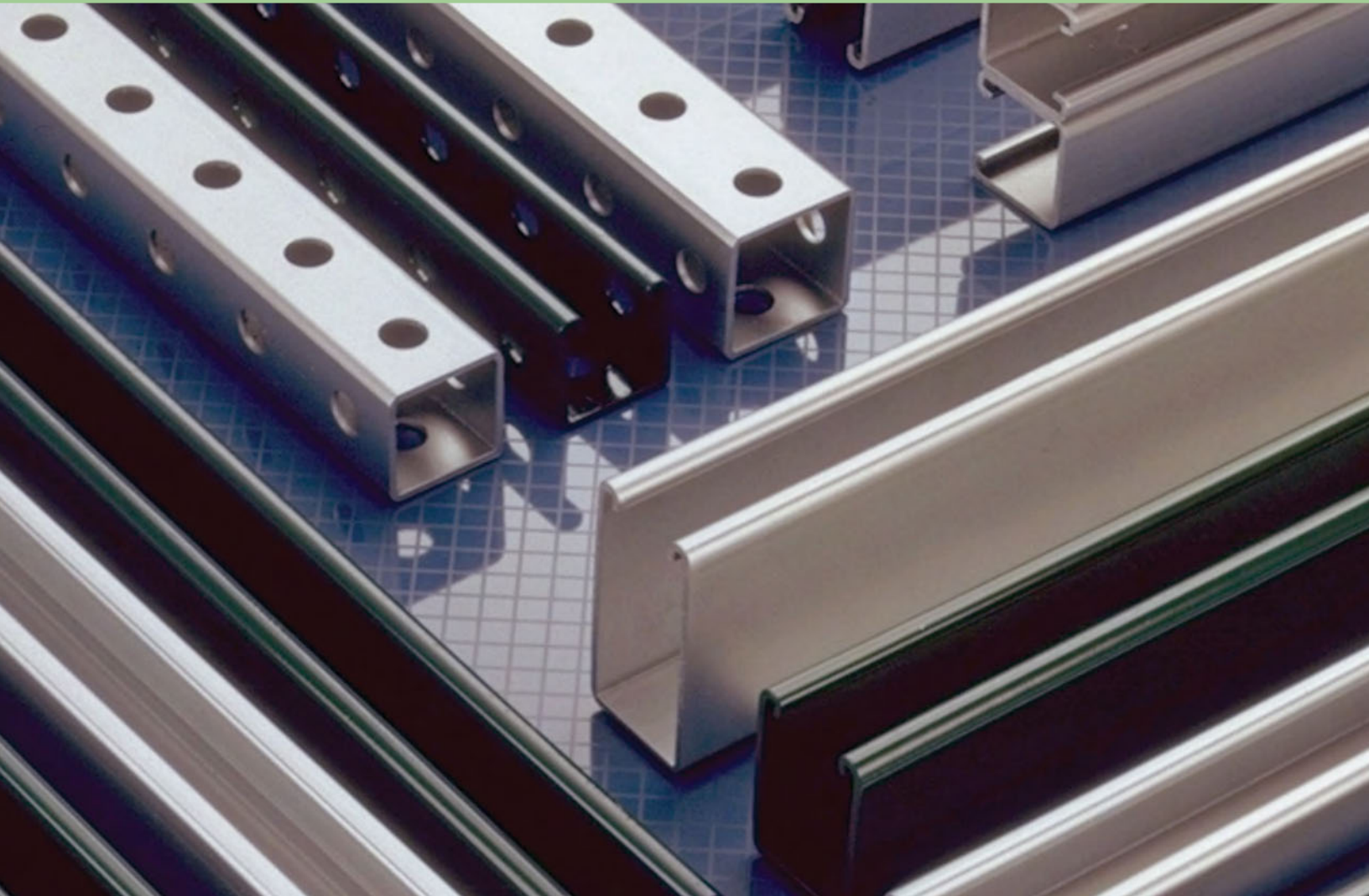




General Engineering Catalog

Number 18A



Atkore[™]
Unistrut

Atkore[™]
Power-Strut

A 100 year history producing millions of solutions.

When Charles Attwood created Unistrut in 1924, the world was introduced to the unique weldless connection that was infinitely adjustable and reusable. His vision of continuous innovation for metal framing has led Unistrut to become the market leader in metal framing. That spirit of innovation has endured over the past 100 years, with Unistrut and Power-Strut developing a robust line of channels, fittings, fasteners, hangers, pipe clamps, and accessories in a variety of finishes and materials to help support that vision of continuous innovation.



Atkore™
Unistrut

Atkore™
Power-Strut

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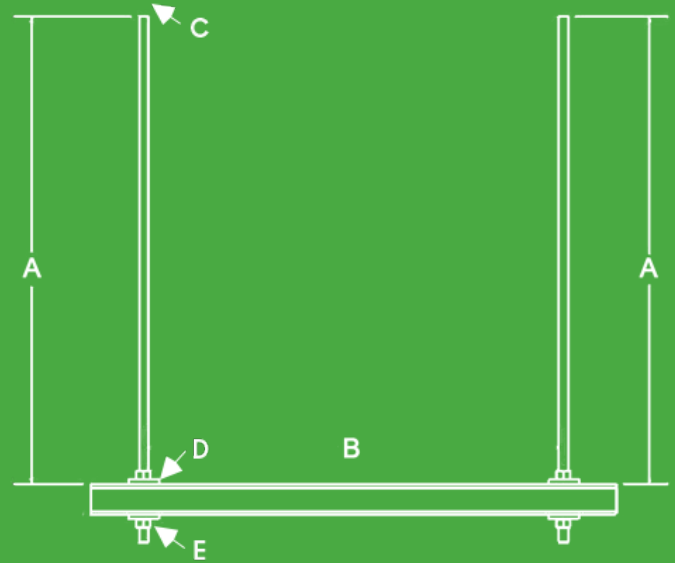
Pipe & Conduit Supports

Design and Install with Ease

Nearly every large building requires a support structure for pipes and conduit. The wide range of channel sizes allows you to design a support that is appropriate for the loads encountered. A major advantage of Unistrut and Power-Strut products is that you can build around structures that are already in place. Whether you are building a pipe support trapeze, a lighting support, or a rooftop stanchion, Unistrut and Power-strut metal framing offers a convenient solution.

PIPE & CONDUIT SUPPORT SOLUTIONS:

- A. Threaded Rod (ex. HTHR050)
- B. 1-5/8" Strut Channel (ex. P1000)
- C. Rod Attachment to Structure - Beam Clamp (ex. P2894)
- D. Hardware - Square Washers (ex. P1063)
- E. Hardware - Hex Nuts (ex. HHXN037)



TRAPEZE HANGERS FOR CONDUIT SUPPORT

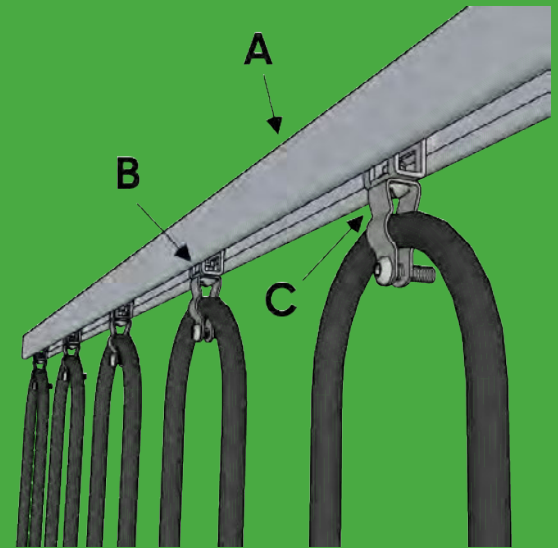
Simply constructed using lengths of threaded rod with a channel section, trapeze hangers made from channel suspended from the structural steel beams with beam clamps provide dependable support for conduit runs. All of Atkore's beam clamps accept standard threaded rod.



Trolley Systems

A Better Approach to Overhead Movement

Atkore has developed a complete trolley system that is ideal for several applications. The system includes a range of light-duty to heavy-duty trolleys, tracks, and hangers offering an abundance of versatility. Using our standard P1000 channel for the track allows countless different configurations using the Unistrut and Power-Strut system of fittings, clamps, and hangers. Curved track is also available and is commonly found in many trolley applications such as festoon systems, sliding doors & curtains, hoists, storage racks, temporary moving structures, and sliding gates.



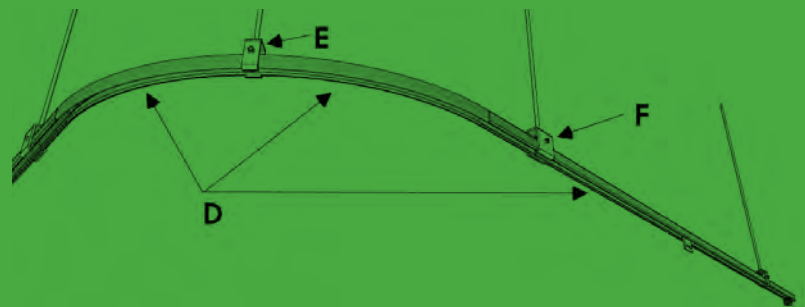
TROLLEY SYSTEM SOLUTIONS:

P2749 FESTOON CONNECTION (FIG. A)

- A. 1-5/8" Strut Channel (ex. P1000)
- B. P2749 2-Wheel Trolley
- C. Conduit Clamp

CURVED TROLLEY (FIG. B)

- D. Curved 1-5/8" Strut Channel (ex. P1000)
- E. P1834 Standard Hanger
- F. P1834A End Splice Hanger



EQUIPMENT, TOOL & SIGN SUPPORTS

Equipment supports are often a challenge for the installer. Many items are added after construction is complete and the solution must be adapted to available space. This is where Unistrut and Power-Strut products clearly distinguish themselves with a wide variety of channel sizes, beam clamps, and fittings to provide countless solutions. The Equipment Transformer Support on the left features heavy-duty brackets providing support for the transformer box while the extra size and weight of the transformers on the right were mounted quickly and easily utilizing back-to-back channel.



Storage Racks & Shelves

Maximize Your Existing Space

Storage racks are one of the earliest and most common applications for Unistrut and Power-Strut metal framing. With load capacity determined by the channel series chosen for the application, one of the major advantages to a metal framing rack is the adjustability of the shelving. By loosening the bolts that secure the fittings to the channel, shelves can be raised or lowered to any height requirement. Post bases can also be used when the rack is placed on a concrete surface to avoid surface damage. With numerous configurations and possibilities, the opportunity to maximize your existing space is limited only by your imagination.

SEISMIC BRACING SOLUTION:

- A. 1- $\frac{5}{8}$ " Strut Channel (ex. P1000)
- B. P1026 90° Angle Fitting
- C. HHXN Mounting Nuts
- D. HHCS Mounting Bolts



MATERIAL HANDLING

Material handling can encompass a wide variety of applications from a simple rolling cart to complex conveyor support systems. Most manufacturing facilities require specialized material transfer systems, tooling supports, and specialized work areas. The flexibility of Unistrut and Power-Strut metal framing products makes it an ideal choice for these structures. With no welding or drilling required, Unistrut and Power-Strut channel can accommodate a wide variety of loading conditions. The rolling bar-stock rack shown to the right features cantilevered brackets that can be quickly adjusted to accommodate changing stock demands.



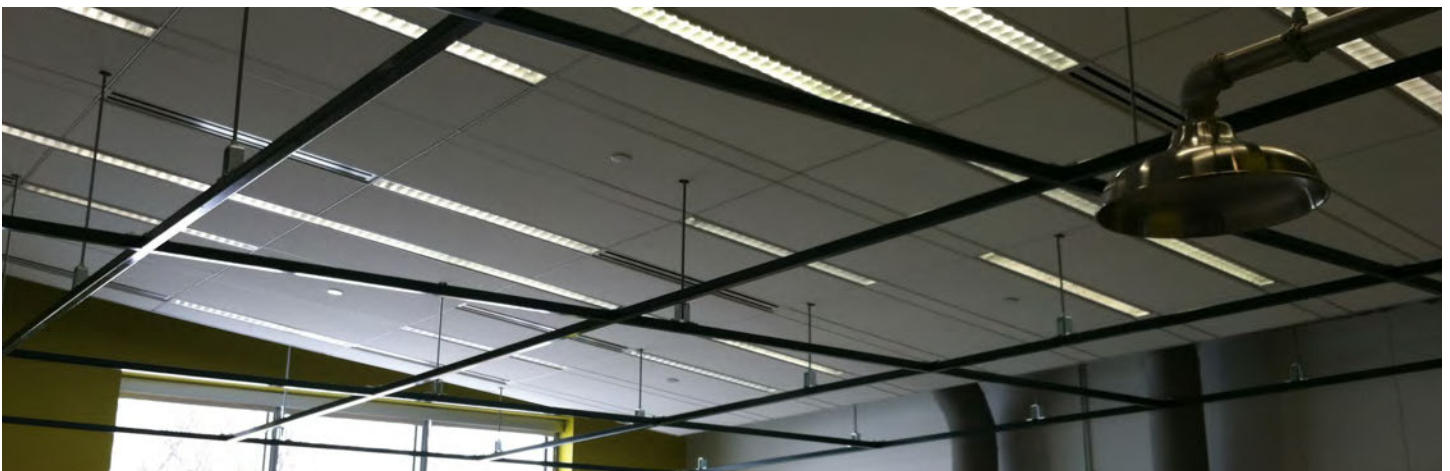
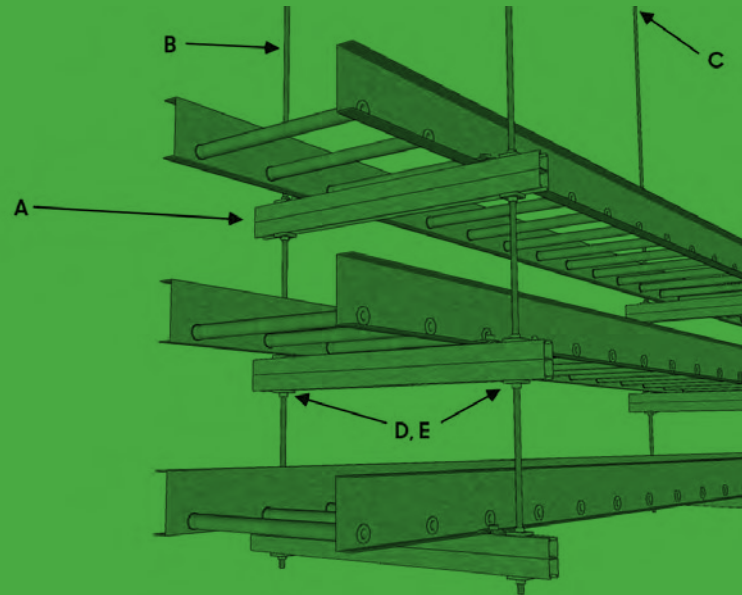
Cable Tray Supports

Infinite Flexibility Easily Achieved

Whether you are supporting the tray with a simple trapeze, a shelf bracket hung from a beam, or a shelf bracket attached to the wall, Unistrut and Power-Strut channel and fittings offer a perfect solution. Cable tray systems are often forced to avoid existing structures which results in more complex support requirements. Unistrut and Power-Strut channel offers a simple, yet flexible, method for accommodating those issues.

CABLE TRAY SUPPORT SOLUTION:

- A. 1- $\frac{5}{8}$ " Back-to-Back Strut Channel (ex. P1001)
- B. HTHR Steel Threaded Rod
- C. Rod Attachment to Structure - Beam Clamp
- D. Hardware - Square Washers (ex. P1063)
- E. Hardware - Hex Nuts (ex. HHXN037)



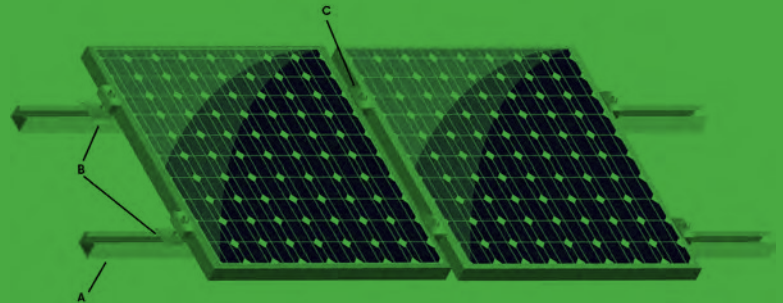
Solar Support Systems

Harness the Energy of Genuine Unistrut Solutions

Unistrut and Power-Strut metal framing delivers the most comprehensive and flexible solar support system on the market. Featuring a simple design used by the industry for a variety of installation methods and applications, Unistrut and Power-Strut solar clamps are designed for the best fit with Unistrut and Power-Strut channel to create less penetration and superior slip-resistance. Designed for maximum loads up to 90 miles per hour, Unistrut solar support systems are built to handle the demand, no matter the requirements for the installation.

SOLAR SUPPORT SYSTEM SOLUTION:

- A. 1- $\frac{5}{8}$ " Strut Channel; Aluminum (ex. P1000T)
- B. SLR200 Solar End-Clamp
- C. SLR100 Solar Mid-Clamp



NUCLEAR SUPPORT SYSTEMS

Unistrut and Power-Strut have been serving the needs of the Nuclear Power Industry for over 40 years. Unistrut and Power-Strut metal framing products provide structural support for millions of feet of conduit, pipe, and other applications in nearly all power plants throughout the United States. Offering the largest array of metal framing products to the industry for safety-related and commercial grade quality levels, Unistrut and Power-Strut metal framing safety-related products are certified to meet the requirements of 10 CFR 50, Appendix B. Unistrut and Power-Strut also assumes responsibility for 10 CFR, part 21 as a part of its safety procurement program.



Seismic Bracing Solutions

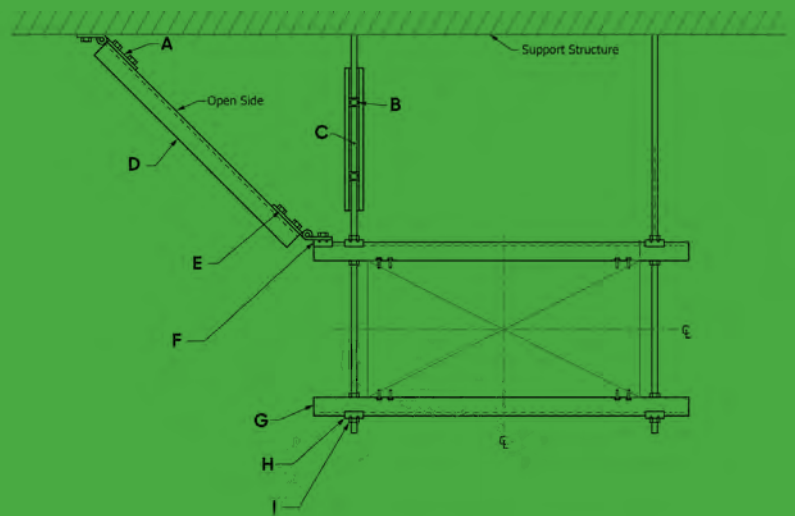
Reinforce and Safeguard Infrastructure from Natural Disasters

Unistrut and Power-Strut Seismic Bracing Systems are designed and constructed to resist virtually all code-specified seismic forces in the event of an earthquake, keeping non-building structural components of hospitals and other essential facilities operational and intact.

Unistrut and Power-Strut's dedication to technical excellence for real-world applications in severe seismic zones includes ensuring that our products meet or exceed the highest industry standards set forth by HCAI (formerly OSHPD) and LARR. Unistrut and Power-Strut's seismic bracing solutions are pre-approved by both HCAI and LARR, ensuring that our products comply with the gold standard in the industry.

SEISMIC BRACING SOLUTION:

- A. P1354AW; P3835-050
- B. P2486
- C. HTHR Steel Threaded Rod
- D. P1000; P900
- E. HHCS; HSSB
- F. HHCS; P3892-xx; P300

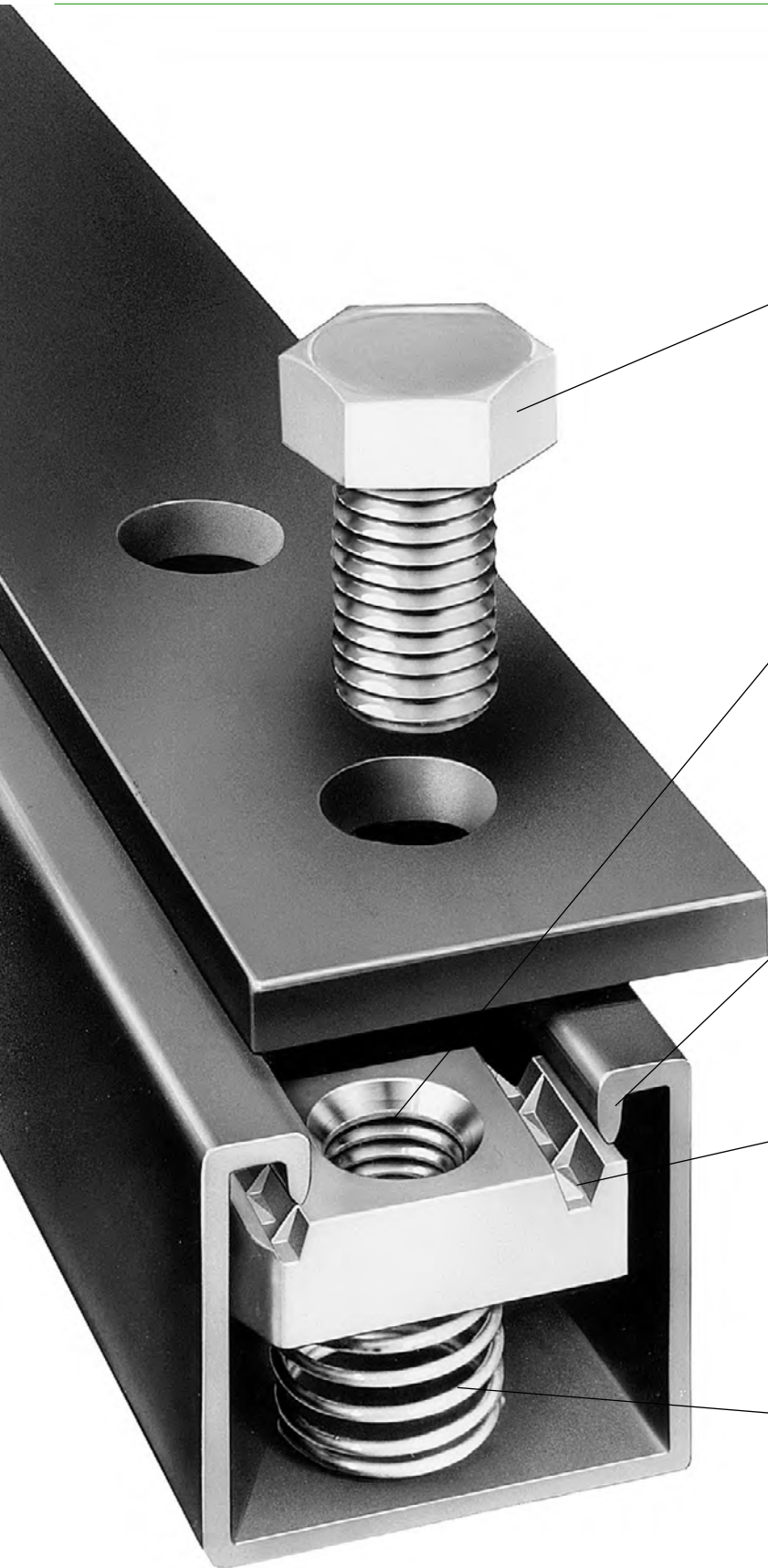


MEDICAL EQUIPMENT SUPPORT SYSTEMS

From basic X-ray machines to large integrated boom systems, Unistrut and Power-Strut can support the systems needed to meet today's medical equipment support challenges. Ceiling tile flanges can be installed directly on the metal framing flush with the bottom of the channel opening to create a clean, flush, unobtrusive look consistent with today's equipment room aesthetics. Medical supports designed with Unistrut and Power-Strut metal framing comply with seismic regulations while also featuring increased adjustability, mechanical connections, expanded adaptability, and efficient installation.



Featuring the Unique Weldless Connection



Hex-head bolt connects fitting to channel as it is threaded into spring nut.

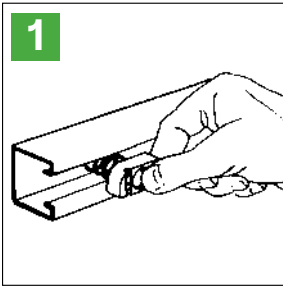
Chamfer in the nut eases starting of the bolt. Nut teeth create a strong, vise-like grip when tightened against the inturned channel edges.

Channel edges and the nut's tapered grooves act as guides to provide fool-proof alignment of connection.

Nut teeth grip the channel's inturned edges, tying the channel sides together in a "box" configuration for added strength.

Spring allows precision placement anywhere along channel length, then holds the nut in position while the connection is completed.

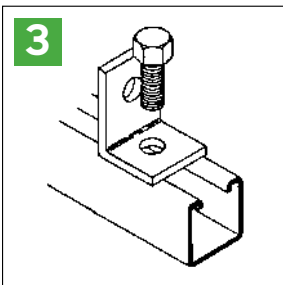
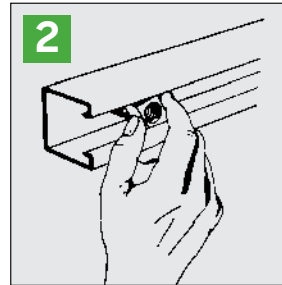
Strong, Fast, Economical and Adjustable



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

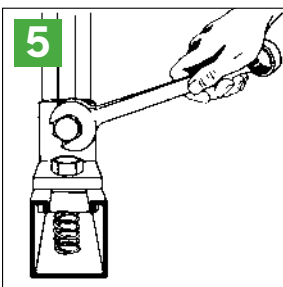
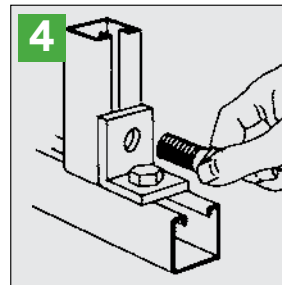
A 90° clockwise turn aligns the grooves in the nut with the inturned edges of the channel.

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



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

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



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



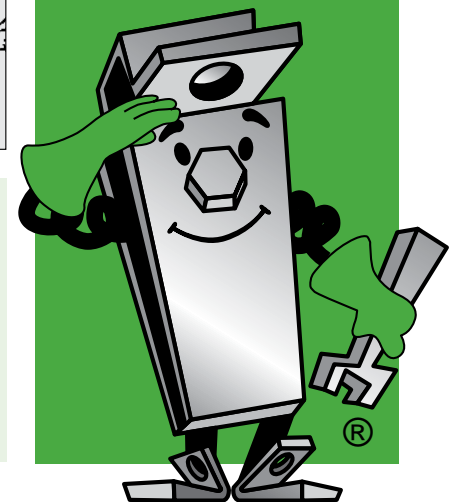
100% Adjustable

100% Reusable

No Welding

No Drilling

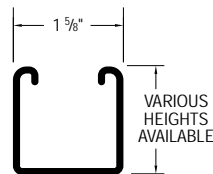
No Special Tools



Metal Framing Systems

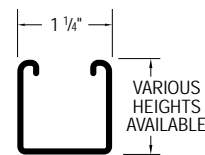
The Most Complete Metal Framing System

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



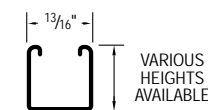
1 5/8" (41.3 mm) width

Designed to carry the heaviest loads and provide the widest variety of applications, the 1 5/8" series has become the accepted standard for use in mechanical, electrical and general construction applications where supports and attachments must meet the highest strength requirements.



