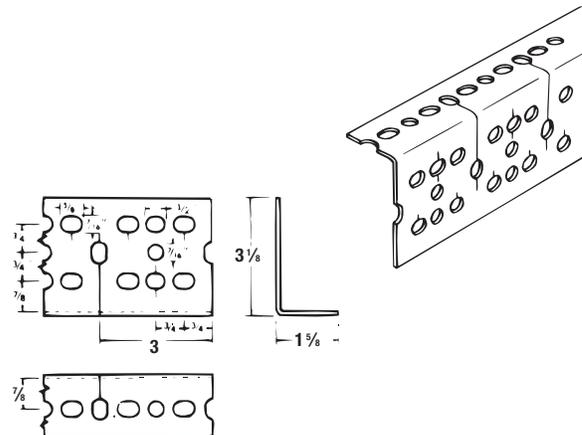
| CAT. NO.  | LENGTH | FT. PER PKG. | WT. PER 100 FT. |
|-----------|--------|--------------|-----------------|
| RA-225-10 | 10 ft. | 50           | 93 lbs.         |
| RA-225-12 | 12 ft. | 60           | 93 lbs.         |



### Type RA-300 — For Extra Heavy-Duty

- 3½" x 1½" x .104" (12 gauge)
- Used where heavy loads are involved
- Racks and shelving for heavy material and large structures such as ramps and balconies are typical uses
- Packaged in five 10-ft. or 12-ft. lengths complete with thirty-six ¾" x ⅝" long hex head bolts and nuts
- Standard package 10' lengths: 72 lbs., 12' lengths: 84 lbs.

| CAT. NO.  | LENGTH | FT. PER PKG. | WT. PER 100 FT. |
|-----------|--------|--------------|-----------------|
| RA 300 10 | 10 ft. | 50           | 135 lbs.        |
| RA-300-12 | 12 ft. | 60           | 135 lbs.        |

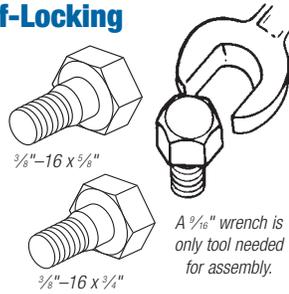


# Kindorf®

## Right Angle Slotted Angle

### Nuts Serrated — For Self-Locking

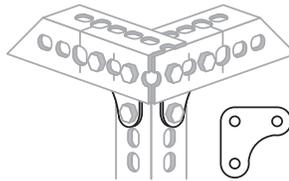
- 100 sets per package
- No. RA-BN-5/8, 5/8"–16 x 3/8" long for RA-160 and RA-225
- No. RA-BN-3/4, 3/4"–16 x 3/4" long for RA-300
- A 3/16" wrench is only tool needed for assembly



| CAT. NO.  | STD. CTN. | WEIGHT PER 100 SETS    |
|-----------|-----------|------------------------|
| RA BN 5/8 | 100       | 4 lbs., 5/8"–16 x 3/8" |
| RA BN 3/4 | 100       | 5 lbs., 3/4"–16 x 3/4" |

### Gusset Plate

- Three hole connector for extra rigid angle assembly
- For use with all three types of right angle
- Galvanized steel



For proper assembly, insert plate between the angle flanges for 3-bolt connection.

| CAT. NO. | STD. CTN. | WEIGHT PER 100 SETS |
|----------|-----------|---------------------|
| RA GP    | 25        | 10                  |

### Portable Cutter

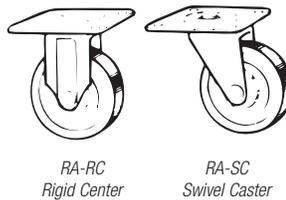
- Designed for use with all three types of slotted angle
- Cuts with single stroke of handle
- Produces clean, burr-free cuts



| CAT. NO. | STD. CTN. | WEIGHT EACH |
|----------|-----------|-------------|
| RA C     | 1         | 17          |

### Rigid and Swivel Casters

- Hard rubber composition
- 3 1/2" diameter with load rating of 225 lbs. per wheel
- Plate has 1 3/32" diameter holes for mounting on all three types of slotted angle

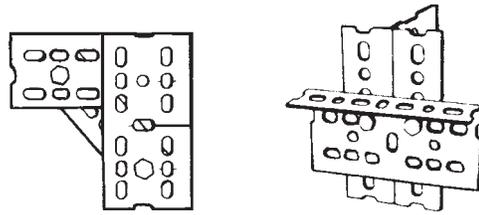


| CAT. NO. | STD. CTN. | WEIGHT EACH |
|----------|-----------|-------------|
| RA RC    | 2         | 2           |
| RA SC    | 2         | 3           |

## Helpful Hints to Maximize Right Angle Erection.

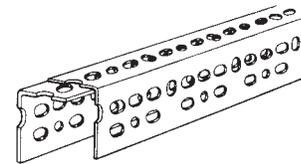
### Slot and Hole Pattern

The Right Angle hole pattern is simple and flexible. It is repeated every 3" along the entire length of the Right Angle. An extended line marks the 3" increments, (vertical slots), while shorter lines mark every 3/4" increment. With this hole pattern, nesting, triangulation, cross beams and many additional combinations are possible.



Triangulation

Cross Beams

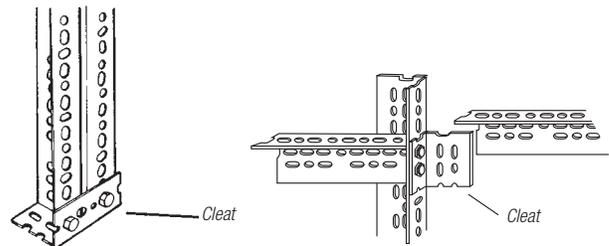


Nesting

### Cleat Sections

Cut Off Cleats are small sections of Right Angle used to reinforce joints or used as feet to support vertical columns. These feet prevent damage to floor surfaces or can be used to bolt a structure to the floor.

Additional joints can be made using cut off cleats. Simply butt the cleat against a column and behind a right side beam, as shown in the illustration.



Cleat

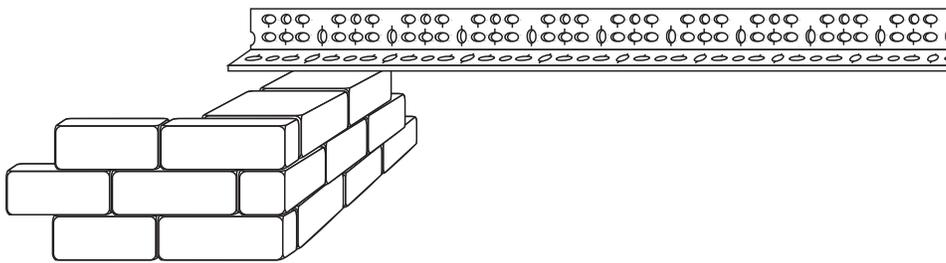
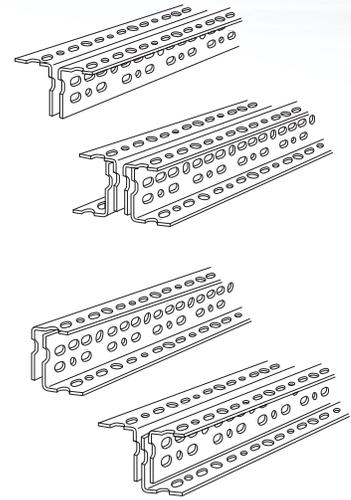
Cleat



When a beam rests on a ledge of other material (such as a wall) the long flange should extend upward. Right Angle beams are at their strongest when assembled with long flange downward. Vertical columns may be in either direction. Place short flange of vertical column in front for shelving to permit wider opening for handling material.

### Variety of Combinations to Meet Needs

Greater strength is obtained by joining sections of Right Angle in various combinations for beams and columns. See the load charts on **page C-99** for the combination that best suits your need.



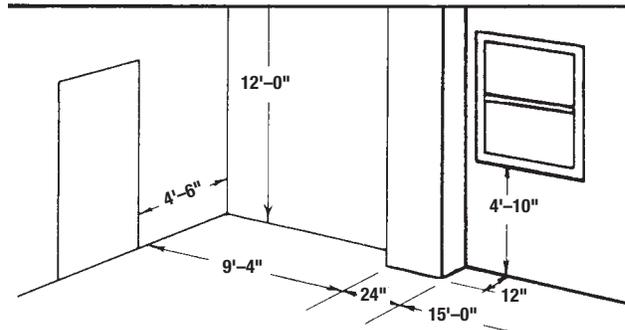
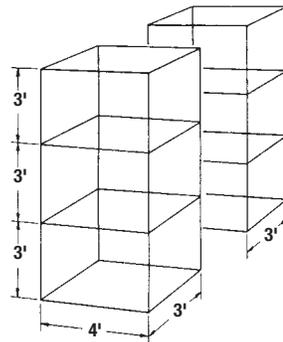
## Procedure for Laying Out Structure.