1 1/4" (31.8 mm) width

A framing system designed for medium loads, the 1 1/4" series is especially suitable for use in the OEM, commercial and display markets. It maintains a lightness in scale and a clean line that makes it aesthetically pleasing as well as functional.



1 3/16" (20.6 mm) width

A unique half-size reduction of the 1 5/8" channel-width series, this smaller channel size can be used to carry light loads economically in applications such as instrumentation, retail displays and light-duty laboratory supports. It also provides the flexibility found in all Unistrut and Power-Strut framing systems.

Quality Assurance and Traceability

Product Load Testing

We utilize our own testing facilities, as well as those of independent testing laboratories, to determine design loads with proper and adequate safety factors. These design loads are indicated, where applicable, throughout the catalog. Loads are based on AISI Specification For The Design Of Cold-Formed Steel Structural Members, 2024 Edition.

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

In short, if there's a specification to meet, our engineers will develop a test to quantify and verify it. Using design properties of the Unistrut and Power-Strut framing members, load data given in this catalog, and/or design procedures of the American Iron & Steel Institute Specification For The Design Of Cold-Formed Steel Structural Members, 2024 Edition, it is possible to design any type of structure within the capabilities of the system.

Assemblies or connections that cannot be calculated using provisions of the AISI specifications must be established by application-specific tests.

Quality Program

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

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

Traceability

Unistrut and Power-Strut channel is stamped with a numeric code that allows traceability to the origin of the steel





1⁵/₈" Channel

1⁵/₈" Channel

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1⁵/₈" Channel

Material

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

All spot-welded combination members, except P1001T, are welded 3" (76 mm) maximum on center.

- **Steel: Plain**
 - 12 Ga. (2.7 mm), 14 Ga.(1.9 mm) and
- **Steel: Pre-Galvanized**
 - 12 Ga. (2.7 mm), 14 Ga. (1.9 mm) and

For other materials, see Special Metals or Fiberglass sections.

Finishes

All channels are available in:

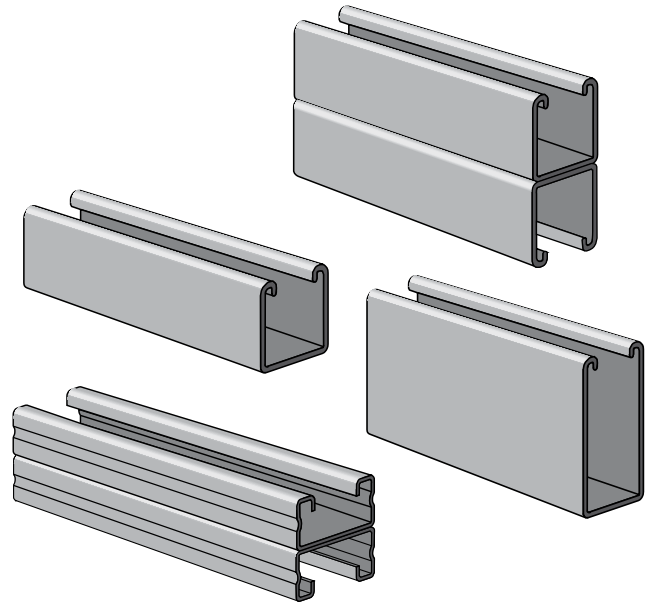
- Perma Green III (GR)
- Pre-galvanized (PG), conforming to ASTM A653 G90
- Hot-dipped galvanized (HG), conforming to ASTM A123
- Plain (PL)
- Defender™ (DF), conforming to ASTM A1046

Dimensions

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

Standard Lengths

Standard lengths are 10 feet (3.05m) and 20 feet (6.10m). Tolerances are $\pm 1/8$ " (3 mm). Special lengths are available for a small cutting charge with a tolerance of $\pm 1/8$ " (3 mm).



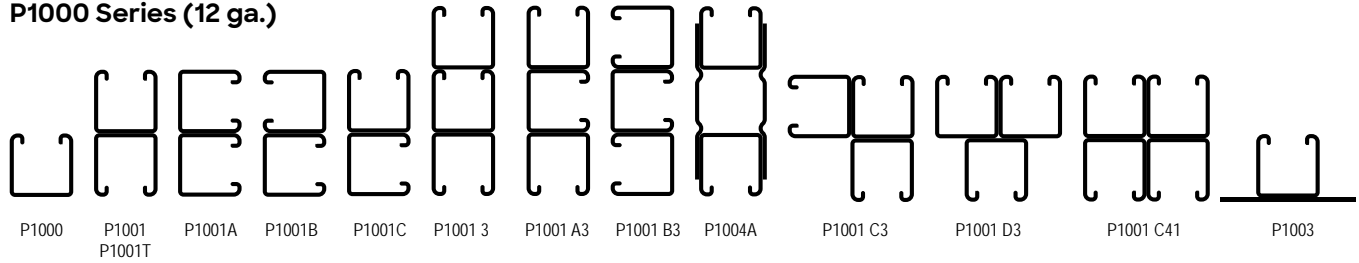
Load Data

All beam and column load data pertains to carbon steel and stainless steel channels. Load tables and charts are constructed to be in accordance with the SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2024 EDITION published by the AMERICAN IRON AND STEEL INSTITUTE USING ASD METHOD. Loads are based on 33 ksi steel cold formed to 42 ksi.

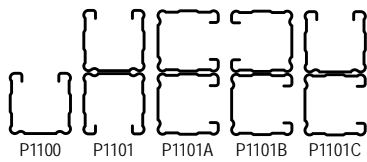
Type of Load	Safety Factor to Yield Strength
Beam Loads	1.67
Column Load	1.80

Channel Pictorial Index

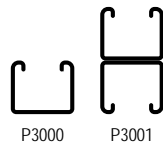
P1000 Series (12 ga.)



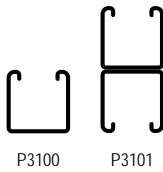
P1100 Series (14 ga.)



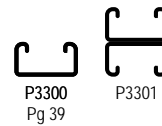
P3000 Series (12 ga.)



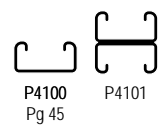
P3100 Series (14 ga.)



P3300 Series (12 ga.)



P4100 Series (14 ga.)

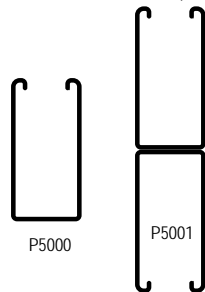


P4000 Series (16 ga.)

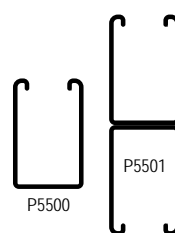
As aluminum only



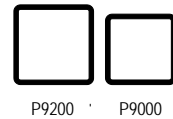
P5000 Series (12 ga.)



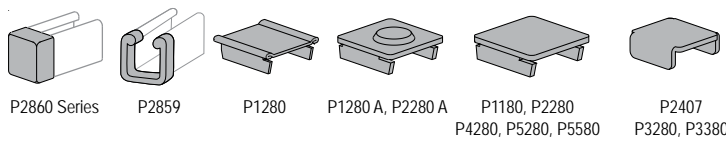
P5500 Series (12 ga.)



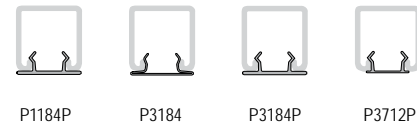
P9000 Series (12 ga.) Telestrut Channel



End Caps and Frame Caps



1 5/8" Channel Closure Strips



Alternate Framing Systems

A1000 Series (14 ga.) - 1 1/4" Channel



A3300 Series (14 ga.) - 1 1/4" Channel



P6000 Series (19 ga.) - 1 3/16" Channel



P7000 Series (19 ga.) - 1 3/16" Channel



Channel Selection

Channel Selection Chart

Channel	Channel Dimensions		Material & Thickness			Hole Pattern Styles						
			Steel	Stainless Steel	Alum.	HS	T	WT	KO	SL	DS	H3
	Width	Height										
In (mm)	In (mm)											
P1000	1 7/8 (41.3)	1 5/8 (41.3)	12 ga	12 ga	0.109 (2.8)	■	■	■	■	■	■	■
P1100	1 5/8 (41.3)	1 5/8 (41.3)	14 ga	14 ga	—	■	■	■	■	■	-	-
P3000	1 5/8 (41.3)	1 5/8 (34.9)	12 ga	—	—	■	■	■	■	■	-	-
P3100	1 5/8 (41.3)	1 5/8 (41.3)	14 ga	14 ga	—	■	■	■	■	■	-	-
P3300	1 5/8 (41.3)	7/8 (22.2)	12 ga	12 ga	—	■	■	■	-	■	-	-
P4100	1 5/8 (41.3)	1 1/16 (20.6)	14 ga	—	—	■	■	■	-	■	-	-
P5000	1 5/8 (41.3)	3 1/4 (82.6)	12 ga	12 ga	—	■	■	■	■	■	-	-
P5500	1 5/8 (41.3)	2 7/16 (61.9)	12 ga	—	0.109 (2.8)	■	■	■	■	■	-	-

Channels & Combinations in Descending Order of Strength

Channel	Area	Weight	I	s	Allow. Moment	Part Number	Area	Weight	I	s	Allow. Moment
	In ² (cm ²)	lbs/ft (kg/m)	In ⁴ (cm ⁴)	In ³ (cm ³)	In-lbs (N•m)		In ² (cm ²)	lbs/ft (kg/m)	In ⁴ (cm ⁴)	In ³ (cm ³)	In-lbs (N•m)
P5001	1.793	6.10	6.227	1.916	48,180	P1100	0.418	1.42	0.145	0.162	4,060
	11.57	9.1	259.2	31.4	5,440		2.69	2.1	6.0	2.6	460
P1004A	1.965	6.68	4.068	1.669	41,980	P3000	0.500	1.70	0.120	0.153	3,850
	12.68	9.9	169.3	27.4	4,740		3.23	2.5	5.0	2.5	430
P5501	1.452	4.94	2.805	1.151	28,940	P3100	0.418	1.42	0.145	0.162	4,060
	9.37	7.3	116.8	18.9	3,270		2.69	2.1	6.0	2.6	460
P1001C41	2.221	7.55	1.856	1.142	28,720	P4001	0.478	1.66	0.104	0.128	3,210
	14.33	11.2	77.2	18.7	3,250		3.14	2.5	4.3	2.1	360
P5000	0.897	3.05	1.098	0.627	15,770	A3301	0.459	1.56	0.077	0.103	2,590
	5.78	4.5	45.7	10.3	1,780		2.96	2.3	3.2	1.7	290
P1001	1.111	3.78	0.928	0.571	14,360	A1000	0.305	1.04	0.061	0.086	2,170
	7.16	5.6	38.6	9.4	1,620		1.96	1.5	2.5	1.4	250
P1101	0.835	2.84	0.733	0.451	11,340	P3300	0.395	1.34	0.037	0.072	1,800
	5.39	4.2	30.5	7.4	1,280		2.55	2.0	1.5	1.2	200
P3001	1.000	3.40	0.591	0.430	10,810	A4001	0.264	0.90	0.037	0.058	1,470
	6.45	5.1	24.6	7.0	1,220		1.70	1.3	1.5	1.0	170
P5500	0.726	2.47	0.522	0.390	9,820	P4100	0.290	0.98	0.026	0.054	1,360
	4.68	3.7	21.7	6.4	1,110		1.87	1.5	1.1	0.9	150
P9200	0.489	2.23	0.279	0.297	7,480	A3300	0.230	0.78	0.017	0.038	950
	3.16	3.3	11.6	4.9	850		1.48	1.2	0.7	0.6	110
A1001	0.609	2.07	0.302	0.242	6,070	P6000	0.107	0.36	0.009	0.020	510
	3.93	3.1	12.6	4.0	690		0.69	0.5	0.4	0.3	60
P9000	0.387	1.88	0.166	0.205	5,150	P7000	0.074	0.25	0.002	0.007	170
	2.50	2.8	6.9	3.4	580		0.48	0.4	0.1	0.1	20
P1000	0.555	1.89	0.185	0.202	5,070	Combinations not shown in catalog are available on special order. Consult factory for more details.					
	3.58	2.8	7.7	3.3	570						
P3301	0.790	2.69	0.176	0.201	5,060						
	5.10	4.0	7.3	3.3	570						

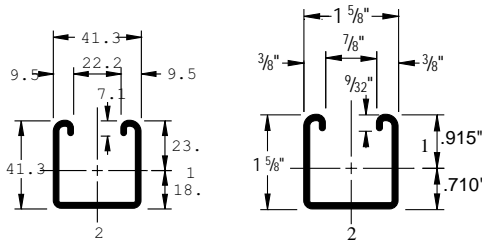
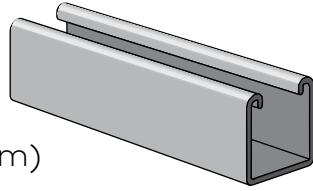
P1000® & P1001 Channels

P1000®

DF GR HG PG PL

Wt/100 Ft:
189 Lbs (281 kg/100 m)

- Allowable Moment
5,070 In-Lbs (570 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

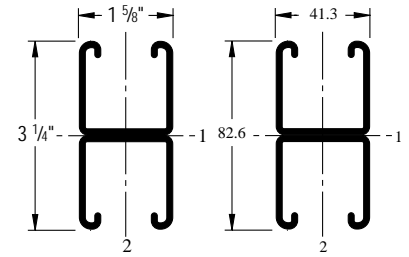
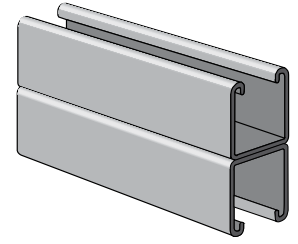


P1001

DF GR HG PG PL

Wt/100 Ft:
378 Lbs (562 kg/100 m)

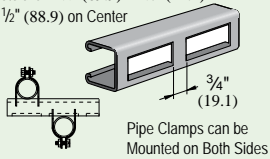
- Allowable Moment
14,360 In-Lbs
(1,620 N·m)
- 12 Gauge Nominal
Thickness
.105" (2.7mm)



P1000 DS

Wt/100 Ft:
173 Lbs (257 kg/100 m)

Slots are 2 3/4" (69.9) x 7/8" (22.2)
3 1/2" (88.9) on Center

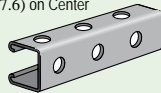


Pipe Clamps can be Mounted on Both Sides

P1000 H3

GR HG PG PL
Wt/100 Ft:
175 Lbs (260 kg/100 m)

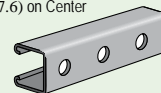
9/16" (14.3) Dia. Holes
1 7/8" (47.6) on Center



P1000 HS

GR HG PG PL
Wt/100 Ft:
190 Lbs (283 kg/100 m)

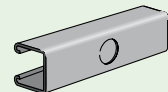
9/16" (14.3) Dia. Holes
1 7/8" (47.6) on Center



P1000 KO

GR PG
Wt/100 Ft:
185 Lbs (275 kg/100 m)

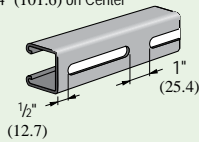
7/8" (22.2) Knockouts
6" (152.4) on Center



P1000 SL

GR HG PG PL
Wt/100 Ft:
185 Lbs (275 kg/100 m)

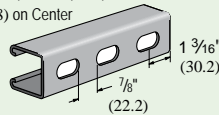
Slots are
3" (76.2) x 1 1/2" (38.1)
4" (101.6) on Center



P1000 T

DF GR HG PG PL
Wt/100 Ft:
185 Lbs (275 kg/100 m)

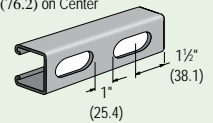
Slots are
1 1/8" (28.6) x 9/16" (14.3)
2" (50.8) on Center



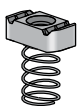
P1000 WT

DF GR HG PG PL
Wt/100 Ft:
185 Lbs (275 kg/100 m)

Slots are
2" (50.8) x 1 1/4" (31.8)
3" (76.2) on Center



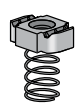
Channel Nuts



P1006-0832
P1006-1024
P1006-1420
P1007
P1008
P1009
P1010



P1008T
P1006T1420
P1010T



P1024
P1012S
P1023S



P1012
P1023
P1024S



P3006-0832
P3006-1024
P3006-1420
P3007
P3008
P3009
P3010



P3016-0632
P3016-0832
P3016-1024
P3016-1420

Channel Finishes: DF, PL, GR, HG, PG, ZD; Standard Lengths: 10' & 20'

P1000 & P1001 Channels

P1000 - Beam Loading

Span (in)	Max. Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	1,690	0.06	1,690	1,690	1,690
36	1,130	0.13	1,130	1,130	900
48	850	0.22	850	760	500
60	680	0.35	650	480	320
72	560	0.50	450	340	220
84	480	0.68	330	250	160
96	420	0.89	250	190	130
108	380	1.14	200	150	100
120	340	1.40	160	120	80
144	280	2.00	110	80	60
168	240	2.72	80	60	40
192	210	3.55	60	50	NR
216	190	4.58	50	40	NR
240	170	5.62	40	NR	NR

P1001 - Beam Loading

Span (in)	Max. Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	3,500*	0.02	3,500*	3,500*	3,500*
36	3,190	0.07	3,190	3,190	3,190
48	2,390	0.13	2,390	2,390	2,390
60	1,910	0.20	1,910	1,910	1,620
72	1,600	0.28	1,600	1,600	1,130
84	1,370	0.39	1,370	1,240	830
96	1,200	0.51	1,200	950	630
108	1,060	0.64	1,000	750	500
120	960	0.79	810	610	410
144	800	1.14	560	420	280
168	680	1.53	410	310	210
192	600	2.02	320	240	160
216	530	2.54	250	190	130
240	480	3.16	200	150	100

P1000 - Column Loading

Unbraced Height (in)	Max. Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	3,550	10,740	9,890	8,770	7,740
36	3,190	8,910	7,740	6,390	5,310
48	2,770	7,260	6,010	4,690	3,800
60	2,380	5,910	4,690	3,630	2,960
72	2,080	4,840	3,800	2,960	2,400
84	1,860	4,040	3,200	2,480	1,980
96	1,670	3,480	2,750	2,110	1,660
108	1,510	3,050	2,400	1,810	**
120	1,380	2,700	2,110	**	**
144	1,150	2,180	1,660	**	**

P1001 - Column Loading

Unbraced Height (in)	Max. Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	6,430	24,280	23,610	22,700	21,820
36	6,290	22,810	21,820	20,650	19,670
48	6,160	21,410	20,300	18,670	16,160
60	6,000	20,210	18,670	15,520	12,390
72	5,620	18,970	16,160	12,390	8,950
84	5,170	16,950	13,630	9,470	6,580
96	4,690	14,890	11,190	7,250	5,040
108	4,170	12,850	8,950	5,730	3,980
120	3,690	10,900	7,250	4,640	**
144	2,930	7,630	5,040	**	**

P1000/P1001 - Elements of Section

Parameter	P1000		P1001	
Area of Section	0.555	ln ²	1.111	ln ²
Axis 1-1				
Moment of Inertia (I)	0.185	ln ⁴	0.928	ln ⁴
Section Modulus (S)	0.202	ln ³	0.571	ln ³
Radius of Gyration (r)	0.577	ln	0.914	ln
Axis 2-2				
Moment of Inertia (I)	0.236	ln ⁴	0.471	ln ⁴
Section Modulus (S)	0.290	ln ³	0.580	ln ³
Radius of Gyration (r)	0.651	ln	0.651	ln

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:

"KO" Series.....	95%	"T" Series	85%
"HS" Series	90%	"SL" Series	85%
"H3" Series	90%	"DS" Series	70%
"WT" Series	85%		
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

P1000® & P1001 Channels

P1000 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	7.6	1	7.6	7.6	7.6
750	6.1	2	6.1	6.1	5.9
1,000	4.6	4	4.6	4.6	3.3
1,250	3.6	6	3.6	3.2	2.1
1,500	3.1	9	3.0	2.2	1.5
1,750	2.6	12	2.2	1.6	1.1
2,000	2.3	15	1.6	1.2	0.8
2,500	1.8	24	1.1	0.8	0.5
3,000	1.5	34	0.8	0.5	0.4
3,500	1.3	46	0.5	0.4	0.3
4,000	1.2	62	0.4	0.3	0.2
4,500	1.0	78	0.3	0.3	0.2
5,000	0.9	97	0.3	0.2	NR
6,000	0.8	136	0.2	NR	NR

P1001 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	15.6*	1	15.6*	15.6*	15.6*
750	15.6*	1	15.6*	15.6*	15.6*
1,000	13.0	2	13.0	13.0	13.0
1,250	10.4	3	10.4	10.4	10.4
1,500	8.7	5	8.7	8.7	7.4
1,750	7.4	7	7.4	7.4	5.5
2,000	6.5	9	6.5	6.3	4.2
2,500	5.2	13	5.2	4.0	2.7
3,000	4.3	19	3.7	2.8	1.9
3,500	3.7	26	2.8	2.0	1.4
4,000	3.2	34	2.1	1.6	1.1
4,500	2.9	44	1.6	1.2	0.8
5,000	2.6	53	1.3	1.0	0.7
6,000	2.2	78	0.9	0.7	0.4

P1000 - Column Loading (metric)

Unbraced Height (mm)	Max. Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	15.8	48.0	44.3	39.4	34.8
750	15.2	44.0	39.4	33.8	28.9
1,000	13.7	37.5	32.0	26.1	21.3
1,250	12.1	31.6	26.1	20.3	16.5
1,500	10.7	26.7	21.3	16.5	13.4
1,750	9.6	22.7	17.8	13.8	11.3
2,000	8.7	19.3	15.3	11.9	9.6
2,250	7.9	16.9	13.4	10.4	8.2
2,500	7.2	15.0	11.9	9.1	**
2,750	6.7	13.5	10.6	8.1	**

P1001 - Column Loading (metric)

Unbraced Height (mm)	Max. Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	28.6	108.2	105.3	101.3	97.4
750	28.3	105.0	101.3	96.5	92.2
1,000	27.8	99.6	95.0	89.7	83.9
1,250	27.3	94.7	89.7	81.7	70.1
1,500	26.8	90.3	83.9	70.1	56.4
1,750	25.4	86.7	74.8	58.6	43.5
2,000	23.9	79.4	65.5	47.7	33.3
2,250	22.2	71.9	56.4	37.9	26.3
2,500	20.4	64.4	47.7	30.7	21.3
2,750	18.5	56.9	39.6	25.4	17.6

P1000/P1001 - Elements of Section (metric)

Parameter	P1000		P1001	
Area of Section	3.58	cm ²	7.16	cm ²
Axis 1-1				
Moment of Inertia (I)	7.68	cm ⁴	38.62	cm ⁴
Section Modulus (S)	3.30	cm ³	9.36	cm ³
Radius of Gyration (r)	1.46	cm	2.32	cm
Axis 2-2				
Moment of Inertia (I)	9.80	cm ⁴	19.60	cm ⁴
Section Modulus (S)	4.75	cm ³	9.50	cm ³
Radius of Gyration (r)	1.65	cm	1.65	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in *total* uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:

"KO" Series.....	95%	"T" Series	85%
"HS" Series.....	90%	"SL" Series	85%
"H3" Series.....	90%	"DS" Series	70%
"WT" Series.....	85%		
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

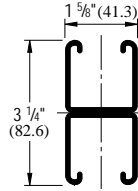
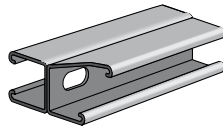
P1001 Channel Combinations

P1001 T

DF GR PG

Wt/100 Ft:
321 Lbs (478 kg/100 m)

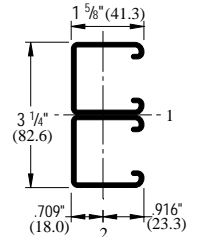
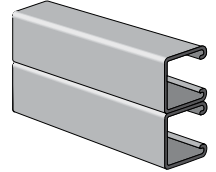
- Allowable Moment
12,200 In-Lbs (1,378 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



P1001 A

Wt/100 Ft:
378 Lbs (562 kg/100 m)

- Allowable Moment
18,640 In-Lbs (2,110 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)

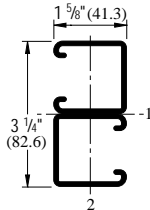
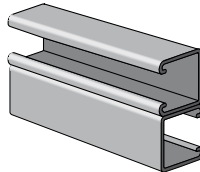


P1001 B

GR PG

Wt/100 Ft:
378 Lbs (562 kg/100 m)

- Allowable Moment
18,640 In-Lbs (2,110 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)

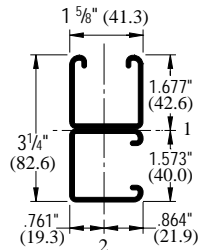
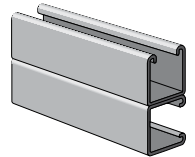


P1001 C

GR PG

Wt/100 Ft:
378 Lbs (562 kg/100 m)

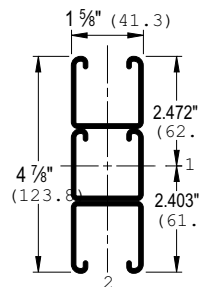
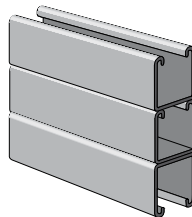
- Allowable Moment
15,950 In-Lbs (1,800 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



P1001 3

Wt/100 Ft:
566 Lbs (843 kg/100 m)

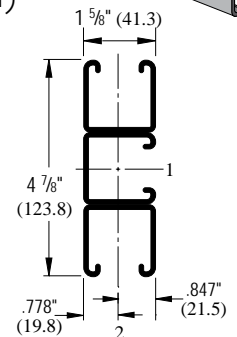
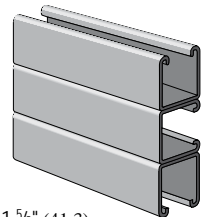
- Allowable Moment
31,840 In-Lbs (3,600 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



P1001 A3

Wt/100 Ft:
566 Lbs (843 kg/100 m)

- Allowable Moment
32,770 In-Lbs (3,700 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



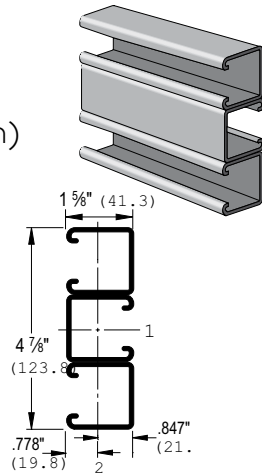
Channel Finishes: DF, PL, GR, HG, PG, ZD; Standard Lengths: 10' & 20'

P1001 Channel Combinations

P1001 B3

Wt/100 Ft:
566 Lbs (843 kg/100 m)