### Measure the Space

Right Angle structures may be built to the size of the space available. Measure the space and make a sketch of the area.

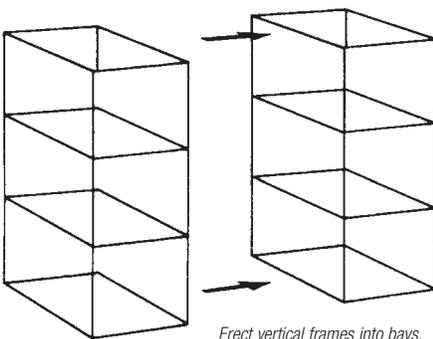
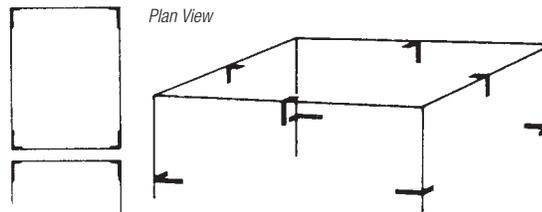
### Sketch the Planned Structure

Sketch the structure you plan to build listing all vital dimensions. Include length, width and height of all sections so that load limits can be calculated safely.



### Plan Flange Direction

Right Angle beams are at their strongest position with the long flange downward. Vertical uprights may be in either direction for equal strength. Be sure to measure the material to be shelved to allow space for handling. Your sketch will also be used as a cutting and assembly plan.



Erect vertical frames into bays.  
Bolt bays together.

### Assembling the Structure

Follow your plan for cutting sections and for layout. Assemble the structure as a series of frames, or bays and bolt together as units. Use as many bolts as possible and turn nuts up finger-tight. Square-up and level the entire structure. Proceed to tighten bolts with wrench, starting with corners to assure permanent squareness. Use diagonal bracing, if necessary. Add shelves. Your Right Angle structure is ready for a useful lifetime.

# Kindorf®

## Right Angle Slotted Angle

### Figure Load Limits

Figure the load your structure must bear on each level or shelf. This is necessary to determine the sections required to carry the load safely.

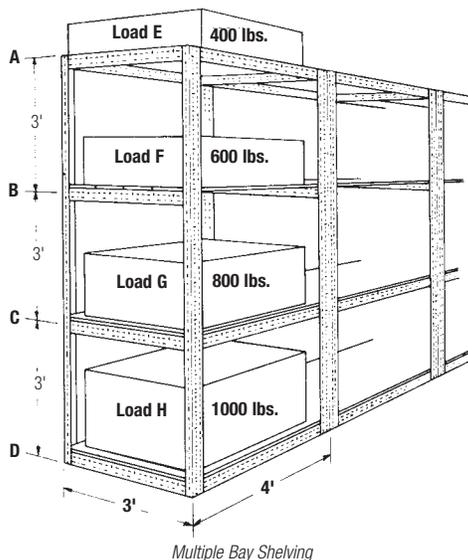
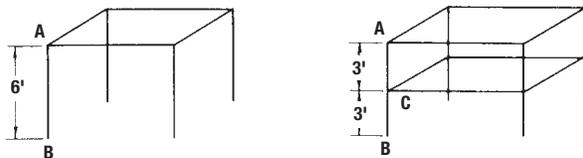
The load tables will enable you to determine the Right Angle gauge and section combination needed.

#### Load Limit Example for Evenly Distributed Loads

Using the sketch shown and the load tables, calculate the weight supportable by a structure with two or more shelves. A 6-ft. high single shelf structure AB will support a load of 5,200 lbs. using RA-225 Right Angle (4 single uprights x 1,100 lbs. each) from table.