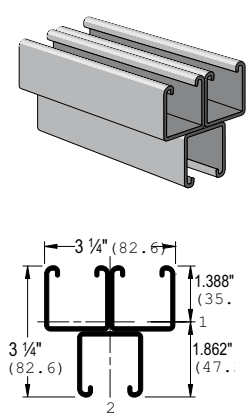
- Allowable Moment
37,550 In-Lbs (4,240 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



P1001 D3

Wt/100 Ft:
566 Lbs (843 kg/100 m)

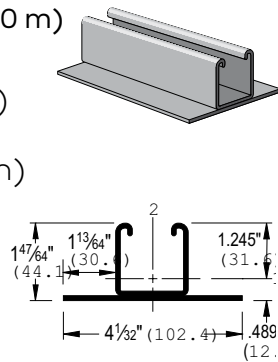
- Allowable Moment
17,550 In-Lbs (1,980 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



P1003

Wt/100 Ft: 333 Lbs (495 kg/100 m)

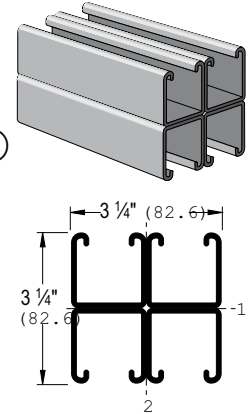
- Allowable Moment
6,240 In-Lbs (700 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



P1001 C41

Wt/100 Ft:
755 Lbs (1,124 kg/100 m)

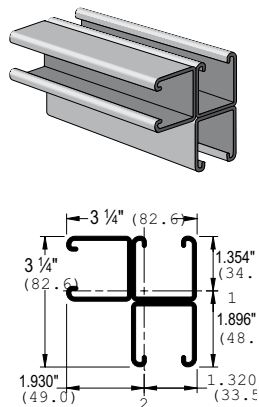
- Allowable Moment
28,720 In-Lbs (3,250 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



P1001 C3

Wt/100 Ft:
566 Lbs (843 kg/100 m)

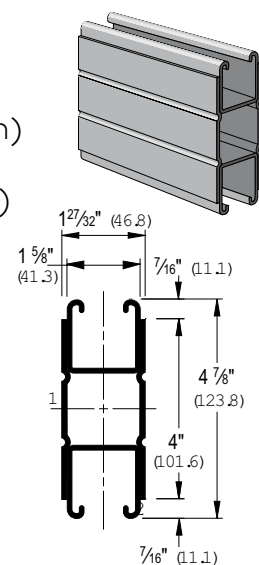
- Allowable Moment
18,680 In-Lbs (2,110 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



P1004 A

Wt/100 Ft:
668 Lbs (994 kg/100 m)

- Allowable Moment
41,970 In-Lbs (4,740 N·m)
- 12 Gauge Nominal
Thickness .105" (2.7mm)



Channel Finishes: DF, PL, GR, HG, PG, ZD; Standard Lengths: 10' & 20'

P1001 Channel Combinations

P1001 C41 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	7,040*	0.02	7,040*	7,040*	7,040*
36	6,380	0.07	6,380	6,380	6,380
48	4,790	0.13	4,790	4,790	4,790
60	3,830	0.20	3,830	3,830	3,240
72	3,190	0.28	3,190	3,190	2,250
84	2,740	0.39	2,740	2,480	1,660
96	2,390	0.50	2,390	1,900	1,270
108	2,130	0.64	2,000	1,500	1,000
120	1,910	0.78	1,620	1,220	810
144	1,600	1.14	1,130	840	560
168	1,370	1.55	830	620	410
192	1,200	2.02	630	480	320
216	1,060	2.54	500	380	250
240	960	3.16	410	300	200

P1004 A - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	9,100*	0.01	9,100*	9,100*	9,100*
36	9,100*	0.05	9,100*	9,100*	9,100*
48	7,000	0.08	7,000	7,000	7,000
60	5,600	0.13	5,600	5,600	5,600
72	4,660	0.19	4,660	4,660	4,660
84	4,000	0.26	4,000	4,000	3,630
96	3,500	0.34	3,500	3,500	2,780
108	3,110	0.43	3,110	3,110	2,200
120	2,800	0.52	2,800	2,670	1,780
144	2,330	0.75	2,330	1,850	1,230
168	2,000	1.03	1,810	1,360	910
192	1,750	1.34	1,390	1,040	690
216	1,550	1.69	1,100	820	550
240	1,400	2.10	890	670	440

P1001 C41 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	12,690	46,920	44,980	42,360	39,890
36	12,250	42,680	39,890	36,660	34,050
48	11,820	38,740	35,720	32,640	30,430
60	11,470	35,500	32,640	29,980	28,220
72	11,180	32,970	30,430	28,220	26,820
84	10,900	31,040	28,840	27,010	24,870
96	10,580	29,570	27,680	26,170	19,840
108	10,310	28,440	26,820	22,310	15,670
120	10,070	27,560	26,170	18,280	12,700
144	8,740	26,320	19,840	12,700	8,820
168	7,360	21,890	14,570	9,330	**

P1004 A - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	11,420	36,800	33,890	30,440	27,600
36	10,600	30,840	27,600	24,400	22,160
48	9,860	26,400	23,560	21,060	19,470
60	9,160	23,370	21,060	19,160	18,020
72	8,610	21,310	19,470	18,020	17,140
84	8,170	19,890	18,410	17,260	15,240
96	7,790	18,890	17,670	16,760	11,670
108	7,460	18,160	17,140	13,280	9,220
120	7,150	17,590	16,760	10,750	7,470
144	5,660	16,840	11,670	7,470	**
168	4,520	12,990	8,570	**	**

P1001 C41/ P1004 A - Elements of Section

Parameter	P1001 C41		P1004 A	
	Value	Unit	Value	Unit
Area of Section	2.221	In ²	1.965	In ²
Axis 1-1				
Moment of Inertia (I)	1.856	In ⁴	4.068	In ⁴
Section Modulus (S)	1.142	In ³	1.669	In ³
Radius of Gyration (r)	0.914	In	1.439	In
Axis 2-2				
Moment of Inertia (I)	2.408	In ⁴	1.092	In ⁴
Section Modulus (S)	1.482	In ³	1.190	In ³
Radius of Gyration (r)	1.041	In	0.745	In

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:
"KO" Series..... 95% **"T" Series85%**
"HS" Series..... 90% **"SL" Series85%**
"WT" Series..... 85%
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

P1001 Channel Combinations

P1001 C41 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	31.3*	1	31.3*	31.3*	31.3*
750	31.3*	1	31.3*	31.3*	31.3*
1,000	26.0	2	26.0	26.0	26.0
1,250	20.8	3	20.8	20.8	20.8
1,500	17.3	5	17.3	17.3	14.9
1,750	14.8	7	14.8	14.8	10.9
2,000	13.0	9	13.0	12.6	8.4
2,500	10.4	13	10.4	8.1	5.4
3,000	8.7	19	7.4	5.6	3.7
3,500	7.4	26	5.5	4.1	2.8
4,000	6.5	34	4.2	3.2	2.1
4,500	5.8	44	3.3	2.5	1.6
5,000	5.2	54	2.7	2.0	1.3
6,000	4.3	77	1.9	1.4	0.9

P1004 A - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	40.5*	1	40.5*	40.5*	40.5*
750	40.5*	1	40.5*	40.5*	40.5*
1,000	37.9	2	37.9	37.9	37.9
1,250	30.3	3	30.3	30.3	30.3
1,500	25.3	4	25.3	25.3	25.3
1,750	21.7	6	21.7	21.7	21.7
2,000	18.9	9	18.9	18.9	18.4
2,500	15.2	13	15.2	15.2	11.7
3,000	12.6	18	12.6	12.2	8.2
3,500	10.9	23	10.9	9.0	6.0
4,000	9.5	29	9.2	6.9	4.6
4,500	8.5	36	7.2	5.4	3.6
5,000	7.6	52	5.9	4.4	2.9
6,000	6.3	77	4.1	3.1	2.0

P1001 C41 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	56.5	209.3	200.8	189.3	178.4
750	55.6	200.1	189.3	175.8	164.1
1,000	53.9	184.7	171.7	157.3	146.1
1,250	52.4	170.7	157.3	143.8	134.1
1,500	51.1	158.9	146.1	134.1	126.1
1,750	50.0	149.3	137.6	127.3	120.7
2,000	49.2	141.5	131.1	122.3	116.8
2,250	47.9	135.4	126.1	118.6	101.9
2,500	46.8	130.4	122.3	114.5	83.9
2,750	45.9	126.4	119.2	98.8	69.4

P1004 A - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	50.9	164.6	151.8	136.5	123.8
750	49.1	150.8	136.5	121.1	109.5
1,000	46.3	130.9	116.9	103.4	94.3
1,250	43.5	115.8	103.4	92.6	85.8
1,500	40.9	104.8	94.3	85.8	80.6
1,750	38.9	96.8	88.1	81.3	77.0
2,000	37.1	91.0	83.7	78.1	74.8
2,250	35.7	86.6	80.6	75.8	60.9
2,500	34.3	83.3	78.1	71.1	49.4
2,750	33.1	80.7	76.2	58.8	40.8

P1001 C41/ P1004 A - Elements of Section (metric)

Parameter	P1001 C41		P1004 A	
Area of Section	14.33	cm ²	12.68	cm ²
Axis 1-1				
Moment of Inertia (I)	77.24	cm ⁴	169.33	cm ⁴
Section Modulus (S)	18.71	cm ³	27.35	cm ³
Radius of Gyration (r)	2.32	cm	3.66	cm
Axis 2-2				
Moment of Inertia (I)	100.24	cm ⁴	45.44	cm ⁴
Section Modulus (S)	24.29	cm ³	19.50	cm ³
Radius of Gyration (r)	2.64	cm	1.89	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:

"KO" Series.....	95%	"T" Series	85%
"HS" Series.....	90%	"SL" Series	85%
"WT" Series.....	85%		
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

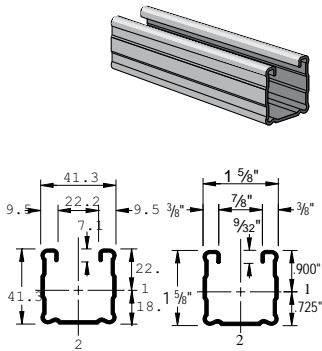
P1100, P1101, P3100 & P3101 Channels

P1100

GR PG

Wt/100 Ft:
142 Lbs (211 kg/100 m)

- Allowable Moment
4,060 In-Lbs
(460 N·m)
- 14 Gauge Nominal
Thickness .075"
(1.9mm)

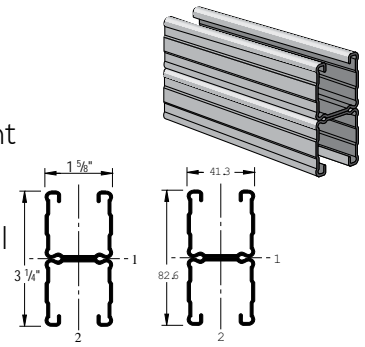


P1101

GR PG

Wt/100 Ft:
284 Lbs (423 kg/100 m)

- Allowable Moment
11,340 In-Lbs
(1,280 N·m)
- 14 Gauge Nominal
Thickness .075"
(1.9mm)

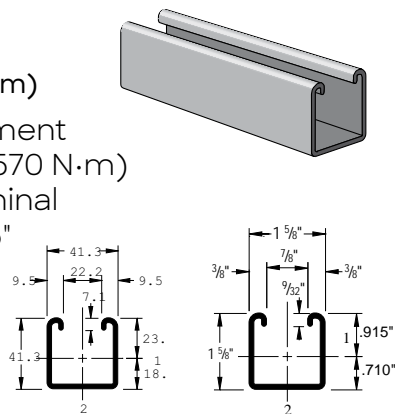


P3100

GR PG

Wt/100 Ft:
189 Lbs (281 kg/100 m)

- Allowable Moment
5,070 In-Lbs (570 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

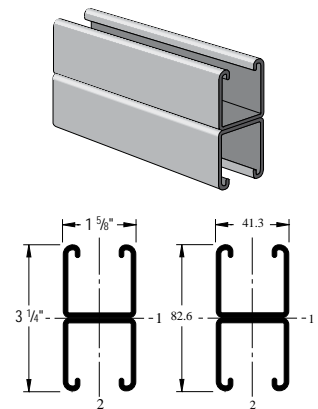


P3101

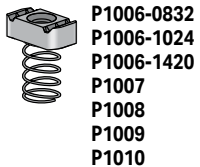
GR PG

Wt/100 Ft:
378 Lbs (562 kg/100 m)

- Allowable Moment
14,360 In-Lbs
(1,620 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)



Channel Nuts



P1006-0832
P1006-1024
P1006-1420
P1007
P1008
P1009
P1010



P1008T
P1006T1420
P1010T



P1024
P1012S
P1023S



P1012
P1023
P1024S



P3006-0832
P3006-1024
P3006-1420
P3007
P3008
P3009
P3010



P3016-0632
P3016-0832
P3016-1024
P3016-1420

Channel Finishes: DF, PL, GR, HG, PG, ZD; Standard Lengths: 10' & 20'

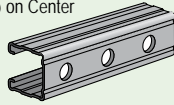
P1100, P1101, P3100 & P3101 Channels

P1100 HS

GR PG

Wt/100 Ft:
136 Lbs (202 kg/100 m)

$\frac{9}{16}$ " (14.3) Dia. Holes
1 $\frac{7}{8}$ " (47.6) on Center

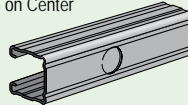


P1100 KO

GR PG

Wt/100 Ft:
140 Lbs (208 kg/100 m)

$\frac{7}{8}$ " (22.2) Knockouts
6" (152.4) on Center

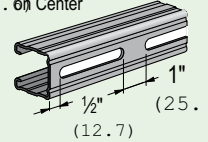


P1100 SL

GR PG

Wt/100 Ft:
136 Lbs (202 kg/100 m)

Slots are
3" (76.2) x $\frac{13}{32}$ " (10.3)
4" (101.6) on Center

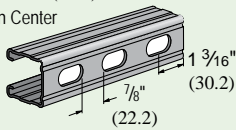


P1100 T

GR PG

Wt/100 Ft:
136 Lbs (202 kg/100 m)

Slots are
1 $\frac{1}{8}$ " (28.6) x $\frac{9}{16}$ " (14.3)
2" (50.8) on Center

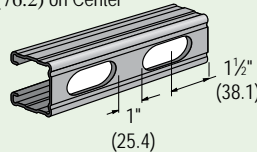


P1100 WT

DF GR HG PG PL

Wt/100 Ft:
136 Lbs (202 kg/100 m)

Slots are
2" (50.8) x $\frac{11}{16}$ " (17.5)
3" (76.2) on Center

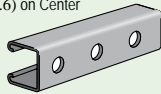


P3100 HS

GR PG

Wt/100 Ft:
136 Lbs (202 kg/100 m)

$\frac{9}{16}$ " (14.3) Dia. Holes
1 $\frac{7}{8}$ " (47.6) on Center

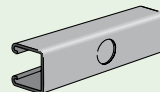


P3100 KO

GR PG

Wt/100 Ft:
140 Lbs (208 kg/100 m)

$\frac{7}{8}$ " (22.2) Knockouts
6" (152.4) on Center

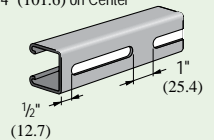


P3100 SL

GR PG

Wt/100 Ft:
136 Lbs (202 kg/100 m)

Slots are
3" (76.2) x $\frac{13}{32}$ " (10.3)
4" (101.6) on Center

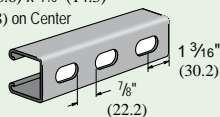


P3100 T

GR PG

Wt/100 Ft:
136 Lbs (202 kg/100 m)

Slots are
1 $\frac{1}{8}$ " (28.6) x $\frac{9}{16}$ " (14.3)
2" (50.8) on Center

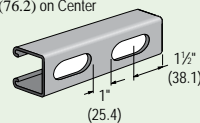


P3100 WT

DF GR HG PG PL

Wt/100 Ft:
136 Lbs (202 kg/100 m)

Slots are
2" (50.8) x $\frac{11}{16}$ " (17.5)
3" (76.2) on Center



P1100, P1101, P3100, & P3101 Channels

P1100/P3100 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	1,350	0.06	1,350	1,350	1,350
36	900	0.13	900	900	700
48	680	0.23	680	590	400
60	540	0.36	510	380	250
72	450	0.51	350	260	180
84	390	0.70	260	190	130
96	340	0.92	200	150	100
108	300	1.15	160	120	80
120	270	1.42	130	90	60
144	230	2.09	90	70	40
168	190	2.75	60	50	30
192	170	3.67	50	40	NR
216	150	4.61	40	30	NR
240	140	5.90	30	NR	NR

P1101/P3101 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	2,180*	0.02	2,180*	2,180*	2,180*
36	2,180*	0.06	2,180*	2,180*	2,180*
48	1,890	0.13	1,890	1,890	1,890
60	1,510	0.20	1,510	1,510	1,280
72	1,260	0.28	1,260	1,260	890
84	1,080	0.39	1,080	980	650
96	950	0.51	950	750	500
108	840	0.64	790	590	400
120	760	0.79	640	480	320
144	630	1.13	440	330	220
168	540	1.54	330	250	160
192	470	2.00	250	190	130
216	420	2.55	200	150	100
240	380	3.16	160	120	80

P1100/P3100 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	2,800	8,040	7,330	6,360	5,430
36	2,410	6,480	5,430	4,190	3,210
48	1,940	4,990	3,830	2,760	2,160
60	1,550	3,740	2,760	2,050	1,640
72	1,290	2,860	2,160	1,640	1,320
84	1,100	2,310	1,780	1,370	1,110
96	950	1,950	1,520	1,180	950
108	840	1,690	1,320	1,030	**
120	760	1,490	1,180	**	**
144	630	1,210	950	**	**

P1101/P3101 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	5,010	18,250	17,700	16,880	16,030
36	4,860	16,990	16,030	14,770	13,620
48	4,700	15,610	14,380	12,930	11,750
60	4,480	14,280	12,930	11,490	9,290
72	4,210	13,100	11,750	9,290	6,700
84	3,880	12,090	10,220	7,090	4,930
96	3,480	11,170	8,390	5,430	3,770
108	3,060	9,640	6,700	4,290	2,980
120	2,680	8,170	5,430	3,480	**
144	2,090	5,710	3,770	**	**

P1100/P1101/P3101 - Elements of Section

Parameter	P1100	P1101
Area of Section	0.418 In ²	0.835 In ²
Axis 1-1		
Moment of Inertia (I)	0.145 In ⁴	0.733 In ⁴
Section Modulus (S)	0.162 In ³	0.451 In ³
Radius of Gyration (r)	0.589 In	0.937 In
Axis 2-2		
Moment of Inertia (I)	0.176 In ⁴	0.353 In ⁴
Section Modulus (S)	0.217 In ³	0.434 In ³
Radius of Gyration (r)	0.650 In	0.650 In

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

1. Beam loads are given in *total* uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).

2. Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.

3. For pierced channel, multiply beam loads by the following factor:

"KO" Series..... 95%

"T" Series85%

"HS" Series..... 90%

"SL" Series85%

"WT" Series..... 85%

4. Deduct channel weight from the beam loads.

5. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.

6. All beam loads are for bending about Axis 1-1.

P1100, P1101, P3100, & P3101 Channels

P1100/P3100 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	6.1	1	6.1	6.1	6.1
750	4.9	2	4.9	4.9	4.7
1,000	3.7	4	3.7	3.7	2.6
1,250	2.9	6	2.9	2.5	1.7
1,500	2.4	9	2.3	1.7	1.2
1,750	2.1	12	1.7	1.3	0.8
2,000	1.8	15	1.3	1.0	0.7
2,500	1.5	24	0.8	0.6	0.4
3,000	1.2	36	0.6	0.4	0.3
3,500	1.1	49	0.4	0.3	0.2
4,000	0.9	64	0.3	0.3	0.2
4,500	0.8	77	0.3	0.2	0.1
5,000	0.8	100	0.2	0.2	NR
6,000	0.6	143	0.1	NR	NR

P1101/P3101 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	9.7*	0	9.7*	9.7*	9.7*
750	9.7*	1	9.7*	9.7*	9.7*
1,000	9.7*	2	9.7*	9.7*	9.7*
1,250	8.2	3	8.2	8.2	8.2
1,500	6.9	5	6.9	6.9	5.9
1,750	5.9	7	5.9	5.9	4.3
2,000	5.1	9	5.1	5.0	3.3
2,500	4.1	13	4.1	3.2	2.1
3,000	3.4	19	2.9	2.2	1.5
3,500	2.9	26	2.2	1.6	1.1
4,000	2.6	35	1.6	1.2	0.8
4,500	2.3	43	1.3	1.0	0.7
5,000	2.0	54	1.1	0.8	0.5
6,000	1.7	77	0.8	0.5	0.4

P1100/P3100 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	12.5	35.9	32.9	28.6	24.5
750	11.8	32.6	28.6	23.5	19.0
1,000	10.1	26.9	22.0	16.4	12.5
1,250	8.5	21.6	16.4	11.8	9.3
1,500	7.0	17.0	12.5	9.3	7.4
1,750	6.0	13.5	10.1	7.7	6.2
2,000	5.2	11.2	8.6	6.5	5.3
2,250	4.6	9.6	7.4	5.7	4.7
2,500	4.1	8.4	6.5	5.1	**
2,750	3.7	7.5	5.9	4.5	**

P1101/P3101 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	22.3	81.4	79.0	75.4	71.7
750	22.0	78.7	75.4	70.7	66.1
1,000	21.4	73.8	69.2	63.3	58.0
1,250	20.8	68.8	63.3	56.8	51.6
1,500	20.0	64.0	58.0	51.6	42.3
1,750	19.0	59.5	53.5	44.0	32.6
2,000	18.0	55.6	49.2	35.7	25.0
2,250	16.6	52.3	42.3	28.4	19.7
2,500	15.1	48.3	35.7	23.0	16.0
2,750	13.6	42.7	29.7	19.0	13.2

P1100/P1101/P3101 - Elements of Section (metric)

Parameter	P1100		P1101	
	Value	Unit	Value	Unit
Area of Section	2.69	cm ²	5.39	cm ²
Axis 1-1				
Moment of Inertia (I)	6.03	cm ⁴	30.51	cm ⁴
Section Modulus (S)	2.65	cm ³	7.39	cm ³
Radius of Gyration (r)	1.50	cm	2.38	cm
Axis 2-2				
Moment of Inertia (I)	7.34	cm ⁴	14.69	cm ⁴
Section Modulus (S)	3.56	cm ³	7.12	cm ³
Radius of Gyration (r)	1.65	cm	1.65	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in *total* uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:
"KO" Series..... 95% **"T" Series85%**
"HS" Series..... 90% **"SL" Series85%**
"WT" Series..... 85%
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

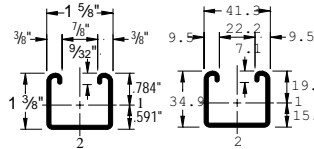
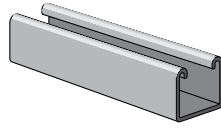
P3000 & P3001 Channels

P3000

GR PG

Wt/100 Ft:
170 Lbs (253 kg/100 m)

- Allowable Moment
3,840 In-Lbs
(430 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

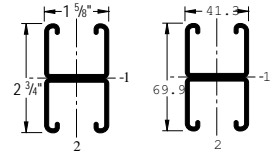
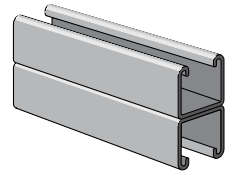


P3001

GR PG

Wt/100 Ft:
340 Lbs (506 kg/100 m)

- Allowable Moment
10,810 In-Lbs
(1,220 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

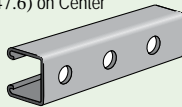


P3000 HS

GR PG

Wt/100 Ft:
165 Lbs (246 kg/100 m)

9/16" (14.3) Dia. Holes
1 7/8" (47.6) on Center

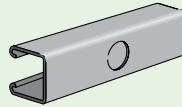


P3000 KO

GR PG

Wt/100 Ft:
170 Lbs (253 kg/100 m)

7/8" (22.2) Knockouts
6" (152.4) on Center

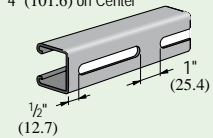


P3000 SL

GR PG

Wt/100 Ft:
165 Lbs (246 kg/100 m)

Slots are
3" (76.2) x 13/32" (10.3)
4" (101.6) on Center

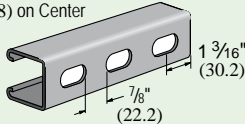


P3000 T

GR PG

Wt/100 Ft:
165 Lbs (246 kg/100 m)

Slots are
1 1/8" (28.6) x 9/16" (14.3)
2" (50.8) on Center

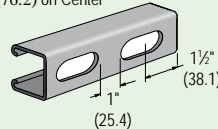


P3000 WT

DF GR HG PG PL

Wt/100 Ft:
165 Lbs (246 kg/100 m)

Slots are
2" (50.8) x 1 1/8" (17.5)
3" (76.2) on Center



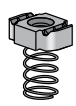
Channel Nuts



P1006-0832
P1006-1024
P1006-1420
P1007
P1008
P1009
P1010



P1008T
P1006T1420
P1010T



P1024
P1012S
P1023S



P1012
P1023
P1024S



P3006-0832
P3006-1024
P3006-1420
P3007
P3008
P3009
P3010



P3016-0632
P3016-0832
P3016-1024
P3016-1420

Channel Finishes: DF, PL, GR, HG, PG, ZD; Standard Lengths: 10' & 20'

P3000 & P3001 Channels

P3000 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	1,280	0.07	1,280	1,280	1,280
36	850	0.15	850	850	580
48	640	0.26	640	490	330
60	510	0.41	420	310	210
72	430	0.59	290	220	150
84	370	0.81	210	160	110
96	320	1.05	160	120	80
108	280	1.30	130	100	60
120	260	1.66	100	80	50
144	210	2.32	70	50	40
168	180	3.15	50	40	30
192	160	4.18	40	30	NR
216	140	5.21	NR	NR	NR
240	130	6.64	NR	NR	NR

P3001 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	2,960*	0.03	2,960*	2,960*	2,960*
36	2,400	0.08	2,400	2,400	2,400
48	1,800	0.15	1,800	1,800	1,610
60	1,440	0.23	1,440	1,440	1,030
72	1,200	0.33	1,200	1,080	720
84	1,030	0.46	1,030	790	530
96	900	0.59	810	610	400
108	800	0.75	640	480	320
120	720	0.93	520	390	260
144	600	1.34	360	270	180
168	510	1.81	260	200	130
192	450	2.38	200	150	100
216	400	3.01	160	120	80
240	360	3.72	130	100	NR

P3000 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	3,180	9,690	8,980	8,050	7,210
36	2,920	8,160	7,210	6,130	5,240
48	2,590	6,820	5,810	4,730	3,860
60	2,300	5,740	4,730	3,690	2,990
72	2,040	4,850	3,860	2,990	2,270
84	1,830	4,100	3,240	2,400	**
96	1,650	3,530	2,770	1,840	**
108	1,450	3,080	2,270	**	**
120	1,250	2,710	1,840	**	**

P3001 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	5,740	21,780	21,200	20,430	19,720
36	5,620	20,520	19,720	18,830	17,680
48	5,520	19,400	18,570	16,570	14,260
60	5,330	18,510	16,570	13,670	10,810
72	5,030	16,850	14,260	10,810	7,730
84	4,630	14,990	11,930	8,180	5,680
96	4,190	13,090	9,720	6,260	4,350
108	3,720	11,230	7,730	4,950	**
120	3,300	9,460	6,260	4,010	**
144	2,620	6,590	4,350	**	**

P3000/P3001 - Elements of Section

Parameter	P3000		P3001	
	Value	Unit	Value	Unit
Area of Section	0.500	In ²	1.000	In ²
Axis 1-1				
Moment of Inertia (I)	0.120	In ⁴	0.591	In ⁴
Section Modulus (S)	0.153	In ³	0.430	In ³
Radius of Gyration (r)	0.489	In	0.769	In
Axis 2-2				
Moment of Inertia (I)	0.203	In ⁴	0.407	In ⁴
Section Modulus (S)	0.250	In ³	0.501	In ³
Radius of Gyration (r)	0.638	In	0.638	In

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

1. Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).

2. Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.

3. For pierced channel, multiply beam loads by the following factor:

"KO" Series..... 95% "T" Series85%
 "HS" Series..... 90% "SL" Series85%
 "WT" Series..... 85%

4. Deduct channel weight from the beam loads.

5. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.

6. All beam loads are for bending about Axis 1-1.

P3000 & P3001 Channels

P3000 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	5.8	2	5.8	5.8	5.8
750	4.6	3	4.6	4.6	3.8
1,000	3.5	4	3.5	3.2	2.2
1,250	2.8	7	2.8	2.1	1.4
1,500	2.3	10	1.9	1.4	1.0
1,750	2.0	14	1.4	1.1	0.7
2,000	1.7	18	1.1	0.8	0.5
2,500	1.4	28	0.7	0.5	0.4
3,000	1.2	40	0.5	0.4	0.2
3,500	1.0	54	0.4	0.3	0.2
4,000	0.9	73	0.3	0.2	0.1
4,500	0.8	89	0.2	0.2	NR
5,000	0.7	115	0.2	0.1	NR
6,000	0.6	161	NR	NR	NR

P3001 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	13.2*	1	13.2*	13.2*	13.2*
750	13.0	1	13.0	13.0	13.0
1,000	9.8	3	9.8	9.8	9.8
1,250	7.8	4	7.8	7.8	6.9
1,500	6.5	6	6.5	6.5	4.8
1,750	5.6	8	5.6	5.2	3.5
2,000	4.9	10	4.9	4.0	2.7
2,500	3.9	16	3.4	2.6	1.7
3,000	3.2	23	2.4	1.8	1.2
3,500	2.8	31	1.7	1.3	0.9
4,000	2.4	41	1.3	1.0	0.7
4,500	2.2	52	1.1	0.8	0.5
5,000	2.0	64	0.8	0.6	0.4
6,000	1.6	92	0.6	0.4	0.3

P3000 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	14.2	43.3	40.2	36.1	32.4
750	13.6	39.9	36.1	31.5	27.6
1,000	12.5	34.5	30.2	25.3	21.3
1,250	11.4	29.8	25.3	20.5	16.7
1,500	10.3	25.8	21.3	16.7	13.6
1,750	9.4	22.5	18.1	14.0	11.0
2,000	8.5	19.6	15.5	11.9	8.5
2,250	7.8	17.2	13.6	9.6	**
2,500	7.2	15.3	11.9	**	**
2,750	6.4	13.7	10.1	**	**

P3001 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	25.5	97.1	94.5	91.1	88.0
750	25.3	94.3	91.1	87.3	84.0
1,000	24.9	89.8	86.1	82.2	74.5
1,250	24.6	85.8	82.2	72.4	61.8
1,500	23.8	82.6	74.5	61.8	49.2
1,750	22.8	77.0	66.1	51.3	37.5
2,000	21.4	70.3	57.6	41.3	28.7
2,250	19.9	63.4	49.2	32.7	22.7
2,500	18.2	56.5	41.3	26.5	18.4
2,750	16.5	49.8	34.2	21.9	**

P3000/P3001 - Elements of Section (metric)

Parameter		P3000		P3001	
Area of Section		3.23	cm ²	6.45	cm ²
Axis 1-1					
	Moment of Inertia (I)	4.97	cm ⁴	24.61	cm ⁴
	Section Modulus (S)	2.51	cm ³	7.05	cm ³
	Radius of Gyration (r)	1.24	cm	1.95	cm
Axis 2-2					
	Moment of Inertia (I)	8.47	cm ⁴	16.93	cm ⁴
	Section Modulus (S)	4.10	cm ³	8.20	cm ³
	Radius of Gyration (r)	1.62	cm	1.62	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in *total* uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:

"KO" Series.....	95%	"T" Series	85%
"HS" Series.....	90%	"SL" Series	85%
"WT" Series.....	85%		
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

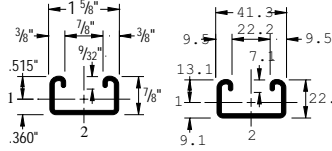
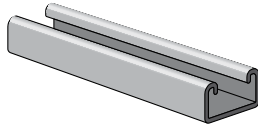
P3300 & P3301 Channels

P3300

DFGR PG PL

Wt/100 Ft:
134 Lbs (200 kg/100 m)

- Allowable Moment
1,800 In-Lbs
(200 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

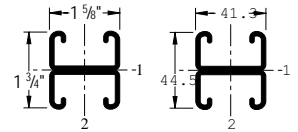
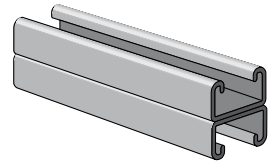


P3301

DFGR PG

Wt/100 Ft:
269 Lbs (400 kg/100 m)

- Allowable Moment
5,060 In-Lbs
(570 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

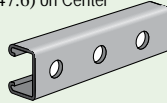


P3300 HS

GR PG

Wt/100 Ft:
130 Lbs (193 kg/100 m)

9/16" (14.3) Dia. Holes
1 7/8" (47.6) on Center

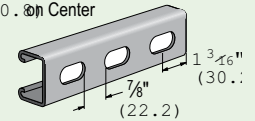


P3300 T

DFGR PG

Wt/100 Ft:
130 Lbs (193 kg/100 m)

Slots are
1 1/8" (28.0) x 9/16" (14.3)
2" (50.8) on Center

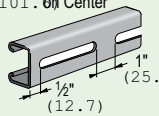


P3300 SL

GR PG

Wt/100 Ft:
130 Lbs (193 kg/100 m)

Slots are
3" (76.2) x 1 3/32" (10.3)
4" (101.6) on Center

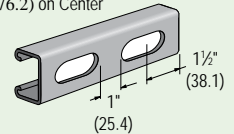


P3300 WT

DF GR HG PG PL

Wt/100 Ft:
130 Lbs (193 kg/100 m)

Slots are
2" (50.8) x 1 1/16" (17.5)
3" (76.2) on Center



Channel Nuts



P4006-0832
P4006-1024
P4006-1420
P4007
P4008
P4009
P4010



P4010T



P4012
P4023



P3006-0832
P3006-1024
P3006-1420
P3007
P3008
P3009
P3013



P3016-0632
P3016-0832
P3016-1024
P3016-1420

Channel Finishes: DF, PL, GR, HG, PG, ZD; Standard Lengths: 10' & 20'

P3300 & P3301 Channels

P3300 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	600	0.10	600	600	400
36	400	0.22	360	270	180
48	300	0.40	200	150	100
60	240	0.62	130	100	60
72	200	0.89	90	70	40
84	170	1.20	70	50	30
96	150	1.59	50	40	30
108	130	1.96	40	30	20
120	120	2.48	30	20	20

P3301 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	1,690	0.06	1,690	1,690	1,690
36	1,130	0.13	1,130	1,130	860
48	840	0.23	840	720	480
60	680	0.37	620	460	310
72	560	0.52	430	320	210
84	480	0.71	310	240	160
96	420	0.93	240	180	120
108	380	1.20	190	140	100
120	340	1.47	150	120	80
144	280	2.09	110	80	50

P3300 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	2,360	7,740	7,260	6,350	5,390
36	2,120	6,470	5,390	3,990	2,810
48	1,760	4,910	3,550	2,270	1,580
60	1,380	3,440	2,270	1,460	**
72	1,080	2,390	1,580	**	**

P3301 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	4,290	16,990	16,580	15,770	14,720
36	4,150	15,890	14,720	12,980	11,120
48	3,940	14,160	12,360	9,880	7,510
60	3,650	12,210	9,880	6,940	4,820
72	3,270	10,190	7,510	4,820	3,350
84	2,800	8,220	5,530	3,540	**
96	2,410	6,420	4,240	**	**
108	2,080	5,070	3,350	**	**

P3300/P3301 - Elements of Section

Parameter	P3300		P3301	
	Value	Unit	Value	Unit
Area of Section	0.395	In ²	0.790	In ²
Axis 1-1				
Moment of Inertia (I)	0.037	In ⁴	0.176	In ⁴
Section Modulus (S)	0.072	In ³	0.201	In ³
Radius of Gyration (r)	0.306	In	0.472	In
Axis 2-2				
Moment of Inertia (I)	0.143	In ⁴	0.285	In ⁴
Section Modulus (S)	0.176	In ³	0.351	In ³
Radius of Gyration (r)	0.601	In	0.601	In

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:
"KO" Series..... 95% **"T" Series85%**
"HS" Series..... 90% **"SL" Series85%**
"WT" Series..... 85%
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

P3300 & P3301 Channels

P3300 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	2.7	2	2.7	2.7	1.9
750	2.2	4	2.2	1.8	1.2
1,000	1.6	7	1.3	1.0	0.7
1,250	1.3	10	0.8	0.6	0.4
1,500	1.1	15	0.6	0.4	0.3
1,750	0.9	21	0.4	0.3	0.2
2,000	0.8	27	0.3	0.3	0.2
2,500	0.7	43	0.2	0.2	0.1
3,000	0.5	60	0.1	0.1	0.1
3,500	0.4	79	0.1	0.1	NR

P3301 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	7.6	1	7.6	7.6	7.6
750	6.1	2	6.1	6.1	5.6
1,000	4.6	4	4.6	4.6	3.2
1,250	3.6	6	3.6	3.1	2.0
1,500	3.1	9	2.8	2.1	1.4
1,750	2.6	12	2.1	1.6	1.0
2,000	2.3	16	1.6	1.2	0.8
2,500	1.8	25	1.0	0.8	0.5
3,000	1.5	36	0.7	0.5	0.4
3,500	1.3	48	0.5	0.4	0.3
4,000	1.2	65	0.4	0.3	0.2

P3300 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	10.5	34.6	32.6	28.6	24.4
750	10.1	32.3	28.6	23.3	18.2
1,000	9.1	26.9	21.6	15.0	10.5
1,250	7.6	21.2	15.0	9.6	6.7
1,500	6.3	15.8	10.5	6.7	**
1,750	5.1	11.6	7.6	**	**

P3301 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	19.1	75.7	73.9	70.5	66.0
750	18.9	73.8	70.5	64.7	58.4
1,000	18.2	68.6	62.7	53.9	44.8
1,250	17.4	62.1	53.9	42.6	31.9
1,500	16.4	55.0	44.8	31.9	22.2
1,750	15.0	47.6	36.0	23.4	16.3
2,000	13.3	40.3	28.0	17.9	**
2,250	11.8	33.4	22.2	14.1	**
2,500	10.4	27.2	17.9	**	**
2,750	9.2	22.5	14.8	**	**

P3300/P3301 - Elements of Section (metric)

Parameter	P3300		P3301	
	Value	Unit	Value	Unit
Area of Section	2.55	cm ²	5.10	cm ²
Axis 1-1				
Moment of Inertia (I)	1.54	cm ⁴	7.33	cm ⁴
Section Modulus (S)	1.18	cm ³	3.30	cm ³
Radius of Gyration (r)	0.78	cm	1.20	cm
Axis 2-2				
Moment of Inertia (I)	5.94	cm ⁴	11.87	cm ⁴
Section Modulus (S)	2.88	cm ³	5.75	cm ³
Radius of Gyration (r)	1.53	cm	1.53	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:
"KO" Series..... 95% **"T" Series85%**
"HS" Series..... 90% **"SL" Series85%**
"WT" Series..... 85%
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

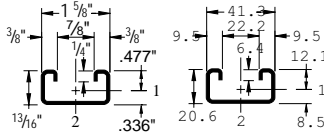
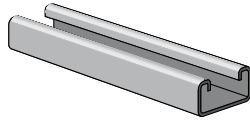
P4100 & P4101 Channels

P4100

DFGRPG

Wt/100 Ft:
98 Lbs (147 kg/100 m)

- Allowable Moment
1,360 In-Lbs
(150 N·m)
- 14 Gauge Nominal
Thickness .075"
(1.9mm)

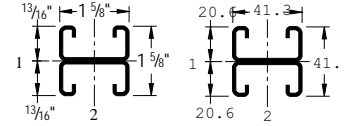
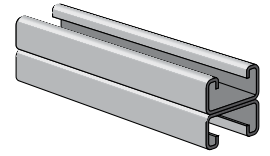


P4101

DFGRPG

Wt/100 Ft:
197 Lbs (293 kg/100 m)

- Allowable Moment
3,610 In-Lbs
(410 N·m)
- 14 Gauge Nominal
Thickness .075"
(1.9mm)

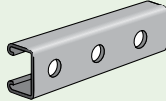


P4100 HS

GRPG

Wt/100 Ft:
87 Lbs (129 kg/100 m)

9/16" (14.3) Dia. Holes
1 7/8" (47.6) on Center

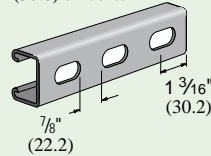


P4100 T

DFGRPG

Wt/100 Ft:
87 Lbs (129 kg/100 m)

Slots are
1 1/8" (28.6) x 9/16" (14.3)
2" (50.8) on Center

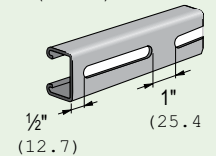


P4100 SL

GRPG

Wt/100 Ft:
87 Lbs (129 kg/100 m)

Slots are
3" (76.2) x 1 3/32" (10.3)
4" (101.6) on Center

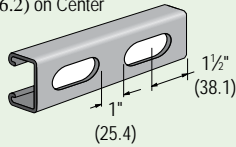


P4100 WT

DFGRHGPGL

Wt/100 Ft:
87 Lbs (129 kg/100 m)

Slots are
2" (50.8) x 1 1/16" (17.5)
3" (76.2) on Center

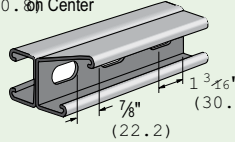


P4101 T

DFGRPG

Wt/100 Ft:
174 Lbs (259 kg/100 m)

Slots are
1 1/8" (28.6) x 9/16" (14.3)
2" (50.8) on Center

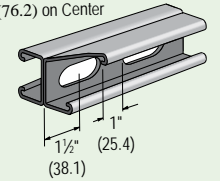


P4101 WT

DFGRHGPGL

Wt/100 Ft:
174 Lbs (259 kg/100 m)

Slots are
2" (50.8) x 1 1/16" (17.5)
3" (76.2) on Center



Channel Nuts



P4006-0832
P4006-1024
P4006-1420
P4007
P4008
P4009
P4010



P4010T



P4012
P4023



P3006-0832
P3006-1024
P3006-1420
P3007
P3008
P3009
P3013



P3016-0632
P3016-0832
P3016-1024
P3016-1420

Channel Finishes: DF, PL, GR, HG, PG, ZD; Standard Lengths: 10' & 20'

P4100 & P4101 Channels

P4100 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	450	0.11	450	420	280
36	300	0.24	250	190	130
48	230	0.44	140	110	70
60	180	0.67	90	70	50
72	150	0.96	60	50	30
84	130	1.32	50	30	20
96	110	1.67	40	30	20
108	100	2.16	30	20	10
120	90	2.67	20	20	10
144	80	4.09	20	NR	NR
168	60	4.88	NR	NR	NR
192	60	7.28	NR	NR	NR
216	50	8.64	NR	NR	NR
240	50	11.85	NR	NR	NR

P4101 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	1,090*	0.06	1,090*	1,090*	1,090*
36	800	0.14	800	800	570
48	600	0.25	600	480	320
60	480	0.39	410	310	200
72	400	0.57	280	210	140
84	340	0.76	210	160	100
96	300	1.00	160	120	80
108	270	1.29	130	90	60
120	240	1.57	100	80	50
144	200	2.26	70	50	40
168	170	3.05	50	40	30
192	150	4.02	40	NR	NR
216	130	4.96	NR	NR	NR
240	120	6.28	NR	NR	NR

P4100 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	1,840	5,610	5,210	4,570	3,850
36	1,640	4,660	3,850	2,800	1,960
48	1,310	3,490	2,480	1,590	1,100
60	1,000	2,400	1,590	**	**
72	770	1,670	1,100	**	**

P4101 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	3,240	12,370	11,950	11,370	10,540
36	3,120	11,470	10,540	9,160	7,720
48	2,940	10,090	8,680	6,770	4,980
60	2,680	8,560	6,770	4,590	3,190
72	2,310	7,010	4,980	3,190	2,220
84	1,950	5,530	3,660	2,340	**
96	1,650	4,250	2,800	**	**
108	1,410	3,360	2,220	**	**

P4100/P4101 - Elements of Section

Parameter	P4100		P4101	
	Value	Unit	Value	Unit
Area of Section	0.290	In ²	0.579	In ²
Axis 1-1				
Moment of Inertia (I)	0.026	In ⁴	0.117	In ⁴
Section Modulus (S)	0.054	In ³	0.143	In ³
Radius of Gyration (r)	0.298	In	0.449	In
Axis 2-2				
Moment of Inertia (I)	0.107	In ⁴	0.214	In ⁴
Section Modulus (S)	0.132	In ³	0.264	In ³
Radius of Gyration (r)	0.609	In	0.608	In

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in *total* uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:
"KO" Series..... 95% **"T" Series85%**
"HS" Series 90% **"SL" Series85%**
"WT" Series..... 85%
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

P4100 & P4101 Channels

P4100 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	2.0	3	2.0	2.0	1.3
750	1.6	4	1.6	1.2	0.8
1,000	1.2	7	0.9	0.7	0.4
1,250	1.0	11	0.6	0.4	0.3
1,500	0.8	16	0.4	0.3	0.2
1,750	0.7	23	0.3	0.2	0.1
2,000	0.6	30	0.2	0.2	0.1
2,500	0.5	46	0.1	0.1	0.1
3,000	0.4	65	0.1	0.1	NR

P4101 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	4.8*	1	4.8*	4.8*	4.8*
750	4.4	2	4.4	4.4	3.7
1,000	3.2	4	3.2	3.2	2.1
1,250	2.6	7	2.6	2.0	1.3
1,500	2.2	10	1.9	1.4	0.9
1,750	1.9	13	1.4	1.0	0.7
2,000	1.6	17	1.1	0.8	0.5
2,500	1.3	27	0.7	0.5	0.4
3,000	1.1	38	0.5	0.4	0.2
3,500	0.9	53	0.4	0.3	0.2

P4100 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	8.2	25.1	23.3	20.6	17.4
750	7.8	23.2	20.6	16.6	12.8
1,000	6.9	19.3	15.3	10.5	7.3
1,250	5.6	15.0	10.5	6.7	4.7
1,500	4.5	11.0	7.3	4.7	**
1,750	3.6	8.1	5.3	**	**

P4101 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	14.4	55.1	53.3	50.8	47.2
750	14.2	53.2	50.8	46.3	41.2
1,000	13.7	49.4	44.7	37.8	30.8
1,250	13.0	44.2	37.8	29.1	21.1
1,500	12.0	38.7	30.8	21.1	14.6
1,750	10.7	33.0	24.2	15.5	10.8
2,000	9.3	27.4	18.5	11.9	**
2,250	8.1	22.2	14.6	9.4	**

P4100/P4101 - Elements of Section (metric)

Parameter	P4100		P4101	
	Value	Unit	Value	Unit
Area of Section	1.87	cm ²	3.74	cm ²
Axis 1-1				
Moment of Inertia (I)	1.07	cm ⁴	4.85	cm ⁴
Section Modulus (S)	0.88	cm ³	2.35	cm ³
Radius of Gyration (r)	0.76	cm	1.14	cm
Axis 2-2				
Moment of Inertia (I)	4.46	cm ⁴	8.93	cm ⁴
Section Modulus (S)	2.16	cm ³	4.32	cm ³
Radius of Gyration (r)	1.55	cm	1.55	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:

"KO" Series..... 95%	"T" Series85%
"HS" Series 90%	"SL" Series85%
"WT" Series..... 85%	
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

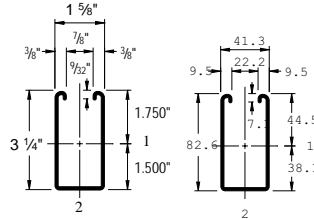
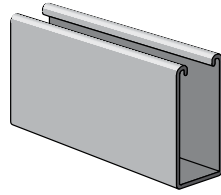
P5000 & P5001 Channels

P5000

DFGR PLPG

Wt/100 Ft:
305 Lbs (454 kg/100 m)

- Allowable Moment
15,770 In-Lbs
(1,780 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

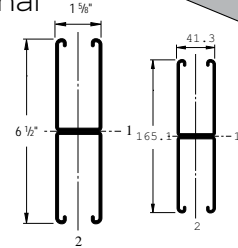
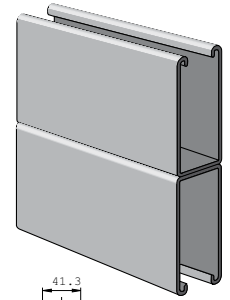


P5001

DFGR PG

Wt/100 Ft:
610 Lbs (907 kg/100 m)

- Allowable Moment
48,180 In-Lbs
(5,440 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

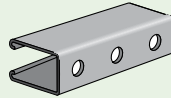


P5000 HS

GRPG

Wt/100 Ft:
300 Lbs (446 kg/100 m)

9/16" (14.3) Dia. Holes
1 7/8" (47.6) on Center

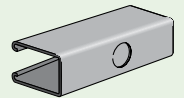


P5000 KO

GRPG

Wt/100 Ft:
305 Lbs (454 kg/100 m)

7/8" (22.2) Knockouts
6" (152.4) on Center

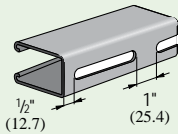


P5000 SL

GRPG

Wt/100 Ft:
300 Lbs (446 kg/100 m)

Slots are
3" (76.2) x 1 3/32" (10.3)
4" (101.6) on Center

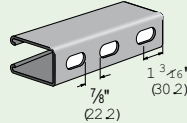


P5000 T

DFGRPG

Wt/100 Ft:
300 Lbs (446 kg/100 m)

Slots are
1 1/8" (28.6) x 9/16" (14.3)
2" (50.8) on Center

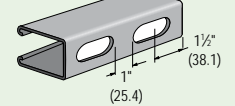


P5000 WT

DFGR HG PG PL

Wt/100 Ft:
300 Lbs (446 kg/100 m)

Slots are
2" (50.8) x 1 1/16" (17.5)
3" (76.2) on Center



Channel Nuts



P5506-0832
P5506-1024
P5506-1420
P5507
P5508
P5509
P5510



P1006T1420
P1008T
P1010T



P1012
P1023
P1024



P3006-0832
P3006-1024
P3006-1420
P3007
P3008
P3009
P3010



P3016-0632
P3016-0832
P3016-1024
P3016-1420

Channel Finishes: DF, PL, GR, HG, PG, ZD; Standard Lengths: 10' & 20'

P5000 & P5001 Channels

P5000 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	5,260	0.03	5,260	5,260	5,260
36	3,500	0.07	3,500	3,500	3,500
48	2,630	0.12	2,630	2,630	2,630
60	2,100	0.18	2,100	2,100	1,920
72	1,750	0.26	1,750	1,750	1,330
84	1,500	0.36	1,500	1,470	980
96	1,310	0.47	1,310	1,120	750
108	1,170	0.59	1,170	890	590
120	1,050	0.73	960	720	480
144	880	1.06	670	500	330
168	750	1.43	490	370	240
192	660	1.88	370	280	190
216	580	2.35	300	220	150
240	530	2.95	240	180	120

P5001 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	6,890*	0.01	6,890*	6,890*	6,890*
36	6,890*	0.02	6,890*	6,890*	6,890*
48	6,890*	0.05	6,890*	6,890*	6,890*
60	6,420	0.10	6,420	6,420	6,420
72	5,350	0.14	5,350	5,350	5,350
84	4,590	0.19	4,590	4,590	4,590
96	4,020	0.25	4,020	4,020	4,020
108	3,570	0.32	3,570	3,570	3,360
120	3,210	0.39	3,210	3,210	2,720
144	2,680	0.57	2,680	2,680	1,890
168	2,290	0.77	2,290	2,080	1,390
192	2,010	1.01	2,010	1,590	1,060
216	1,780	1.27	1,680	1,260	840
240	1,610	1.58	1,360	1,020	680

P5000 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	5,650	16,870	15,180	12,850	10,600
36	4,690	13,140	10,600	7,650	5,660
48	3,560	9,550	6,860	4,790	3,660
60	2,730	6,680	4,790	3,450	2,710
72	2,160	4,980	3,660	2,710	2,170
84	1,760	3,950	2,960	2,240	1,820
96	1,500	3,270	2,500	1,930	1,580
108	1,310	2,800	2,170	1,690	1,390
120	1,170	2,450	1,930	1,510	**
144	980	1,980	1,580	**	**
168	850	1,670	1,340	**	**

P5001 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	10,670	39,230	38,030	36,210	34,240
36	10,350	36,450	34,240	31,200	28,260
48	9,940	33,220	30,200	26,430	23,190
60	9,290	29,950	26,430	22,470	19,380
72	8,560	26,880	23,190	19,380	16,450
84	7,860	24,140	20,520	17,040	12,090
96	7,220	21,790	18,370	13,330	9,250
108	6,600	19,790	16,450	10,530	7,310
120	5,760	18,130	13,330	8,530	**
144	4,390	14,020	9,250	**	**
168	3,420	10,300	6,800	**	**

P5000/P5001 - Elements of Section

Parameter	P4100		P4101	
Area of Section	0.897	In ²	1.793	In ²
Axis 1-1				
Moment of Inertia (I)	1.098	In ⁴	6.227	In ⁴
Section Modulus (S)	0.627	In ³	1.916	In ³
Radius of Gyration (r)	1.107	In	1.864	In
Axis 2-2				
Moment of Inertia (I)	0.433	In ⁴	0.866	In ⁴
Section Modulus (S)	0.533	In ³	1.066	In ³
Radius of Gyration (r)	0.695	In	0.695	In

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:

"KO" Series.....	95%	"T" Series	85%
"HS" Series.....	90%	"SL" Series	85%
"WT" Series.....	85%		
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

P5000 & P5001 Channels

P5000 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	23.8	1	23.8	23.8	23.8
750	19.0	1	19.0	19.0	19.0
1,000	14.2	2	14.2	14.2	14.2
1,250	11.4	3	11.4	11.4	11.4
1,500	9.5	5	9.5	9.5	8.8
1,750	8.1	6	8.1	8.1	6.5
2,000	7.1	8	7.1	7.1	4.9
2,500	5.7	12	5.7	4.8	3.2
3,000	4.8	18	4.4	3.3	2.2
3,500	4.1	25	3.2	2.4	1.6
4,000	3.6	32	2.5	1.9	1.2
4,500	3.2	40	2.0	1.5	1.0
5,000	2.8	50	1.6	1.2	0.8
6,000	2.4	71	1.1	0.8	0.5

P5001 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	30.6*	0	30.6*	30.6*	30.6*
750	30.6*	0	30.6*	30.6*	30.6*
1,000	30.6*	1	30.6*	30.6*	30.6*
1,250	30.6*	1	30.6*	30.6*	30.6*
1,500	29.0	2	29.0	29.0	29.0
1,750	24.9	3	24.9	24.9	24.9
2,000	21.8	4	21.8	21.8	21.8
2,500	17.4	7	17.4	17.4	17.4
3,000	14.5	10	14.5	14.5	12.5
3,500	12.5	13	12.5	12.5	9.2
4,000	10.9	17	10.9	10.5	7.0
4,500	9.7	22	9.7	8.3	5.6
5,000	8.7	27	8.7	6.8	4.5
6,000	7.2	39	6.2	4.7	3.1

P5000 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	25.2	75.5	68.1	58.0	48.0
750	23.5	67.5	58.0	45.7	35.0
1,000	19.4	53.7	41.9	29.3	21.8
1,250	15.4	41.0	29.3	20.5	15.7
1,500	12.4	30.5	21.8	15.7	12.3
1,750	10.2	23.8	17.3	12.8	10.2
2,000	8.5	19.3	14.4	10.8	8.7
2,250	7.3	16.3	12.3	9.4	7.6
2,500	6.5	14.1	10.8	8.3	6.9
2,750	5.8	12.4	9.6	7.5	6.2

P5001 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	47.5	174.9	169.7	161.7	153.2
750	46.8	169.2	161.7	150.9	139.8
1,000	45.6	158.2	147.2	132.6	118.8
1,250	44.0	146.3	132.6	115.6	101.2
1,500	41.6	134.3	118.8	101.2	87.4
1,750	38.9	122.9	106.6	89.4	76.8
2,000	36.3	112.5	96.2	80.0	61.2
2,250	33.9	103.2	87.4	69.6	48.4
2,500	31.6	95.0	80.0	56.4	39.1
2,750	29.3	87.8	72.9	46.6	32.4

P5000/P5001 - Elements of Section (metric)

Parameter	P4100		P4101	
Area of Section	5.78	cm ²	11.57	cm ²
Axis 1-1				
Moment of Inertia (I)	45.70	cm ⁴	259.17	cm ⁴
Section Modulus (S)	10.28	cm ³	31.40	cm ³
Radius of Gyration (r)	2.81	cm	4.73	cm
Axis 2-2				
Moment of Inertia (I)	18.02	cm ⁴	36.04	cm ⁴
Section Modulus (S)	8.73	cm ³	17.46	cm ³
Radius of Gyration (r)	1.77	cm	1.77	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

- Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- For pierced channel, multiply beam loads by the following factor:
"KO" Series..... 95% **"T" Series85%**
"HS" Series..... 90% **"SL" Series85%**
"WT" Series..... 85%
- Deduct channel weight from the beam loads.
- For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- All beam loads are for bending about Axis 1-1.