When an additional shelf is framed at C, columns become the same as two 3-ft. uprights, AC and CB, and the total safe load is 10,200 lbs. on columns CB (4 x 2,550 lbs.). This load can be divided between the shelves in any convenient way, so long as the total load on columns CB does not exceed 10,200 lbs. If shelf loads are unequal, the heavier load should go on the lower shelf to avoid top-heavy instability.

Use the same method of calculating for three or more shelves with the load tables as reference.



### How to Determine Weight to Be Supported

Multiple-bay shelving is typical of many Right Angle weight-bearing structures. Load tables are your guide to the weights supportable by RA-160, RA-225 and RA-300. Strengths are increased where needed by combining sections for beams or columns, and by adding braces.

#### Example for Checking Load Safety

This structure is erected as 3 separate bays and bolted together, using RA-225.

#### Beam Load Bearing

Load E = 400 lbs. evenly distributed on two 4' beams. Refer to beam load tables for RA-225: Two 4' beams will support 1,090 lbs. — safe load.

Load F = 600 lbs. on solid shelf evenly distributes weight to two 3' beams. Refer to beam load tables: Two 3' beams will support 1,560 lbs. — safe load.

Load G = 800 lbs. on shelf supported by two 3' beams and two 4' beams. Add the 4 sections: 3 + 3 + 4 + 4 = 14 ft. Divide total load G by 14, i.e.,  $800 \div 14 = 57$  lbs. per ft.

Compute wt. on longest beam — two 4' sections, or 8 ft. Multiply 8' x 57 lbs. per ft. load = 456 lbs. supported by the two 4' beam. Refer to load tables: Two 4' beams support 1,090 lbs. — safe load. Since the 3' beams are stronger, they are also safe for the load. Load H, any load on shelf supported by beams at floor level — considered safe.

The example illustrates methods of figuring loads on three different types of shelf construction. It is not a typical bay.

It should be remembered that a safe beam load does not assure a safe structure — column load safety must also be computed.

#### Column Load Bearing

Four columns support load equally. Column section AB = b load E, or 100 lbs.

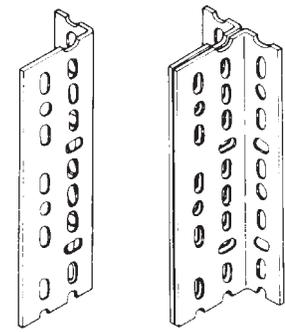
Column section BC = b load F, or 150 lbs., PLUS b load E, 100 lbs. or 250 lbs.

Column section CD = b load G, or 200 lbs. PLUS 150 lbs., b load F, PLUS 100 lbs., b load E, for a total load on section CD of 450 lbs. Load H is at floor level, does not count.

Assuming a 9' high structure, the 9' column is supported at 3' intervals by ties for shelving, the 3' column section data is used. Refer to column load tables: 3 column (vertical) supports 2,550 lbs. — safe for the load.

Figures are for a free-standing, unbraced structure. Common uprights in two or more bay structures carry a double load.

See **page C-99** for load tables.



Single Section

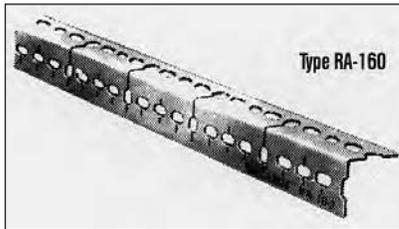
T-Section



### Column Loads

#### RA 160 — 14 ga. x 1 5/8" x 1 5/8"

|    | T-SECTION | SINGLE SECTION |
|----|-----------|----------------|
| 3' | 3,880     | 1,500          |
| 4' | 3,500     | 1,200          |
| 5' | 3,000     | 950            |
| 6' | 2,500     | 750            |

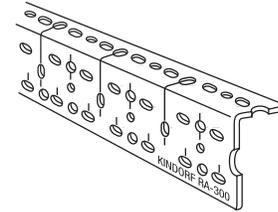


Single Section

#### RA 300 — 12 ga. x 3 1/8" x 1 5/8"

|     | T-SECTION | SINGLE SECTION |
|-----|-----------|----------------|
| 3'  | 8,000     | 3,500          |
| 4'  | 7,100     | 2,900          |
| 5'  | 6,300     | 2,400          |
| 6'  | 5,550     | 1,800          |
| 7'  | 4,750     | 1,300          |
| 8'  | 4,000     | 1,000          |
| 9'  | 3,200     | —              |
| 10' | 2,400     | —              |

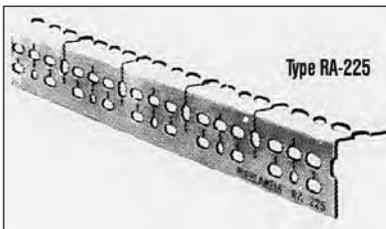
NOTE: Values shown are static loads (lbs.) applied vertically to an unbraced column. Min. safety factor 2.1. To increase load capacity columns can be reinforced with side braces cut to size.