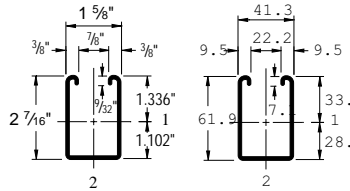
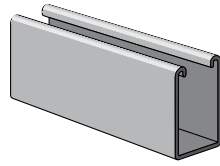
P5500 & P5501 Channels

P5500

GR PG

Wt/100 Ft:
247 Lbs (367 kg/100 m)

- Allowable Moment
9,820 In-Lbs
(1,110 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

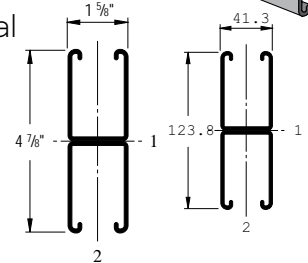
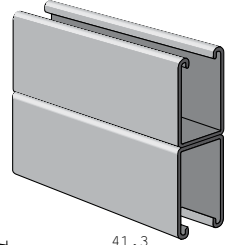


P5501

GR PG

Wt/100 Ft:
494 Lbs (734 kg/100 m)

- Allowable Moment
28,940 In-Lbs
(3,270 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

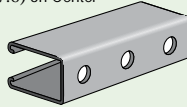


P5500 HS

GR PG

Wt/100 Ft:
242 Lbs (360 kg/100 m)

5/16" (14.3) Dia. Holes
1 7/8" (47.6) on Center

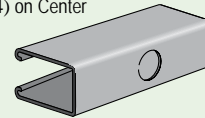


P5500 KO

GR PG

Wt/100 Ft:
247 Lbs (368 kg/100 m)

7/8" (22.2) Knockouts
6" (152.4) on Center

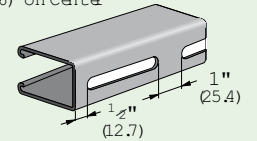


P5500 SL

GR PG

Wt/100 Ft:
242 Lbs (360 kg/100 m)

Slots are
3" (76.2) x 1 3/32" (10.3)
4" (101.6) on Center

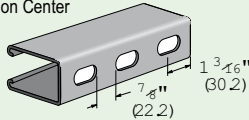


P5500 T

GR PG

Wt/100 Ft:
242 Lbs (360 kg/100 m)

Slots are
1 1/8" (28.6) x 5/16" (14.3)
2" (50.8) on Center

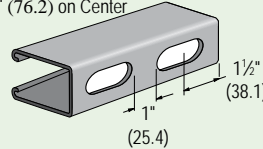


P5500 WT

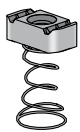
DF GR HG PG PL

Wt/100 Ft:
242 Lbs (360 kg/100 m)

Slots are
2" (50.8) x 1 1/16" (17.5)
3" (76.2) on Center



Channel Nuts



P5506-0832
P5506-1024
P5506-1420
P5507
P5508
P5509
P5510



P1006T1420
P1008T
P1010T



P1012
P1023
P1024



P3006-0832
P3006-1024
P3006-1420
P3007
P3008
P3009
P3010



P3016-0632
P3016-0832
P3016-1024
P3016-1420

Channel Finishes: PL, GR, HG, PG, ZD; Standard Lengths: 10' & 20'

P5500 & P5501 Channels

P5500 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	3,270	0.04	3,270	3,270	3,270
36	2,180	0.09	2,180	2,180	2,180
48	1,640	0.15	1,640	1,640	1,420
60	1,310	0.24	1,310	1,310	910
72	1,090	0.34	1,090	950	630
84	940	0.47	930	700	470
96	820	0.61	710	530	360
108	730	0.78	560	420	280
120	650	0.95	460	340	230
144	550	1.39	320	240	160
168	470	1.89	230	170	120
192	410	2.46	180	130	90
216	360	3.07	140	110	70
240	330	3.86	110	90	60

P5501 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	5,220*	0.01	5,220*	5,220*	5,220*
36	5,220*	0.04	5,220*	5,220*	5,220*
48	4,820	0.08	4,820	4,820	4,820
60	3,860	0.13	3,860	3,860	3,860
72	3,220	0.19	3,220	3,220	3,220
84	2,760	0.26	2,760	2,760	2,500
96	2,410	0.34	2,410	2,410	1,920
108	2,140	0.42	2,140	2,140	1,510
120	1,930	0.52	1,930	1,840	1,230
144	1,610	0.76	1,610	1,280	850
168	1,380	1.03	1,250	940	630
192	1,210	1.35	960	720	480
216	1,070	1.70	760	570	380
240	960	2.09	610	460	310

P5500 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	4,640	13,840	12,570	10,840	9,190
36	3,970	11,050	9,190	7,030	5,370
48	3,180	8,420	6,390	4,620	3,630
60	2,550	6,250	4,620	3,450	2,780
72	2,120	4,790	3,630	2,780	2,260
84	1,810	3,890	3,010	2,330	1,910
96	1,580	3,290	2,580	2,020	1,650
108	1,400	2,860	2,260	1,770	1,440
120	1,270	2,530	2,020	1,580	**
144	1,060	2,070	1,650	**	**
168	920	1,750	1,380	**	**

P5501 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	8,580	31,810	30,880	29,520	28,100
36	8,350	29,700	28,100	26,000	24,070
48	8,080	27,390	25,330	22,910	20,940
60	7,720	25,170	22,910	20,510	17,170
72	7,270	23,190	20,940	17,170	12,700
84	6,780	21,510	18,740	13,430	9,330
96	6,130	20,110	15,630	10,290	7,150
108	5,450	17,750	12,700	8,130	5,650
120	4,800	15,260	10,290	6,590	**
144	3,760	10,830	7,150	**	**
168	2,970	7,950	5,250	**	**

P5500/P5501 - Elements of Section

Parameter	P4100	P4101
Area of Section	0.726 In ²	1.452 In ²
Axis 1-1		
Moment of Inertia (I)	0.522 In ⁴	2.805 In ⁴
Section Modulus (S)	0.390 In ³	1.151 In ³
Radius of Gyration (r)	0.848 In	1.390 In
Axis 2-2		
Moment of Inertia (I)	0.334 In ⁴	0.669 In ⁴
Section Modulus (S)	0.411 In ³	0.823 In ³
Radius of Gyration (r)	0.679 In	0.679 In

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

1. Beam loads are given in *total* uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).

2. Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.

3. For pierced channel, multiply beam loads by the following factor:

"KO" Series..... 95%

"T" Series85%

"HS" Series..... 90%

"SL" Series85%

"WT" Series..... 85%

4. Deduct channel weight from the beam loads.

5. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.

6. All beam loads are for bending about Axis 1-1.

P5500 & P5501 Channels

P5500 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	14.8	1	14.8	14.8	14.8
750	11.8	1	11.8	11.8	11.8
1,000	8.9	3	8.9	8.9	8.9
1,250	7.1	4	7.1	7.1	6.1
1,500	5.9	6	5.9	5.9	4.2
1,750	5.1	8	5.1	4.6	3.1
2,000	4.5	10	4.5	3.5	2.4
2,500	3.6	16	3.0	2.3	1.5
3,000	3.0	24	2.1	1.6	1.1
3,500	2.5	32	1.6	1.2	0.8
4,000	2.2	42	1.2	0.9	0.6
4,500	2.0	53	0.9	0.7	0.4
5,000	1.8	66	0.8	0.6	0.4
6,000	1.5	94	0.5	0.4	0.3

P5501 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	23.2*	0	23.2*	23.2*	23.2*
750	23.2*	1	23.2*	23.2*	23.2*
1,000	23.2*	1	23.2*	23.2*	23.2*
1,250	20.9	2	20.9	20.9	20.9
1,500	17.4	3	17.4	17.4	17.4
1,750	14.9	4	14.9	14.9	14.9
2,000	13.1	6	13.1	13.1	12.7
2,500	10.5	9	10.5	10.5	8.1
3,000	8.7	13	8.7	8.5	5.6
3,500	7.5	18	7.5	6.2	4.1
4,000	6.5	23	6.3	4.8	3.2
4,500	5.8	29	5.0	3.7	2.5
5,000	5.2	36	4.1	3.0	2.0
6,000	4.4	52	2.8	2.1	1.4

P5500 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	20.7	61.9	56.4	48.8	41.6
750	19.6	55.9	48.8	39.8	31.9
1,000	16.7	45.7	37.0	27.4	21.0
1,250	13.8	36.4	27.4	19.9	15.7
1,500	11.5	28.5	21.0	15.7	12.6
1,750	9.8	22.6	17.1	13.0	10.6
2,000	8.6	18.9	14.5	11.2	9.1
2,250	7.6	16.2	12.6	9.8	8.0
2,500	6.9	14.2	11.2	8.7	7.2
2,750	6.2	12.7	10.1	7.9	6.4

P5501 - Column Loading (metric)

Unbraced Height (mm)	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	38.2	141.5	137.4	131.3	125.0
750	37.1	132.1	125.0	115.6	107.1
1,000	35.9	121.8	112.7	101.9	93.1
1,250	34.3	112.0	101.9	91.2	76.4
1,500	32.3	103.2	93.1	76.4	56.5
1,750	30.2	95.7	83.4	59.7	41.5
2,000	27.3	89.5	69.5	45.8	31.8
2,500	24.2	79.0	56.5	36.2	25.1
3,000	21.3	67.9	45.8	29.3	**
3,500	16.7	48.2	31.8	**	**
4,000	13.2	35.4	23.3	**	**

P5500/P5501 - Elements of Section (metric)

Parameter	P4100		P4101	
	Value	Unit	Value	Unit
Area of Section	4.68	cm ²	9.37	cm ²
Axis 1-1				
Moment of Inertia (I)	21.71	cm ⁴	116.76	cm ⁴
Section Modulus (S)	6.40	cm ³	18.86	cm ³
Radius of Gyration (r)	2.15	cm	3.53	cm
Axis 2-2				
Moment of Inertia (I)	13.91	cm ⁴	27.83	cm ⁴
Section Modulus (S)	6.74	cm ³	13.48	cm ³
Radius of Gyration (r)	1.72	cm	1.72	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

1. Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).

2. Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.

3. For pierced channel, multiply beam loads by the following factor:

"KO" Series 95%

"T" Series 85%

"HS" Series 90%

"SL" Series 85%

"WT" Series 85%

4. Deduct channel weight from the beam loads.

5. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.

6. All beam loads are for bending about Axis 1-1.

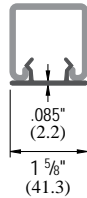
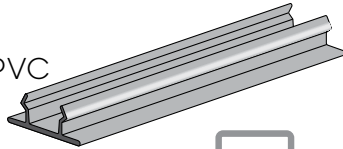
Closure Strips for 1⁵/₈" (41mm) Channel

P1184 P



Wt/100 Ft:
11 Lbs (16.5 kg/100 m)

- Material: Paintable PVC
- Color: Green, Grey
- Standard length: 10' (3m)

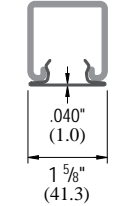
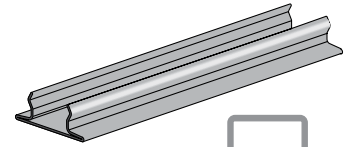


P3184



Wt/100 Ft:
47 Lbs (69.9 kg/100 m)

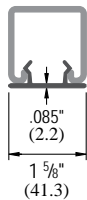
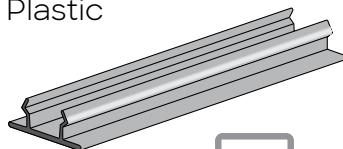
- Finish: GR, PG, PL
- Standard length: 10' (3m)



P3184 P

Wt/100 Ft:
9.4 Lbs (14.0 kg/100 m)

- Material : GE Noryl® Plastic
- Color: Green, Grey and White
- Standard length: 10' (3m)

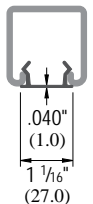
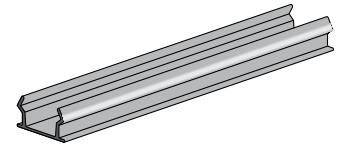


P3712 P



Wt/100 Ft:
5.4 Lbs (8.0 kg/100 m)

- Material: Plastic
- Color: Black
- Standard length: 10' (3m)



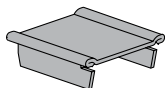
Note: Use with P3170, P3270, and P3370 series concrete insert.

End Caps and Frame Caps

P1280

EG

- Material: .060" (1.5)

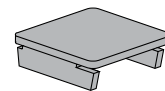


Part Number	Use With Channel	Wt/100 pcs	
		(lb)	(kg)
P1280	P1000	11	5.0

P1180, P4280, P5280, P5580

EG

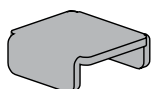
- Material: .075" (1.9)



Part Number	Use With Channel	Wt/100 pcs	
		(lb)	(kg)
P1180	P1100	12	5.4
P4280	P4100	5	2.3
P5280	P4100	22	10.0
P5580	P5500	17	7.7

P2407, P3280, P3380

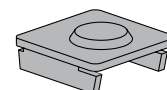
EG



Part Number	Fits Channel	Wt/100 pcs	
		(lb)	(kg)
P2407	P1000	10	4.5
P3280	P3000	8	3.6
P3380*	P3300	5	2.3

P1280 A

- Material: .075" (1.9)



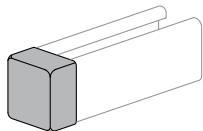
Part Number	Use With Channel	Wt/100 pcs	
		(lb)	(kg)
P1280A	P1000	11	5.0

P2860 - Plastic White End Caps

VY

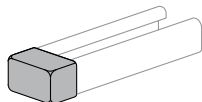
P2860-10

Use with P1000, P1100 channels & P9000 Telestrut.
Wt/100 pcs 3.4 Lbs (1.5 kg)



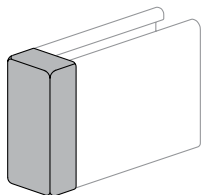
P2860-33

Use with P3300 channel.
Wt/100 pcs 2.5 Lbs (1.1 kg)



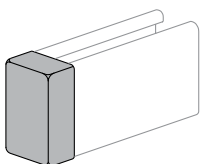
P2860-50

Use with P5000 & P1001 channels.
Wt/100 pcs 5 Lbs (2.3 kg)



P2860-55

Use with P5500 channel.
Wt/100 pcs 4.7 Lbs (2.1 kg)



P2859 - Frame Caps

GY WH

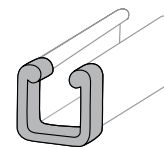
* Add color suffix:

GR - Green

WH - White

GY - Grey

"A" series frame caps available



Part Number	Use With Channel	Wt/100 pcs	
		(lb)	(kg)
P2859-10	P1000	12	5.4
P2859-11	P1001	12	5.4
P2859-12	P3300	5	2.3
P2859-13	P5000	22	10.0
P2859-14	P5500	17	7.7

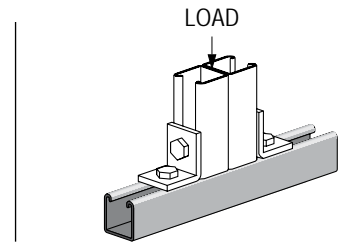
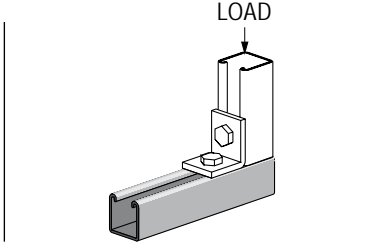
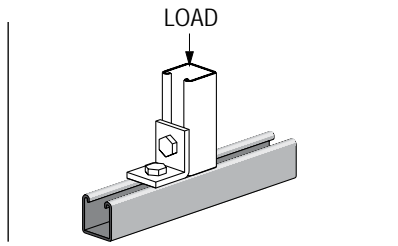
Lateral Bracing Load Reduction

Lateral Bracing Load Reduction Charts

Span				Single Channel							Double Channel										
(ft)	(m)	(in)	(cm)	P1000	P1100	P3000	P3300	P4100	P5000	P5500	P1001	P1101	P2001	P3001	P3301	P4001	P4101	P4401	P5001	P5501	
2	0.61	24	61	1.00	1.00	1.00	1.00	1.00	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3	0.91	36	91	0.94	0.89	0.96	1.00	0.98	0.85	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4	1.22	48	122	0.88	0.78	0.91	1.00	0.94	0.70	0.77	1.00	0.98	0.98	1.00	1.00	0.98	1.00	1.00	0.97	0.98	0.98
5	1.52	60	152	0.82	0.68	0.88	0.98	0.91	0.55	0.67	0.97	0.93	0.92	0.98	1.00	0.93	0.96	1.00	0.90	0.93	0.93
6	1.83	72	183	0.78	0.59	0.84	0.97	0.89	0.44	0.58	0.93	0.87	0.85	0.95	0.97	0.88	0.92	0.97	0.83	0.87	0.87
7	2.13	84	213	0.75	0.52	0.82	0.96	0.86	0.38	0.51	0.89	0.82	0.78	0.92	0.95	0.83	0.89	0.95	0.76	0.81	0.81
8	2.44	96	244	0.71	0.47	0.79	0.94	0.84	0.33	0.46	0.85	0.76	0.71	0.88	0.92	0.79	0.85	0.92	0.68	0.76	0.76
9	2.74	108	274	0.69	0.43	0.77	0.93	0.82	0.30	0.42	0.81	0.70	0.64	0.85	0.90	0.74	0.81	0.90	0.61	0.70	0.70
10	3.05	120	305	0.66	0.40	0.75	0.92	0.80	0.28	0.40	0.78	0.65	0.57	0.82	0.87	0.69	0.78	0.87	0.54	0.64	0.64
12	3.66	144	366	0.61	0.36	0.70	0.89	0.76	0.24	0.36	0.70	0.54	0.45	0.76	0.82	0.60	0.71	0.82	0.43	0.53	0.53
14	4.27	168	427	0.55	0.32	0.66	0.86	0.73	0.22	0.32	0.63	0.45	0.38	0.70	0.78	0.51	0.64	0.77	0.35	0.45	0.45
16	4.88	192	488	0.51	0.30	0.62	0.84	0.69	0.21	0.30	0.56	0.39	0.32	0.64	0.73	0.44	0.57	0.72	0.30	0.39	0.39
18	5.49	216	549	0.47	0.28	0.58	0.81	0.65	0.19	0.28	0.49	0.34	0.28	0.58	0.68	0.39	0.50	0.67	0.27	0.34	0.34
20	6.10	240	610	0.44	0.26	0.54	0.78	0.61	0.18	0.26	0.44	0.31	0.25	0.52	0.63	0.35	0.45	0.62	0.24	0.30	0.30

Bearing Loads

Bearing Loads on Channel



Part Number	Bearing Length 15/8" (41 mm) Maximum Allowable Loads		Bearing Length 15/8" (41 mm) Maximum Allowable Loads		Bearing Length 31/4" (82 mm) Maximum Allowable Loads	
	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
P1000	6,700	29.80	3,100	13.79	7,700	34.25
P1100	3,500	15.57	1,700	7.56	4,000	17.79
P3000	6,700	29.80	3,200	14.23	7,700	34.25
P3300	6,800	30.25	3,200	14.23	7,800	34.70
P4100	3,500	15.57	1,800	8.01	4,100	18.24
P5000	6,500	28.91	3,000	13.34	7,500	33.36
P5500	6,600	29.36	3,100	13.79	7,600	33.81

Loads are calculated based on 2007 Specification For The Design Of Cold Formed Steel Structural Members published by AISI



TELESTRUT® SYSTEM

TELESTRUT® SYSTEM.....	53
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TELESTRUT® SYSTEM

Material

TELESTRUT is accurately and carefully cold formed to size from low-carbon strip steel.

- **Steel: Plain**
 - 12 Ga. (2.7 mm), ASTM A1011 SS GR 33
- **Steel: Pre-Galvanized**
 - 12 Ga. (2.7 mm), ASTM A653 GR 33

Finishes

Telestrut is available in:

- Plain (PL)
- Pre-Galvanized (PG)
- Green powder coat (GR)

Fittings are available in:

- Green Powder Coat (GR), conforming to commercial standards for Powder Coating
- Electro-galvanized (EG), conforming to ASTM B633 Type III SC1
- Hot-dipped Galvanized (HG), conforming to ASTM A153
- Plain (PL)

Dimensions

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

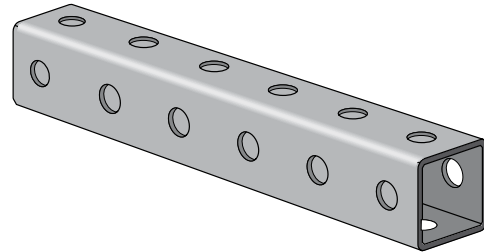
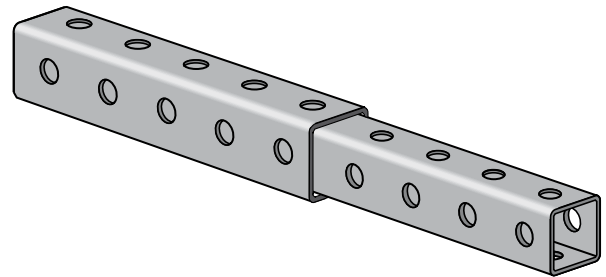
Design Bolt Torque

Bolt Size	Rec. Torque		Max. Torque	
	(ft/lb)	(N•m)	(ft/lb)	(N•m)
1/4"-20	6	8	7	9
5/16"-18	11	15	15	20
3/8"-16	19	26	25	34
1/2"-13	50	68	70	95
5/8"-11	100	136	125	170
3/4"-10	125	170	135	183

Design Load

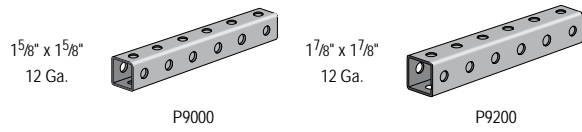
Load tables and charts are constructed to be in accordance with the SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2007 EDITION published by the AMERICAN IRON AND STEEL INSTITUTE USING ASD METHOD.