Broad Channels

#### RA 225 — 14 ga. x 2 3/8" x 1 5/8"

|     | T-SECTION | SINGLE SECTION |
|-----|-----------|----------------|
| 3'  | 5,550     | 2,550          |
| 4'  | 5,050     | 1,900          |
| 5'  | 4,400     | 1,550          |
| 6'  | 3,850     | 1,300          |
| 7'  | 3,400     | 970            |
| 8'  | 3,000     | —              |
| 9'  | 2,650     | —              |
| 10' | 2,300     | —              |



Narrow Channel

### Beam Loads

|     | BROAD CHANNEL | NARROW CHANNEL | SINGLE SECTION |
|-----|---------------|----------------|----------------|
| 3'  | 2,550         | 1,490          | 770            |
| 4'  | 1,780         | 1,040          | 530            |
| 5'  | 1,330         | 770            | 400            |
| 6'  | 1,030         | 600            | 310            |
| 7'  | 820           | 470            | 240            |
| 8'  | 590           | 380            | —              |
| 9'  | 420           | 310            | —              |
| 10' | 310           | 230            | —              |
| 3'  | 4,110         | 3,050          | 1,560          |
| 4'  | 2,870         | 2,130          | 1,090          |
| 5'  | 2,140         | 1,580          | 810            |
| 6'  | 1,660         | 1,230          | 630            |
| 7'  | 1,330         | 980            | 500            |
| 8'  | 1,080         | 790            | 410            |
| 9'  | 890           | 650            | 330            |
| 10' | 720           | 540            | 280            |
| 3'  | 7,570         | 6,300          | 3,220          |
| 4'  | 5,290         | 4,400          | 2,250          |
| 5'  | 3,950         | 3,280          | 1,680          |
| 6'  | 3,060         | 2,540          | 1,300          |
| 7'  | 2,440         | 2,020          | 1,040          |
| 8'  | 1,990         | 1,650          | 840            |
| 9'  | 1,650         | 1,360          | 690            |
| 10' | 1,380         | 1,140          | 580            |

NOTE: Values shown are for a pair of beams supporting an evenly distributed load (lbs.). For a concentrated load these values should be halved. Min. safety factor 1.4. Multiple angle beams should be bolted every 6 in. with bolts staggered in alternate rows. To increase load capacity tie angles can be cut to size and bolted between beams.

# Handle Retro-Fit Trapeze Applications with Ease!

## Kindorf® Trap-Eze™ Connector



The innovative Kindorf® Trap-Eze™ Connector changes a time-consuming retro-fit trapeze application into a streamlined process. Using a Kindorf® Trapnut® Strut Fastener, the new Trap-Eze™ Connector can be easily installed above or to the side of an existing assembly, eliminating the need to disassemble and reassemble the trapeze. It is designed for use with shorter strut lengths that can vary in length by as much as an inch, so the strut can be rough cut versus labor-intensive precision cut.

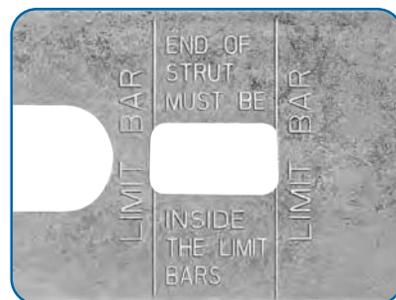


*Unique safety slot maintains bracket position on threaded rod and prevents disengagement of the trapeze system.*

**Easily installs above existing trapeze.**

**Can be used to extend existing trapeze.**

**Designed for use with the innovative Kindorf® Trapnut® Strut Fastener.**



*View window provides strut length safety zone for rough cuts versus precision cuts.*

**See page C-70 for more information**