Type of Load	Safety Factor to Yield Strength
Beam Loads	1.67
Column Load	1.80

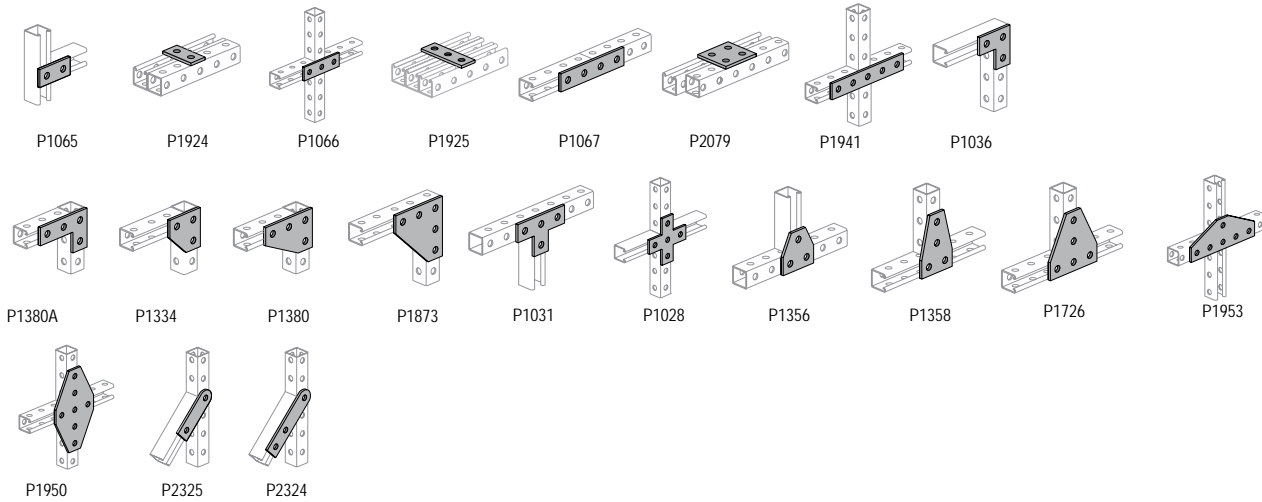


TELESTRUT® SYSTEM

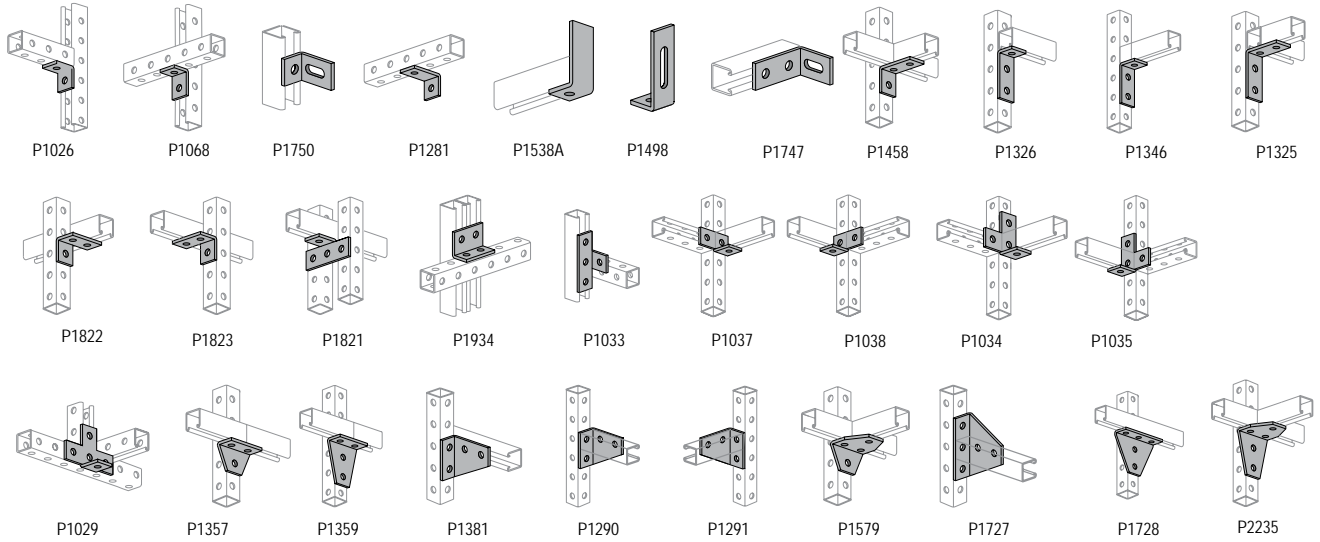
Telestrut Telescoping Tubing



Standard 1 5/8" - Flat Plate Fittings

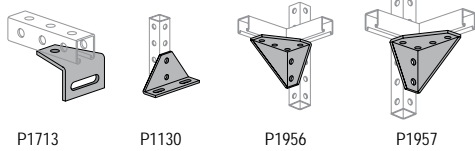


Standard 1 5/8" - 90° Fittings

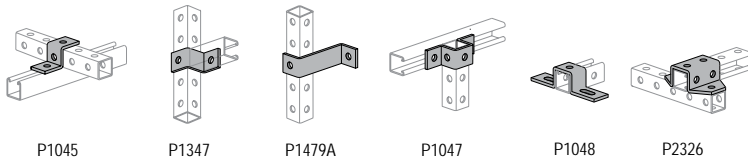


TELESTRUT® SYSTEM

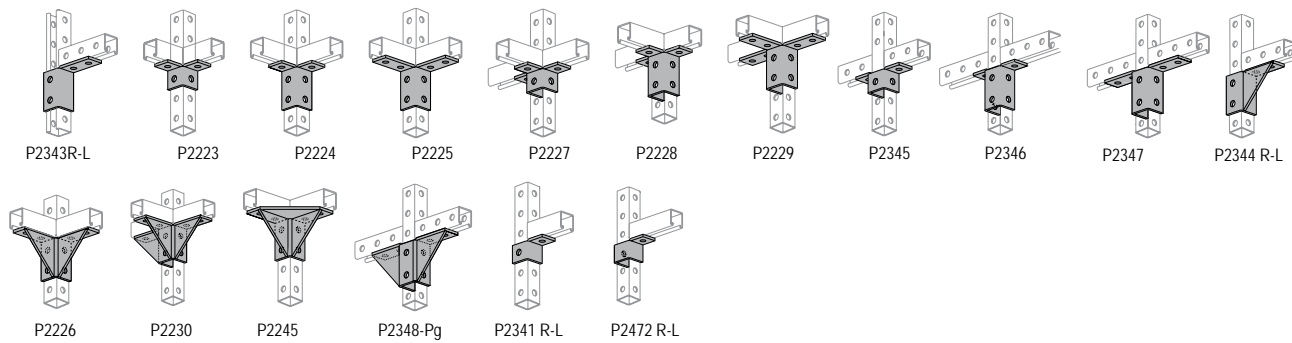
Standard 1 5/8" - 90° Fittings



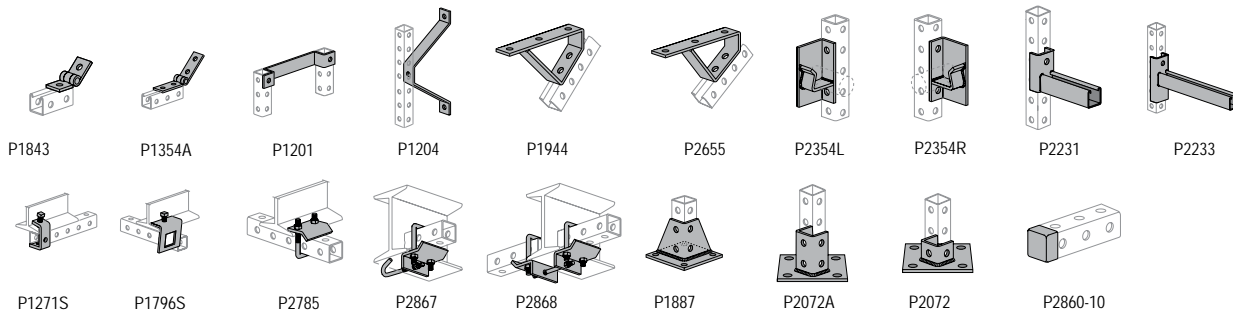
Standard 1 5/8" - "Z" and "U" Shape Fittings



Standard 1 5/8" - Wing Shape Fittings



Standard 1 5/8" - Misc. Fittings



Many of the standard metal framing components are compatible with the Telestrut telescoping tubing. Refer to the appropriate page in other sections of the catalog for information on the particular fittings shown here.

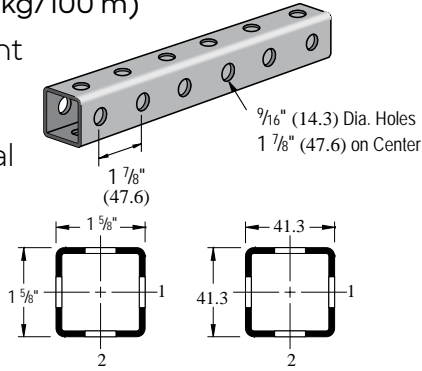
TELESTRUT® SYSTEM

P9000

GR PG

Wt/100 Ft: 188 Lbs (279 kg/100 m)

- Allowable Moment
5,140 In-Lbs
(580 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)

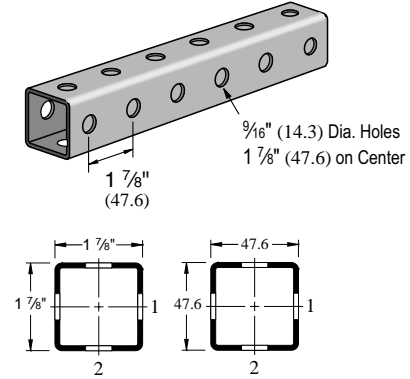


P9200

GR PG

Wt/100 Ft:
223 Lbs (331 kg/100 m)

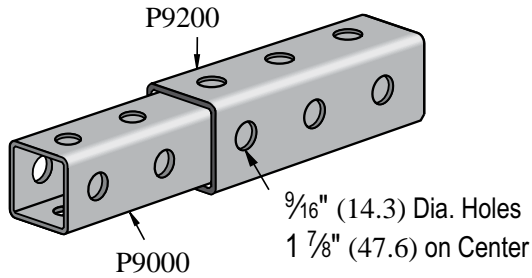
- Allowable Moment
7,480 In-Lbs
(850 N·m)
- 12 Gauge Nominal
Thickness .105"
(2.7mm)



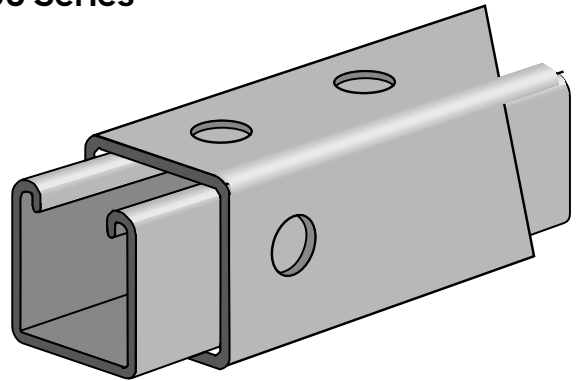
Telestrut's Telescoping Power

Telestrut can be combined with metal framing channel

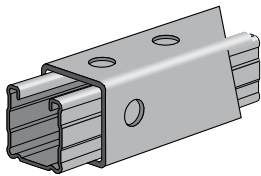
Note: Will not telescope with GR or HG finish



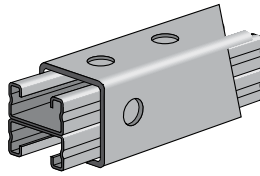
P1000 Series



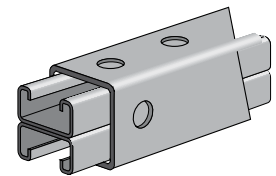
P1100 Series



P4001 Series



P4101 Series



P9000 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	1,710	0.06	1,710	1,710	1,710
36	1,140	0.14	1,140	1,140	810
48	860	0.25	860	680	450
60	690	0.40	580	440	290
72	570	0.57	400	300	200
84	490	0.77	300	220	150
96	430	1.01	230	170	110
108	380	1.27	180	130	90
120	340	1.56	150	110	70
144	290	2.30	100	80	50
168	240	3.02	70	60	40
192	210	3.95	60	40	NR
216	190	5.09	40	NR	NR
240	170	6.24	40	NR	NR

P9200 - Beam Loading

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
24	2,490	0.05	2,490	2,490	2,490
36	1,660	0.12	1,660	1,660	1,350
48	1,250	0.22	1,250	1,140	760
60	1,000	0.34	980	730	490
72	830	0.49	680	510	340
84	710	0.67	500	370	250
96	620	0.87	380	290	190
108	550	1.10	300	230	150
120	500	1.37	240	180	120
144	420	1.98	170	130	80
168	360	2.70	120	90	60
192	310	3.47	100	70	50
216	280	4.47	80	60	NR
240	250	5.47	60	50	NR

P9000 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	3,640	8,730	8,570	8,330	8,040
36	3,540	8,360	8,040	7,530	6,950
48	3,400	7,880	7,340	6,530	5,660
60	3,210	7,290	6,530	5,440	4,360
72	2,990	6,640	5,660	4,360	3,160
84	2,730	5,940	4,790	3,340	2,320
96	2,430	5,220	3,940	2,560	1,780
108	2,110	4,520	3,160	2,020	1,400
120	1,820	3,840	2,560	1,640	**
144	1,390	2,690	1,780	**	**

P9200 - Column Loading

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
24	4,620	11,120	10,980	10,740	10,460
36	4,530	10,770	10,460	9,950	9,370
48	4,390	10,300	9,760	8,940	8,030
60	4,220	9,720	8,940	7,800	6,590
72	4,000	9,050	8,030	6,590	5,180
84	3,750	8,320	7,080	5,410	3,890
96	3,460	7,560	6,110	4,290	2,980
108	3,140	6,770	5,180	3,390	2,360
120	2,790	5,990	4,290	2,750	1,910
144	2,170	4,510	2,980	1,910	**
168	1,720	3,320	2,190	**	**

P9000/P9200 - Elements of Section

Parameter	P9000		P9200	
	Area of Section	0.387	In ²	0.489
Axis 1-1				
Moment of Inertia (I)	0.166	In ⁴	0.279	In ⁴
Section Modulus (S)	0.205	In ³	0.297	In ³
Radius of Gyration (r)	0.655	In	0.755	In
Axis 2-2				
Moment of Inertia (I)	0.166	In ⁴	0.279	In ⁴
Section Modulus (S)	0.205	In ³	0.297	In ³
Radius of Gyration (r)	0.655	In	0.755	In

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

1. Beam loads are given in *total* uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
2. Deduct Telestrut weight from the beam loads.
3. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.

P9000 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	7.7	2	7.7	7.7	7.7
750	6.2	2	6.2	6.2	5.3
1,000	4.7	4	4.7	4.5	3.0
1,250	3.7	7	3.7	2.9	1.9
1,500	3.1	10	2.7	2.0	1.3
1,750	2.7	13	2.0	1.5	1.0
2,000	2.3	17	1.5	1.1	0.8
2,500	1.9	27	1.0	0.7	0.5
3,000	1.6	39	0.7	0.5	0.3
3,500	1.3	53	0.5	0.4	0.3
4,000	1.2	68	0.4	0.3	0.2
4,500	1.0	86	0.3	0.2	0.1
5,000	0.9	108	0.2	0.2	NR
6,000	0.8	151	0.2	NR	NR

P9200 - Beam Loading (metric)

Span (mm)	Max Allowable Uniform Load kN	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	11.3	1	11.3	11.3	11.3
750	9.0	2	9.0	9.0	8.9
1,000	6.8	4	6.8	6.8	5.0
1,250	5.4	6	5.4	4.8	3.2
1,500	4.5	8	4.5	3.3	2.2
1,750	3.9	11	3.3	2.4	1.6
2,000	3.4	15	2.5	1.9	1.2
2,500	2.7	23	1.6	1.2	0.8
3,000	2.3	34	1.1	0.8	0.6
3,500	1.9	45	0.8	0.6	0.4
4,000	1.7	60	0.6	0.5	0.3
4,500	1.5	76	0.5	0.4	0.3
5,000	1.3	92	0.4	0.3	0.2
6,000	1.1	132	0.3	0.2	NR

P9000 - Column Loading (metric)

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
600	16.2	38.9	38.2	37.1	35.9
750	16.0	38.2	37.1	35.5	33.7
1,000	15.6	36.7	35.0	32.3	29.4
1,250	15.0	34.8	32.3	28.6	24.6
1,500	14.4	32.6	29.4	24.6	19.8
1,750	13.6	30.3	26.2	20.6	15.3
2,000	12.7	27.8	23.0	16.8	11.7
2,250	11.7	25.2	19.8	13.3	9.3
2,500	10.5	22.6	16.8	10.8	7.5
2,750	9.3	20.0	14.0	8.9	6.2

P9200 - Column Loading (metric)

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
600	20.6	49.5	48.9	47.9	46.6
750	20.4	48.8	47.9	46.3	44.4
1,000	20.0	47.4	45.7	43.1	40.1
1,250	19.5	45.6	43.1	39.3	35.1
1,500	18.8	43.5	40.1	35.1	29.9
1,750	18.1	41.1	36.8	30.7	24.6
2,000	17.2	38.5	33.4	26.3	19.7
2,250	16.2	35.7	29.9	22.1	15.6
2,500	15.1	32.9	26.3	18.2	12.6
2,750	13.9	30.1	23.0	15.0	10.4

P9000/P9200 - Elements of Section (metric)

Parameter	P9000		P9200	
	Value	Unit	Value	Unit
Area of Section	2.50	cm ²	3.16	cm ²
Axis 1-1				
Moment of Inertia (I)	6.92	cm ⁴	11.61	cm ⁴
Section Modulus (S)	3.35	cm ³	4.87	cm ³
Radius of Gyration (r)	1.66	cm	1.92	cm
Axis 2-2				
Moment of Inertia (I)	6.92	cm ⁴	11.61	cm ⁴
Section Modulus (S)	3.35	cm ³	4.87	cm ³
Radius of Gyration (r)	1.66	cm	1.92	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

1. Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
2. Deduct Telestrut weight from the beam loads.
3. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.

Nuts & Hardware

Nuts & Hardware

Nuts & Hardware62

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Channel Nut Loads.....64

Channel Nuts with Spring65

Channel Nuts Without Spring66

Hardware67



Nuts & Hardware

Material

Unistrut and Power-Strut channel nuts are manufactured from mild steel cold rolled coil, and after stamping and machining operations are completed, they are case hardened, assuring positive biting action into the inturred edge of the channel.

Screws conform to SAE J429 GR 2. Proof Load 55KSI, Tensile Load 74 KSI

Bolt Size	Channel Nut ASTM
$\frac{1}{4}$ " & $\frac{5}{16}$ "	A1011 SS GR33
$\frac{3}{8}$ ", $\frac{7}{16}$ " & $\frac{1}{2}$ "	A576 GR1015 Modified
$\frac{5}{8}$ " & $\frac{3}{4}$ "	A36 or A675 GR60
$\frac{7}{8}$ "	A36

Finishes

All Channel nuts are available in:

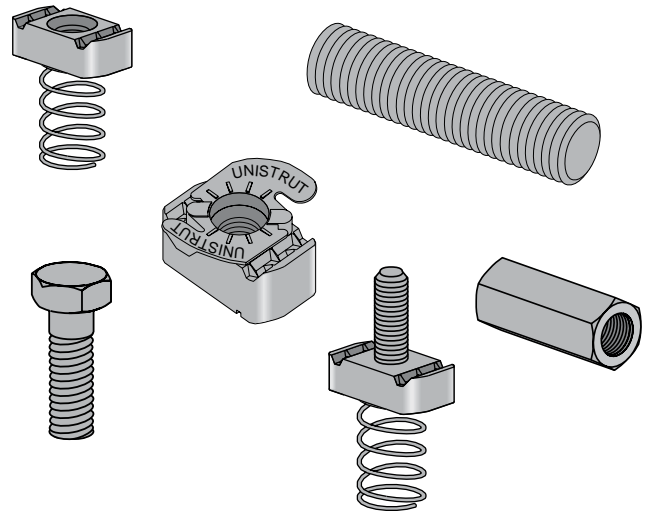
- Electro-galvanized (EG), conforming to ASTM B633 type III SC1
- Hot-dipped galvanized (HG), conforming to ASTM A153
- Plain (PL)
- Defender™ (DF), conforming to ASTM A1059

Hardware items such as Hex Nuts bolts and washers are Electro-Galvanized (EG), ASTM B633 Type III SC1 finish, unless otherwise noted.

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

Threads

Unistrut and Power-Strut nuts and bolts are manufactured to meet the Unified Screw Thread standard, ANSI B1.1, coarse series (UNC) class 2.



Design Bolt Torque

Bolt Size	Rec. Torque		Max. Torque	
	(ft/lb)	(N•m)	(ft/lb)	(N•m)
$\frac{1}{4}$ "-20	6	8	7	9
$\frac{5}{16}$ "-18	11	15	15	20
$\frac{3}{8}$ "-16	19	26	25	34
$\frac{1}{2}$ "-13	50	68	70	95
$\frac{5}{8}$ "-11	100	136	125	170
$\frac{3}{4}$ "-10	125	170	135	183

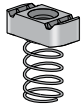
Dimensions

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

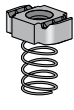
Many Unistrut and Power-Strut nuts, bolts and hardware items are also available in standard metric dimensions. Consult factory for ordering information.

Nuts & Hardware Pictorial Index

Channel Nuts With Spring



P1006 - P1010



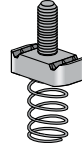
P1012S - P1024S



P4006 - P4010



P5506 - P5510



P2378 - P2382

Channel Nuts Without Spring



P3016



P3006 - P3013



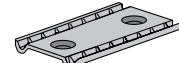
P1012 - P1024



P4012 - P4023



P1006T - P1010T, P4010T



P4908

Hardware



HHCS



HFMS



HRMS



HSHS



HCSS



HSQN



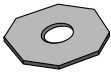
HHXN



HFLW



HLKW



HOCW



HTHR



HRCN



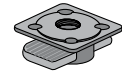
P2486



P2485



P2485K



K1062 - K1064

Channel Nut Loads

Maximum Allowable Pull-out And Slip Loads

Channel	Channel Nut Size-Thread	Gauge	Allowable Pull-Out Strength		Resistance to Slip		Torque	
			(lb)	(kN)	(lb)	(kN)	(Ft-lb)	(N·m)
P1000 P3000 P5000 P5500	7/8" - 9	12	2,500	11.12	1,700	7.56	*125	170
	3/4" - 10	12	2,500	11.12	1,700	7.56	*125	170
	5/8" - 11	12	2,500	11.12	1,500	6.67	*100	135
	1/2" - 13	12	2,000	8.90	1,500	6.67	50	70
	7/16" - 14	12	1,400	6.23	1,000	4.45	35	50
	3/8" - 16	12	1,000	4.45	800	3.56	19	25
	5/16" - 18	12	800	3.56	500	2.22	11	15
	1/4" - 20	12	600	2.67	300	1.33	6	8
P3300	1/2" - 13	12	1,500	6.67	1,500	6.67	50	70
	3/8" - 16	12	1,000	4.45	800	3.56	19	25
	5/16" - 18	12	800	3.56	500	2.22	11	15
	1/4" - 20	12	600	2.67	300	1.33	6	8
P1100 & P4100	1/2" - 13	14	1,400	6.23	1,000	4.45	50	70
	3/8" - 16	14	1,000	4.45	750	3.34	19	25
	5/16" - 18	14	800	3.56	400	1.78	11	15
	1/4" - 20	14	600	2.67	300	1.33	6	8

* May require 3/8" or 1/2" thick fitting.

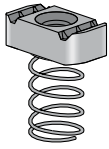
Nut design loads include a minimum safety factor of 3.

Note: Refer to the Channel Nut Selection Chart on the following two pages for the part number.

Channel Nuts With Spring

Channel Nut With Spring

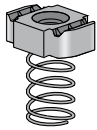
EG, HG



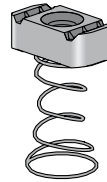
Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P1006-0832	#8	-32	7	(3.2)	P1000, P1100, P3000
P1006-1024	#10	-24	7	(3.2)	
P1006-1420	1/4"	-20	7	(3.2)	
P1007	5/16"	-18	6	(2.7)	
P1008	3/8"	-16	10	(4.5)	
P1009	7/16"	-14	9	(4.1)	
P1010	1/2"	-13	12	(5.4)	



Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P4006-0832	#8	-32	7	(3.2)	P3300, P4100
P4006-1024	#10	-24	7	(3.2)	
P4006-1420	1/4"	-20	7	(3.2)	
P4007	5/16"	-18	6	(2.7)	
P4008	3/8"	-16	9	(4.1)	
P4009	7/16"	-14	9	(4.1)	
P4010	1/2"	-13	8	(3.6)	



Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P1012S	5/8"	-11	21	(9.5)	P1000, P1100, P3000
P1023S	3/4"	-10	21	(9.5)	
P1024S	7/8"	-9	21	(9.5)	

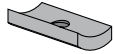


Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P5506-0832	#8	-32	7	(3.2)	P5000, P5500
P5506-1024	#10	-24	7	(3.2)	
P5506-1420	1/4"	-20	7	(3.2)	
P5507	5/16"	-18	6	(2.7)	
P5508	3/8"	-16	10	(4.5)	
P5509	7/16"	-14	10	(4.5)	
P5510	1/2"	-13	12	(5.4)	

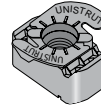
Channel Nuts Without Spring

Channel Nut Without Spring

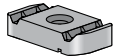
EG, HG



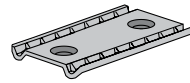
Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P3016-0632	#6	-32	2	(0.9)	Any Channel
P3016-0832	#8	-32	2	(0.9)	
P3016-1024	#10	-24	4	(1.8)	
P3016-1420	1/4"	-20	4	(1.8)	



Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P1006T1420	1/4"	-20	7	(3.2)	Any Channel
P1008T	3/8"	-16	10	(4.5)	
P1010T	1/2"	-13	12	(5.4)	Any Channel Except P3300, P4100
P4010T	1/2"	-13	8	(3.6)	P3300, P4100



Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P3006-0832	#8	-32	6	(2.7)	Any Channel
P3006-1024	#10	-24	6	(2.7)	
P3006-1420	1/4"	-20	6	(2.7)	
P3007	5/16"	-18	6	(2.7)	
P3008	3/8"	-16	9	(4.1)	
P3009	7/16"	-14	9	(4.1)	
P3010	1/2"	-13	11	(5.0)	Any Channel Except P3300, P4100
P3013	1/2"	-13	8	(3.6)	P3300, P4100



Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P4908	3/8"	-16	17.5	(7.9)	Any Channel

Double Conveyor Adjusting Nut

Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P1016	3/8"	-16	17.5	(7.9)	Any "T" Slotted Channel

Missing Link Multi-Purpose Strut Fastener



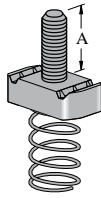
Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P1012	5/8"	-11	20	(9.1)	Any Channel Except P3300, P4100
P1023	3/4"	-10	20	(9.1)	
P1024	7/8"	-9	20	(9.1)	



Part Number	Nut Size Thread		Wt/100 pcs		Use With
			(lb)	(kg)	
P4012	5/8"	-11	11	(5.0)	P3300, P4100
P4023	3/4"	-10	11	(5.0)	

Channel Stud Nut With Spring

EG

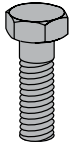


Part No.	Thread	"A" Stud		Wt/100 pcs		Use With
		(in)	(mm)	(lb)	(kg)	
P2378-1	1/4" - 20	1	25.4	8	3.6	P1000, P1100, P3000
P2378-2		1 1/4	31.8	9	4.1	
P2378-3		1 1/2	38.1	9	4.1	
P2379-1	5/16" - 18	1	25.4	12	5.4	
P2379-2		1 1/4	31.8	12	5.4	
P2379-3		1 1/2	38.1	13	5.9	
P2380-1	3/8" - 16	1	25.4	13	5.9	
P2380-2		1 1/4	31.8	13	5.9	
P2380-3		1 1/2	38.1	13	5.9	
P2380-4		1 3/4	44.5	15	6.8	
P2380-5		2	50.8	16	7.3	
P2380-6		2 1/4	57.2	16	7.3	
P2381-2	1/2" - 13	1	25.4	14	6.4	
P2381-3		1 1/4	31.8	15	6.8	
P2381-4		1 1/2	38.1	17	7.7	
P2381-5		1 3/4	44.5	18	8.2	
P2381-6		2	50.8	19	8.6	
P2381-7		2 1/4	57.2	20	9.1	
P2382-2		5/8" - 11	1 1/4	31.8	18	8.2
P2382-3	1 1/2		38.1	20	9.1	

All Stud Nut grooves are serrated.

Hex Head Cap Screws

DF, EG



Part Number	Size	Wt/ 100 pcs	
		(lb)	(kg)
HHCS025044EG	1/4" x 7/16"	1.0	(0.5)
HHCS025075EG	1/4" x 3/4"	1.3	(0.6)
HHCS025150EG	1/4" x 1 1/2"	2.6	(1.2)
HHCS031125EG	5/16" x 1 1/4"	3.6	(1.6)
HHCS037075EG	3/8" x 3/4"	4.0	(1.8)
HHCS037087EG	3/8" x 7/8"	4.4	(2.0)
HHCS037100EG	3/8" x 1"	4.5	(2.0)
HHCS037125EG	3/8" x 1 1/4"	5.3	(2.4)
HHCS037150EG	3/8" x 1 1/2"	6.0	(2.7)
HHCS037200EG	3/8" x 2"	7.6	(3.4)
HHCS037225EG	3/8" x 2 1/4"	8.4	(3.8)
HHCS037250EG	3/8" x 2 1/2"	9.2	(4.2)
HHCS050094EG	1/2" x 15/16"	9.1	(4.1)
HHCS050119EG	1/2" x 1 3/16"	10.2	(4.6)
HHCS050125EG	1/2" x 1 1/4"	11.0	(5.0)
HHCS050150EG	1/2" x 1 1/2"	11.6	(5.3)
HHCS050175EG	1/2" x 1 3/4"	13.1	(5.9)
HHCS050200EG	1/2" x 2"	14.6	(6.6)
HHCS050225EG	1/2" x 2 1/4"	16	(7.3)
HHCS050250EG	1/2" x 2 1/2"	17.5	(7.9)

Hex Slotted Machine Screws



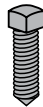
Part Number	Size	Wt/ 100 pcs	
		(lb)	(kg)
HSHS025050EG	$\frac{1}{4}'' \times \frac{1}{2}''$	1.4	0.6
HSHS025062EG	$\frac{1}{4}'' \times \frac{5}{8}''$	1.5	0.7
HSHS025075EG	$\frac{1}{4}'' \times \frac{3}{4}''$	1.7	0.8
HSHS031100EG	$\frac{5}{16}'' \times 1''$	2.6	1.2
HSHS031125EG	$\frac{5}{16}'' \times 1\frac{1}{4}''$	3.0	1.4
HSHS031150EG	$\frac{5}{16}'' \times 1\frac{1}{2}''$	3.4	1.5
HSHS037125EG	$\frac{3}{8}'' \times 1\frac{1}{4}''$	5.3	2.4

Flat Head Machine Screws



Part Number	Size	Wt/ 100 pcs	
		(lb)	(kg)
HFMS025062EG	$\frac{1}{4}'' \times \frac{5}{8}''$	1.2	0.5
HFMS031100EG	$\frac{5}{16}'' \times 1''$	2.6	1.2
HFMS050100EG	$\frac{1}{2}'' \times 1''$	9.3	4.2

Cone Point Set Screws



Part Number	Size	Wt/ 100 pcs	
		(lb)	(kg)
HCSS025100EG	$\frac{1}{4}'' \times 1''$	2.8	1.3
HCSS031150EG	$\frac{5}{16}'' \times 1\frac{1}{2}''$	3.9	1.8
HCSS037150EG	$\frac{3}{8}'' \times 1\frac{1}{2}''$	4.5	2.0
HCSS037200EG	$\frac{3}{8}'' \times 2''$	6.1	2.8
HCSS050150EG	$\frac{1}{2}'' \times 1\frac{1}{2}''$	8.5	3.9
HCSS050200EG	$\frac{1}{2}'' \times 2''$	11.4	5.2
HCSS062150EG	$\frac{5}{8}'' \times 1\frac{1}{2}''$	14.5	6.6
HCSS062200EG	$\frac{5}{8}'' \times 2''$	23.0	10.4

Round Head Machine Screws

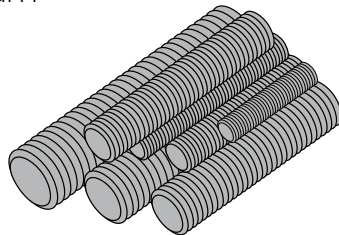


Part Number	Size	Wt/ 100 pcs	
		(lb)	(kg)
HRMS025050EG	$\frac{1}{4}'' \times \frac{1}{2}''$	1	0.5
HRMS025075EG	$\frac{1}{4}'' \times \frac{3}{4}''$	1.2	0.5
HRMS025100EG	$\frac{1}{4}'' \times 1''$	1.5	0.7
HRMS031100EG	$\frac{5}{16}'' \times 1''$	2.6	1.2
HRMS031125EG	$\frac{5}{16}'' \times 1\frac{1}{4}''$	3.0	1.4
HRMS037100EG	$\frac{3}{8}'' \times 1''$	4.1	1.9
HRMS037125EG	$\frac{3}{8}'' \times 1\frac{1}{4}''$	4.7	2.1
HRMS037150EG	$\frac{3}{8}'' \times 1\frac{1}{2}''$	5.3	2.4

Steel Threaded Rod

DF, EG

- Low Carbon Steel Grade 1006 - 1010
- $F_y = 36,000$ psi minimum
- $F_t = 58,000$ psi minimum



Standard Length 12' (3.7m)

Part Number	Size	Wt/ 100 pcs	
		(lb)	(kg)
HTHR025	$\frac{1}{4}'' \times 20$	13	5.9
HTHR031	$\frac{5}{16}'' \times 18$	20	9.1
HTHR037	$\frac{3}{8}'' \times 16$	30	13.6
HTHR044	$\frac{7}{16}'' \times 14$	30	13.6
HTHR050	$\frac{1}{2}'' \times 13$	53	24.0
HTHR062	$\frac{5}{8}'' \times 11$	84	38.1
HTHR075	$\frac{3}{4}'' \times 10$	124	56.2
HTHR087	$\frac{7}{8}'' \times 9$	170	77.1
HTHR100	$1'' \times 8$	223	101.2

Hardware

Square Nuts



Part Number	Size (in)	Wt/ 100 pcs	
		(lb)	(kg)
HSQN025EG	1/4	0.9	0.4
HSQN031EG	5/16	1.6	0.7
HSQN037EG	3/8	2.7	1.2
HSQN050EG	1/2	5.8	2.6
HSQN062EG	5/8	10.7	4.9
HSQN075EG	3/4	15.4	6.9
HSQN087EG	7/8	24.9	11.3
HSQN100EG	1	36.3	16.5

Hexagon Nuts

DF, EG



Part Number	Size (in)	Wt/ 100 pcs	
		(lb)	(kg)
HHXN025EG	1/4	0.6	0.3
HHXN031EG	5/16	1.2	0.5
HHXN037EG	3/8	1.6	0.7
HHXN050EG	1/2	4.8	2.2
HHXN062EG	5/8	7.3	3.3
HHXN075EG	3/4	11.9	5.4
HHXN087EG	7/8	19.0	8.6
HHXN100EG	1	28.3	12.8

Flat Washers

DF, EG



Part Number	Size (in)	Wt/ 100 pcs	
		(lb)	(kg)
HFLW025EG	1/4	0.8	0.4
HFLW031EG	5/16	1.0	0.5
HFLW037EG	3/8	1.5	0.7
HFLW050EG	1/2	3.5	1.6
HFLW062EG	5/8	7.7	3.5
HFLW075EG	3/4	11.0	5.0
HFLW087EG	7/8	15.3	6.9
HFLW100EG	1	18.8	8.5

Lock Washers

DF, EG



Part Number	Size (in)	Wt/ 100 pcs	
		(lb)	(kg)
HLKW025EG	1/4	0.25	0.1
HLKW031EG	5/16	0.41	0.2
HLKW037EG	3/8	0.63	0.3
HLKW050EG	1/2	1.32	0.6
HLKW062EG	5/8	2.20	1.0
HLKW075EG	3/4	3.80	1.7
HLKW087EG	7/8	6.00	2.7
HLKW100EG	1	8.80	4.0

Load Carrying Capacity Of Threaded Hot Rolled Steel Conforming To ASTM A575 And A576

Threaded Rod Loads for Piping Applications (Based on MSS SP-58)

Nominal Dia. (in)	Root Area		Max. Safe Load at 650°F (343°C)	
	(in ²)	(mm ²)	(lb)	(kN)
3/8	0.068	43.9	730	3.25
1/2	0.126	81.3	1,350	6.01
5/8	0.202	130.3	2,160	9.61
3/4	0.302	194.8	3,230	14.37
7/8	0.419	270.3	4,480	19.93
1	0.552	356.1	5,900	26.24

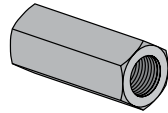
Threaded Rod Loads for Structural Applications

(Based on AISC, Steel Construction Manual, ASD, 16th Edition. Per AISC, Allowed Tensile Stress = 0.33 * Fu)

Nominal Dia. (in)	Nominal Area		Allowed Tension Load	
	(in ²)	(mm ²)	(lb)	(kN)
1/4	0.049	31.6	930	4.14
3/8	0.110	71.0	2,110	9.39
1/2	0.150	96.8	2,870	12.77
5/8	0.196	126.5	3,750	16.68
3/4	0.307	198.2	5,870	26.11
7/8	0.442	285.4	8,450	37.59
1	0.601	388.0	11,500	51.15
1	0.785	506.8	15,030	66.86

Steel Coupler Nuts

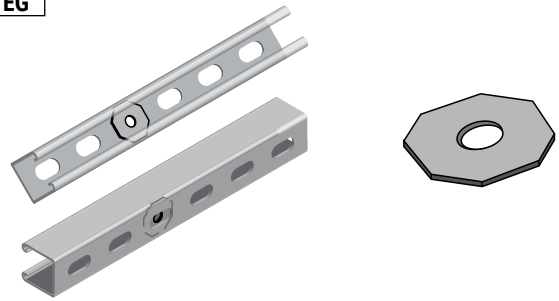
DF, EG



Part Number	Size	Length		Wt/100 pcs	
		(in)	(mm)	(lb)	(kg)
HRCN025	1/4" - 20	7/8	22.2	1.9	0.9
HRCN031	5/16" - 18	1 3/4	44.5	7.5	3.4
HRCN037	3/8" - 16	1 3/4	44.5	9.0	4.1
HRCN044	7/16" - 14	1 3/4	44.5	10.4	4.7
HRCN050	1/2" - 13	1 3/4	44.5	10.0	4.5
HRCN062	5/8" - 11	2 1/8	54.0	18.0	8.2
HRCN075	3/4" - 10	2 1/4	57.2	28.0	12.7
HRCN087	7/8" - 9	2 1/2	63.5	55.0	24.9
HRCN100	1" - 8	2 3/4	69.9	73.0	33.1

Slot Adapter™

EG

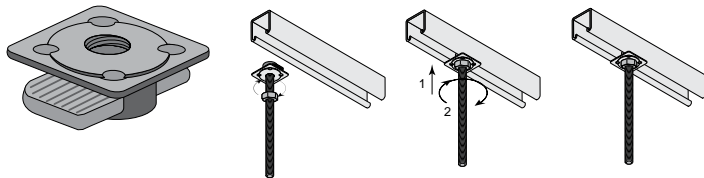


Part Number	Bolt Size		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
HOCW025	1/4	6.4	1	0.5
HOCW037	3/8	9.5	1.5	0.7

Kwik Washer™

EG

Overhead installation with one hand.
Available in zinc plated and hot dip galvanized

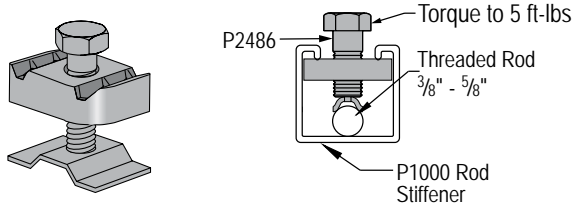


Part Number	Size		Load		Wt/100 pcs	
	(in)	(mm)	(lb)	(kN)	(lb)	(kg)
K1062	1/4	6.4	250	1.11	1.2	0.5
K1063	3/8	9.5	610	2.71	2.6	1.2
K1064	1/2	12.7	1,130	5.03	9.3	4.2

P2486 Seismic Rod Stiffener



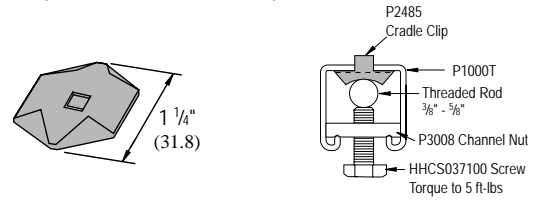
Wt/100 pcs: 16 Lbs (7.3 kg)



P2485 Cradle Clip

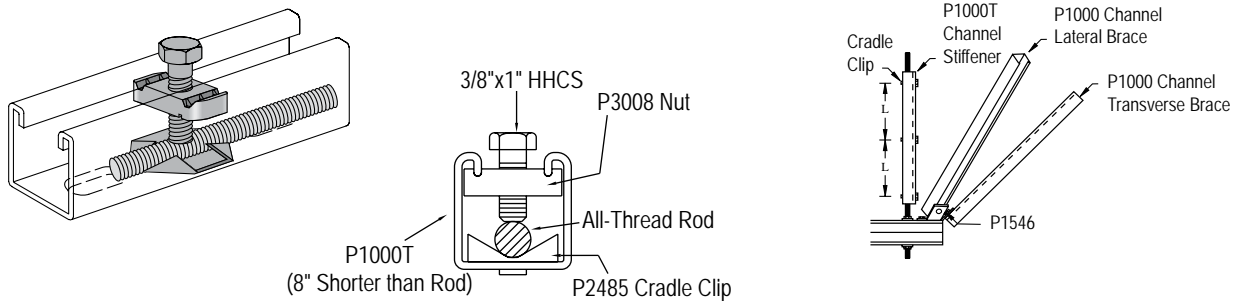


Cradle clip only, order other items separately.



P2485K - Seismic Cradle Clip Assembly

Wt/100 pcs: 3.0 Lbs (1.4 kg)



P2485 & P2486 - Spacing Chart

Rod Size		Root Area		Radius of Gyration		Design Load	Rod Stiffener Clip Spacing (L).....							
								Rod Stress @100% 10,700 PSI		Rod Stress @75% 8,025 PSI		Rod Stress @50% 5,350 PSI		Rod Stress @35% 3,745 PSI	
(in)	(mm)	(in ²)	(mm ²)	(in)	(mm)	(lb)	(kN)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
3/8	9.5	0.068	49.5	0.074	1.99	730	3.24	9	228.6	11	279.4	13	330.2	15	381.0
1/2	12.7	0.126	72.4	0.100	2.40	1,350	6.01	12	304.8	14	355.6	17	431.8	21	533.4
5/8	15.9	0.202	138.3	0.127	3.32	2,160	9.61	15	381.0	18	457.2	22	558.8	26	660.4

Notes:

1. Minimum Tensile Stress is 50,000 psi (345MPa)
2. Working Stress is 10,700 psi (73.9 MPa) – Same as for Tension
3. Compression will Only Occur During a Seismic Event
4. Compression Requires the Use of Rod Stiffeners
5. KL/r = 200 When Rod Stress is at 35%

Refer to seismic bracing systems catalog for more detailed information.



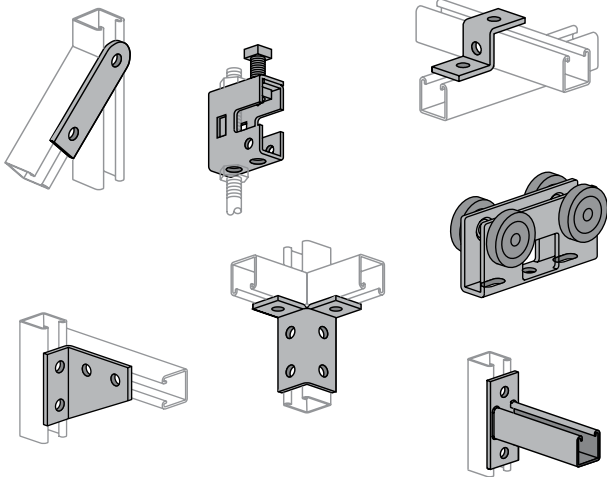
General Fittings

General Fittings

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General Fittings



Material

Fittings, unless noted, are made from hot-rolled, pickled and oiled steel plates, bar, strip or coil, and conform to one or more of the following specifications: ASTM specifications A575, A576, A635, A1011 SS GR 33, A1011 HSLAS GR 45 or A36. All fittings meet or exceed physical properties of ASTM A1011 GR 33. The pickling of the steel produces a smooth surface free from scale.

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

Finishes

Fittings are available in:

- Green Powder Coat (GR), conforming to commercial standards for Powder Coating
- Electro-galvanized (EG), conforming to ASTM B633 Type III SC1;
- Hot-dipped galvanized (HG), conforming to ASTM A123 or A153 and
- Plain (PL)
- Defender (DF), conforming to ASTM A1059 or A1046

Application

All parts drawings illustrate only one application of each fitting. In most cases many other applications are possible. The channels shown in the illustrations are P1000, 1 $\frac{5}{8}$ " square, except where noted otherwise.

All $\frac{9}{16}$ " diameter holes use $\frac{1}{2}$ " x $1\frac{5}{16}$ " hex head cap screws and $\frac{1}{2}$ " nuts – P1010, P3010, P4010 or P5510 – depending on the channel used. Nuts and bolts are not included with the fitting and must be ordered separately.

General Fittings

Design Bolt Torque

Bolt Size	Rec. Torque		Max. Torque	
	(ft/lb)	(N•m)	(ft/lb)	(N•m)
1/4"-20	6	8	7	9
5/16"-18	11	15	15	20
3/8"-16	19	26	25	34
1/2"-13	50	68	70	95
5/8"-11	100	136	125	170
3/4"-10	125	170	135	183

Set Screw Torque

Bolt Size	Set Screw Torque	
	(in/lb)	(N•m)
1/4"-20	40	4
3/8"-16	60	7
1/2"-13	125	14
5/8"-11	250	28
3/4"-10	400	44.5
7/8"-9	665	75

Note: Caution should be taken not to overtighten the set screw

Dimensions

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

Design Load

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

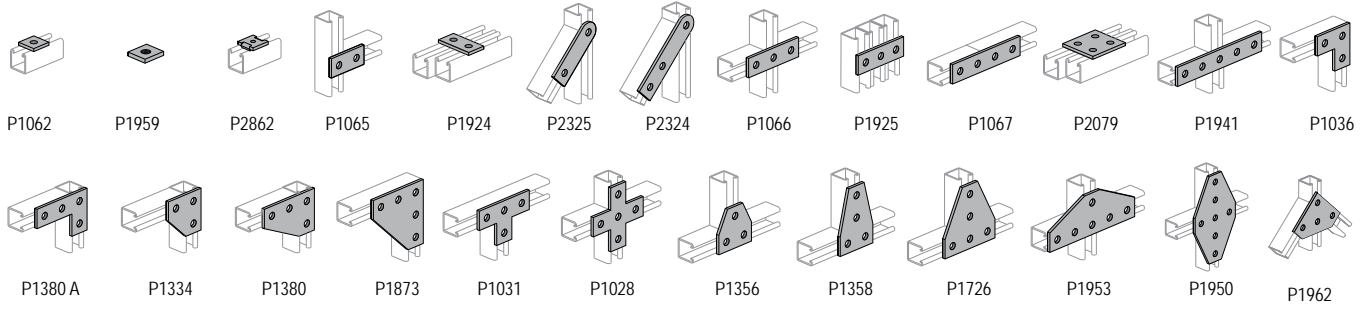
Beam Clamps

Clamps are designed to be used with W, M, S and HP Shape beams, Standard C and Miscellaneous MC Channels, Angles and Structural Tees. Clamps must be used in pairs mounted in opposite directions where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

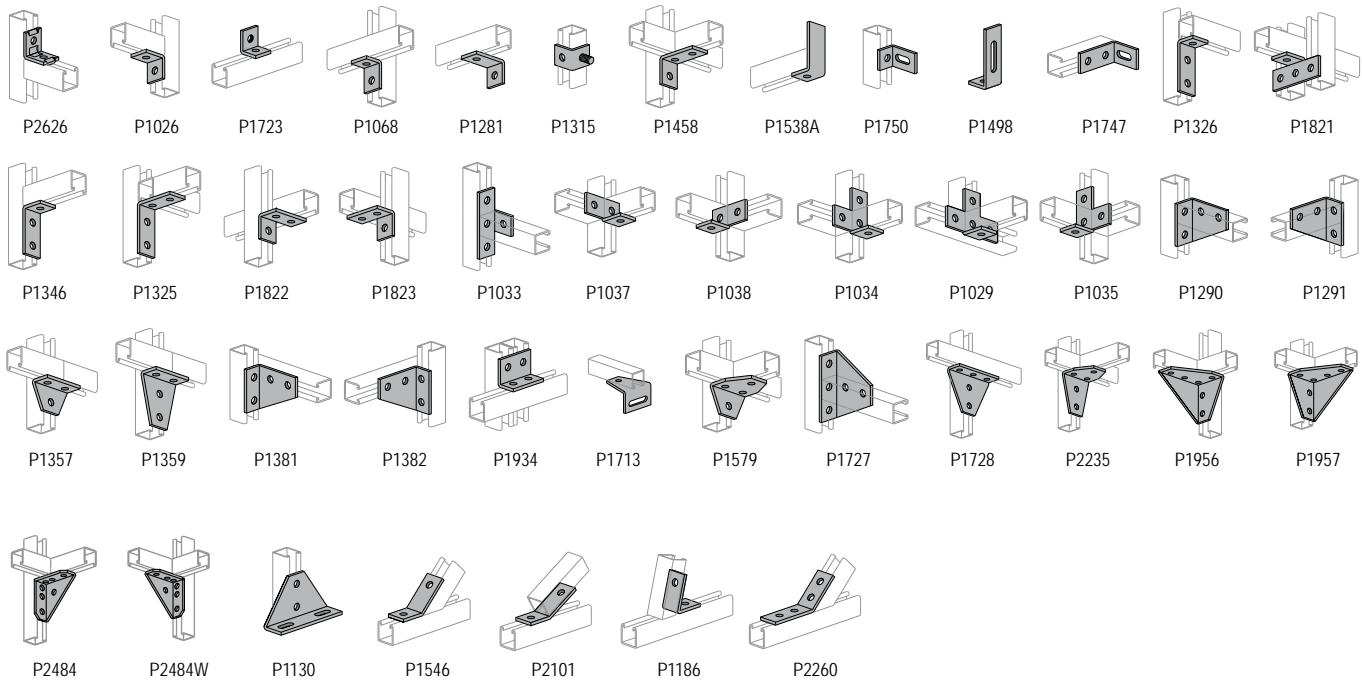


General Fittings Pictorial Index

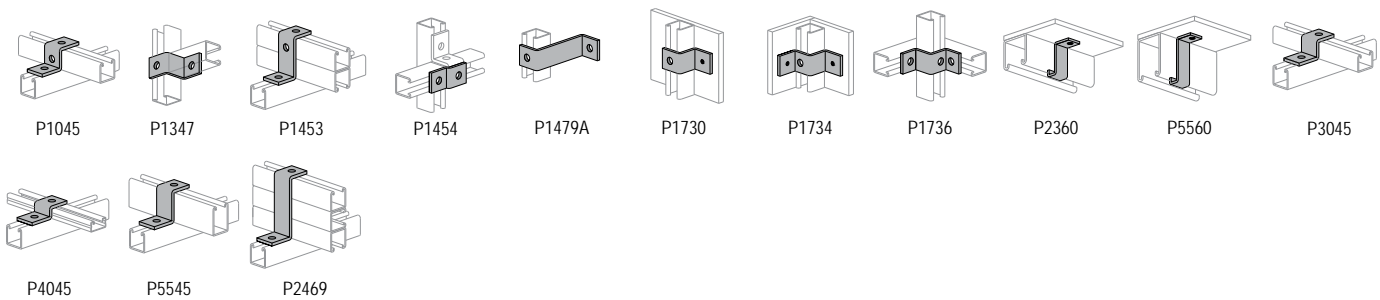
Flat Plate Fittings



Angle Fittings

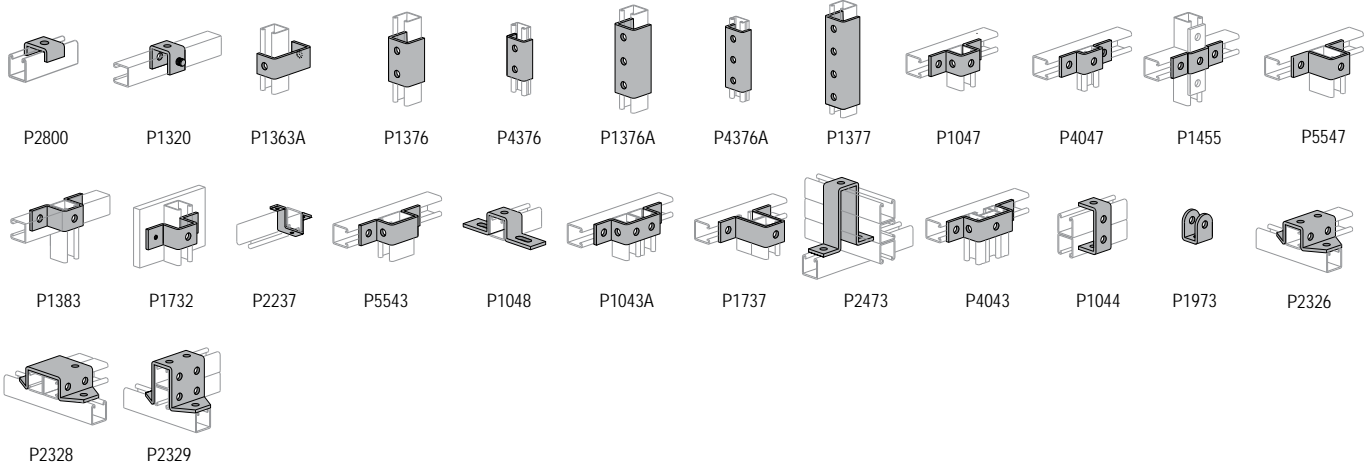


"Z" Shape Fittings

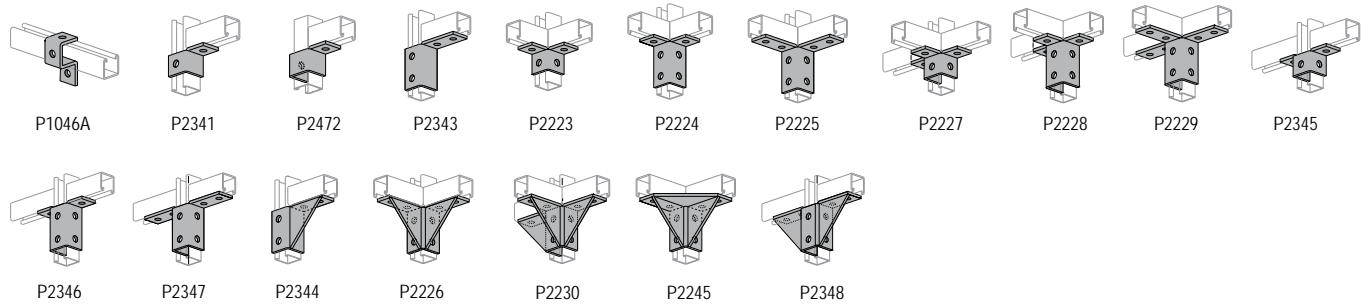


General Fittings Pictorial Index

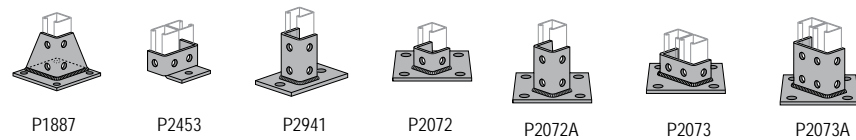
"U" Shape Fittings



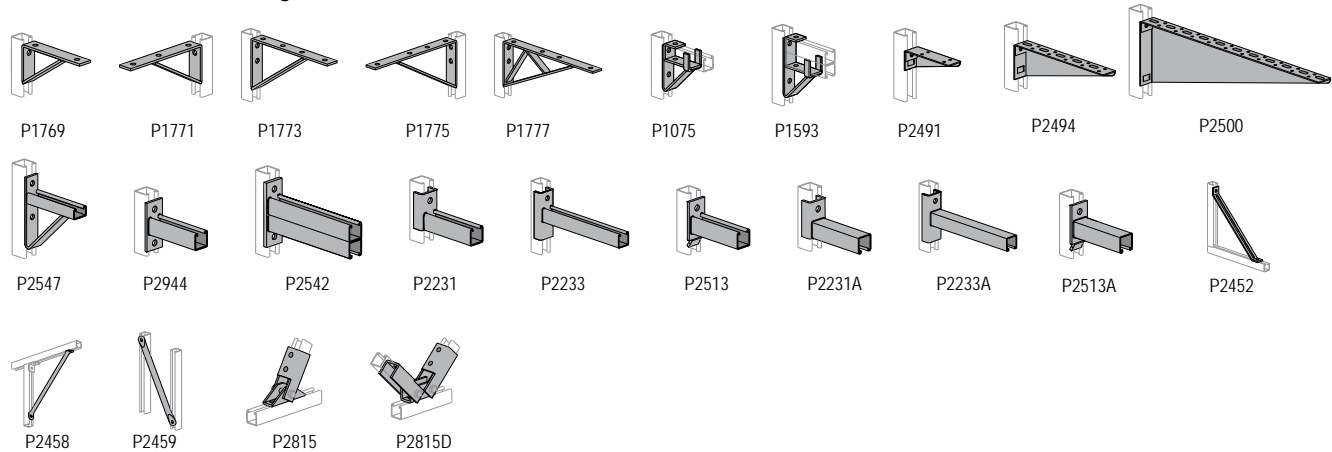
Wing Shape Fittings



Post Bases

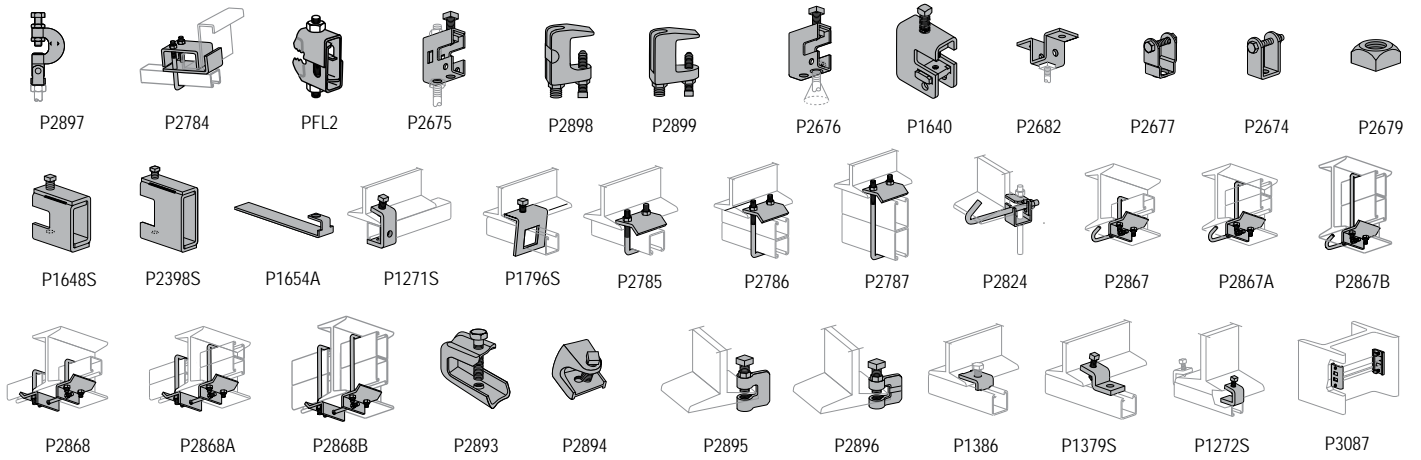


Brackets and Brace Fittings

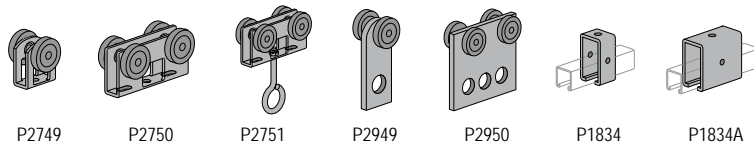


General Fittings Pictorial Index

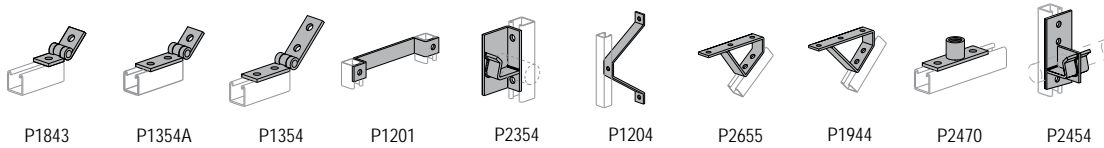
Beam Clamps



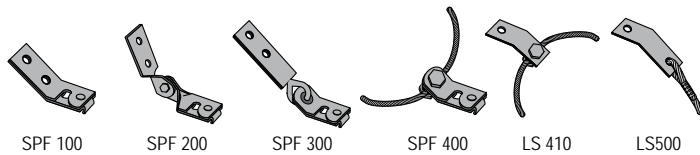
Trolley Assemblies



Special Applications Fittings



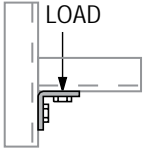
Seismic Retrofit Fittings



Design Load Data

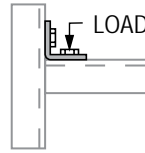
Design Load Data For Typical Channel Connections 90° Fittings (When used in position shown)

Load - P1026



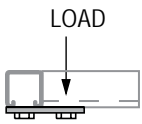
Channel Thickness	Load	
	(lb)	(kN)
12 ga	1,500	6.67
14 ga	1,000	4.45
16 ga	750	3.34

Load - P1026



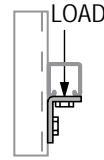
Channel Thickness	Load	
	(lb)	(kN)
12 ga	1,000	4.45
14 ga	650	2.89
16 ga	500	2.22

Load - P1065



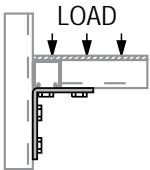
Channel Thickness	Load	
	(lb)	(kN)
12 ga	1,000	4.45
14 ga	800	3.56
16 ga	600	2.67

Load - P1068



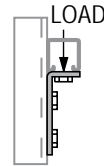
Channel Thickness	Load	
	(lb)	(kN)
12 ga	500	2.22
14 ga	500	2.22
16 ga	500	2.22

Load - P1325, P2235



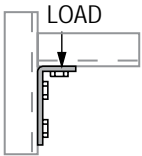
Channel Thickness	Load	
	(lb)	(kN)
12 ga	2,000	8.90
14 ga	2,000	8.90
16 ga	1,500	6.67

Load - P1326



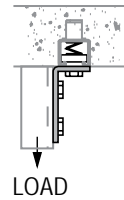
Channel Thickness	Load	
	(lb)	(kN)
12 ga	500	2.22
14 ga	500	2.22
16 ga	500	2.22

Load - P1346



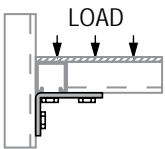
Channel Thickness	Load	
	(lb)	(kN)
12 ga	2,000	8.90
14 ga	1,500	6.67
16 ga	900	4.00

Load - P1346



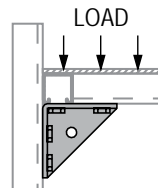
Channel Thickness	Load	
	(lb)	(kN)
12 ga	1,200	5.34
14 ga	1,200	5.34
16 ga	1,000	4.45

Load - P1458, P1579



Channel Thickness	Load	
	(lb)	(kN)
12 ga	1,500	6.67
14 ga	1,000	4.45
16 ga	1,000	4.45

Load - P2484



Channel Thickness	Load	
	(lb)	(kN)
12 ga	3,000	13.34
14 ga	2,000	8.90
16 ga	1,500	6.67

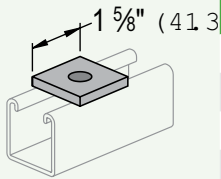
Note:

- (1) Both ends of beams supported.
- (2) Load data is based on P1010 nut and 1/2" bolt.
- (3) Safety factor = 2 1/2 based on ultimate strength of connection.

Flat Plate Fittings

P1062, P1063, P1064, P1964, P2471, P2490 ■

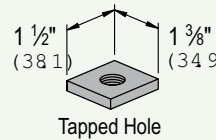
DF, EG, GR, HG



Part Number	Bolt Size (in)	Hole Size (in)	Wt/100 pcs	
			(lb)	(kg)
P1062	5/16	1 1/32	18	8.2
P1063	3/8	7/16	18	8.2
P1064	1/2	9/16	17	7.7
P1964	5/8	1 1/16	16	7.3
P2471	3/4	1 3/16	15	6.8
P2490	7/8	1 5/16	14	6.4

P1959, P1960, P1961 ■

EG, GR, HG

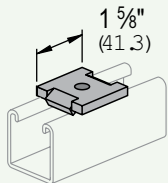


Part Number	US Std. Thread Size	Wt/100 pcs	
		(lb)	(kg)
P1959	3/8-16	21	9.5
P1960	1/2-13	20	9.1
P1961	5/8-11	19	8.6

Material: 3/8" (9.5 mm) thick

P2862, 2863, 2864 ■

DF, EG, GR, HG

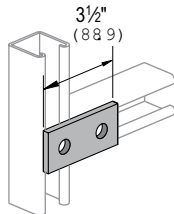


Part Number	Bolt Size (in)	Hole Size (in)	Wt/100 pcs	
			(lb)	(kg)
P2862	5/16	1 1/32	18	8.2
P2863	3/8	7/16	18	8.2
P2864	1/2	9/16	17	7.7

P1065 ■

DF, EG, GR, HG

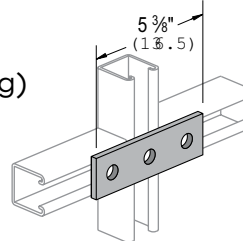
Wt/100 pcs:
38 Lbs (17.2 kg)



P1066 ■

DF, EG, GR, HG

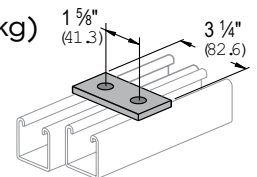
Wt/100 pcs:
56 Lbs (25.4 kg)



P1924 ■

EG, GR, HG

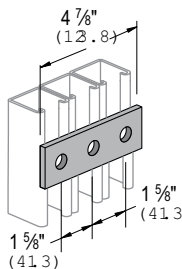
Wt/100 pcs:
35 Lbs (15.9 kg)



P1925 ■

EG, GR, HG

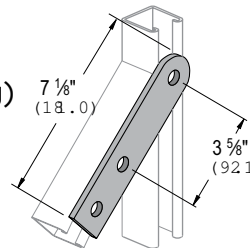
Wt/100 pcs:
50 Lbs (22.7 kg)



P2324 ■

DF, EG, GR, HG

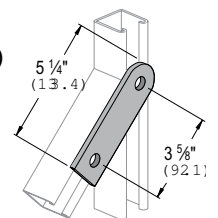
Wt/100 pcs:
75 Lbs (34.0 kg)



P2325 ■

EG, GR, HG

Wt/100 pcs:
55 Lbs (24.9 kg)



Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

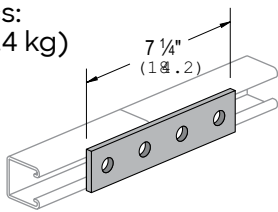
Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 1 3/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

Flat Plate Fittings

P1067

EG, GR, HG

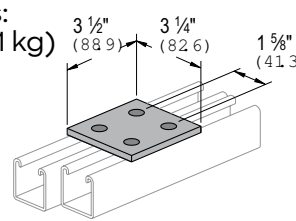
Wt/100 pcs:
78 Lbs (35.4 kg)



P2079

EG, GR, HG

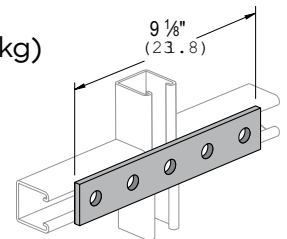
Wt/100 pcs:
73 Lbs (33.1 kg)



P1941

EG, GR, HG

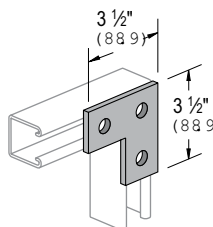
Wt/100 pcs:
94 Lbs (42.6 kg)



P1036

DF, EG, GR, HG

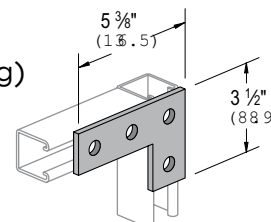
Wt/100 pcs:
58 Lbs (26.3 kg)



P1380 A

DF, EG, GR, HG

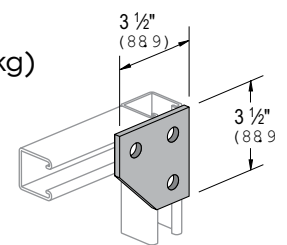
Wt/100 pcs:
80 Lbs (36.3 kg)



P1334

EG, GR, HG

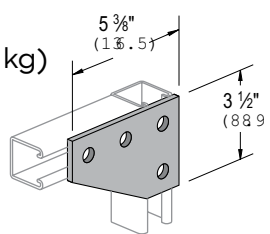
Wt/100 pcs:
70 Lbs (31.8 kg)



P1380

EG, GR, HG

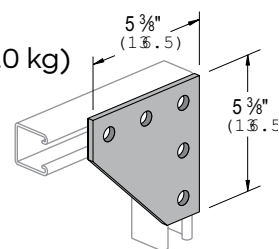
Wt/100 pcs:
105 Lbs (47.6 kg)



P1873

EG, GR, HG

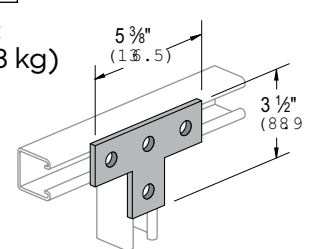
Wt/100 pcs:
150 Lbs (68.0 kg)



P1031

DF, EG, GR, HG

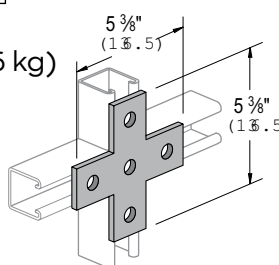
Wt/100 pcs:
80 Lbs (36.3 kg)



P1028

DF, EG, GR, HG

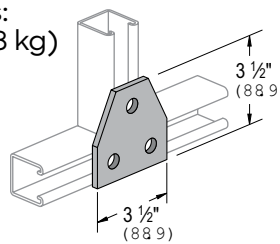
Wt/100 pcs:
105 Lbs (47.6 kg)



P1356

EG, GR, HG

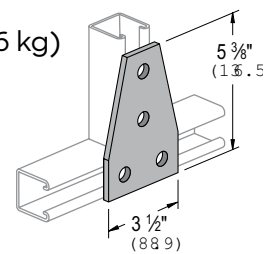
Wt/100 pcs:
70 Lbs (31.8 kg)



P1358

EG, GR, HG

Wt/100 pcs:
105 Lbs (47.6 kg)



Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

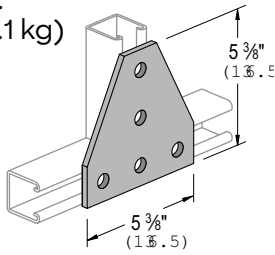
Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 1 3/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

Flat & 90° Angle Fittings

P1726

EG, GR, HG

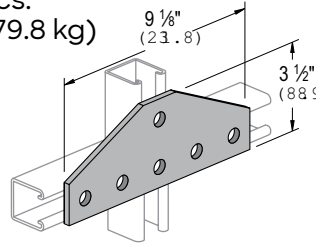
Wt/100 pcs:
148 Lbs (67.1 kg)



P1953

EG, GR, HG

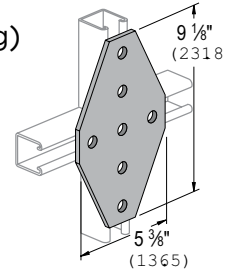
Wt/100 pcs:
176 Lbs (79.8 kg)



P1950

EG, GR, HG

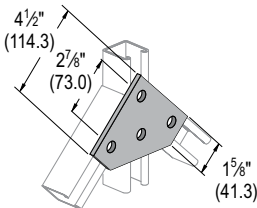
Wt/100 pcs:
240 Lbs (108.9 kg)



P1962

EG, GR, HG

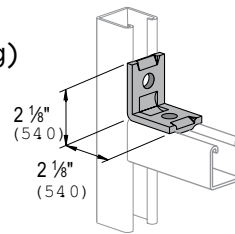
Wt/100 pcs:
112 Lbs (50.8 kg)



P2626

EG, GR, HG

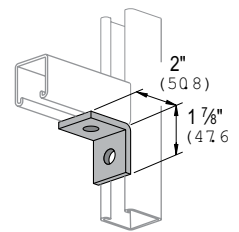
Wt/100 pcs:
40 Lbs (18.1 kg)



P1026

DF, EG, GR, HG

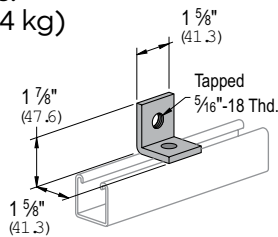
Wt/100 pcs:
38 Lbs (17.2 kg)



P1723

EG, GR, HG

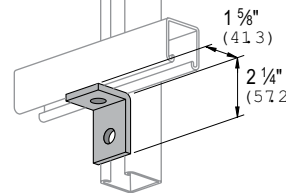
Wt/100 pcs:
34 Lbs (15.4 kg)



P1068

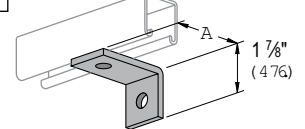
DF, EG, GR, HG

Wt/100 pcs:
38 Lbs (17.2 kg)



P1281, P1282, P1283

EG, GR, HG

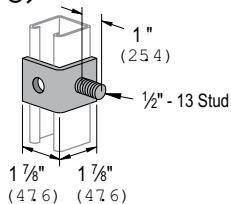


Part Number	"A"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P1281	3	76.2	49	22.2
P1282	3 1/2	88.9	54	24.5
P1283	4	101.6	61	27.7

P1315

EG, GR, HG

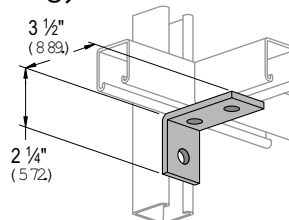
Wt/100 pcs:
45 Lbs (20.4 kg)



P1458

EG, GR, HG

Wt/100 pcs:
58 Lbs (26.3 kg)



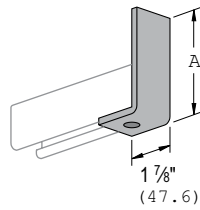
Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

90° Angle Fittings

P1538A thru P1538D

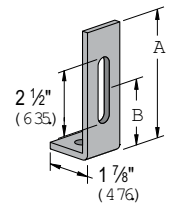
EG, GR, HG



Part Number	"A"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P1538A	3 7/8	98.4	61	27.7
P1538B	5 7/8	149.2	84	38.1
P1538C	7 7/8	200.0	107	48.5
P1538D	9 7/8	250.8	130	59.0

P1498, P1499

DF, EG, GR, HG

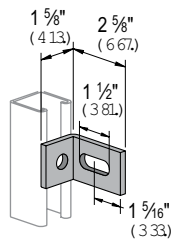


Part Number	"A"		"B"		Wt/100 pcs	
	(in)	(mm)	(in)	(mm)	(lb)	(kg)
P1498	4 7/8	123.8	2 1/2	63.5	65	29.5
P1499	6 7/8	174.6	4 1/2	114.3	85	38.6

P1750

EG, GR, HG

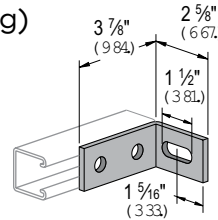
Wt/100 pcs:
38 Lbs (17.2 kg)



P1747

EG, GR, HG

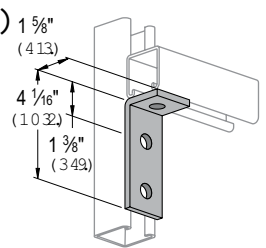
Wt/100 pcs:
66 Lbs (29.9 kg)



P1326

EG, GR, HG

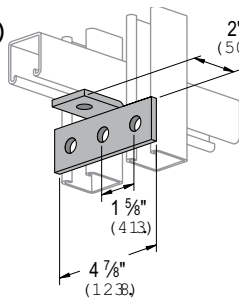
Wt/100 pcs:
58 Lbs (26.3 kg)



P1821

EG, GR, HG

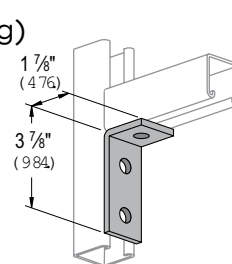
Wt/100 pcs:
71 Lbs (32.2 kg)



P1346

EG, GR, HG

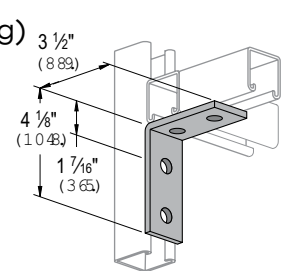
Wt/100 pcs:
58 Lbs (26.3 kg)



P1325

EG, GR, HG

Wt/100 pcs:
78 Lbs (35.4 kg)



Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

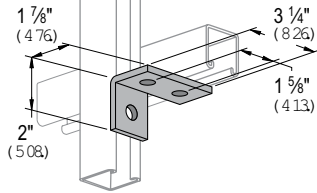
Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 1 3/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

90° Angle Fittings

P1822

EG, GR, HG

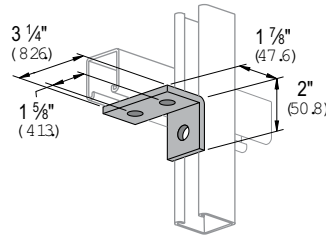
Wt/100 pcs:
55 Lbs (24.9 kg)



P1823

EG, GR, HG

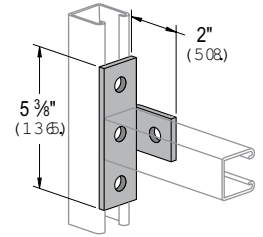
Wt/100 pcs:
55 Lbs (24.9 kg)



P1033

EG, GR, HG

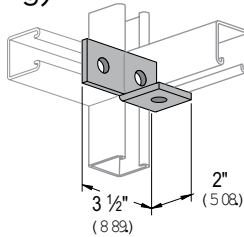
Wt/100 pcs:
80 Lbs (36.3 kg)



P1037

EG, GR, HG

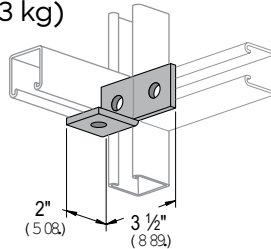
Wt/100 pcs:
58 Lbs (26.3 kg)



P1038

EG, GR, HG

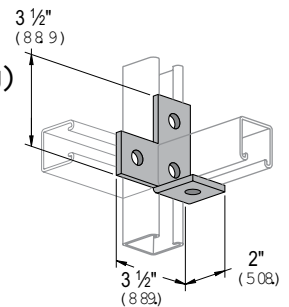
Wt/100 pcs:
58 Lbs (26.3 kg)



P1034

EG, GR, HG

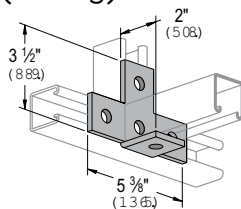
Wt/100 pcs:
80 Lbs (36.3 kg)



P1029

EG, GR, HG

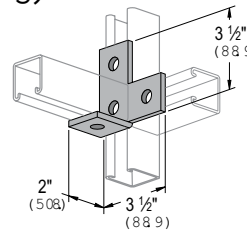
Wt/100 pcs:
105 Lbs (47.6 kg)



P1035

EG, GR, HG

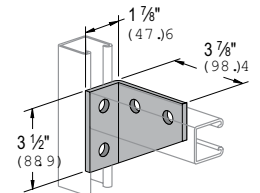
Wt/100 pcs:
80 Lbs (36.3 kg)



P1290

EG, GR, HG

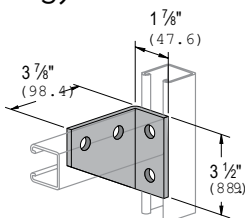
Wt/100 pcs:
101 Lbs (45.8 kg)



P1291

EG, GR, HG

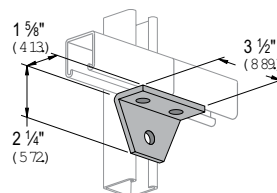
Wt/100 pcs:
101 Lbs (45.8 kg)



P1357

EG, GR, HG

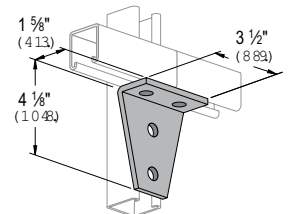
Wt/100 pcs:
70 Lbs (31.8 kg)



P1359

EG, GR, HG

Wt/100 pcs:
105 Lbs (47.6 kg)



Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

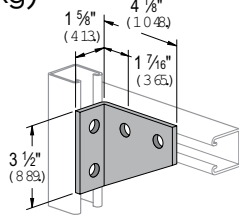
Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

90° Angle Fittings

P1381

EG, GR, HG

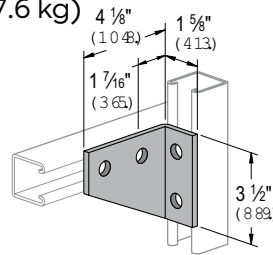
Wt/100 pcs:
105 Lbs (47.6 kg)



P1382

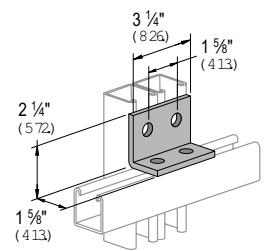
EG, GR, HG

Wt/100 pcs:
105 Lbs (47.6 kg)



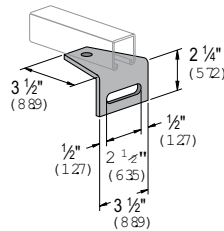
P1934

Wt/100 pcs:
75 Lbs (34.0 kg)



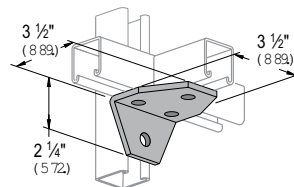
P1713

Wt/100 pcs:
97 Lbs (44.0 kg)



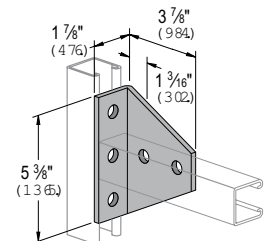
P1579

Wt/100 pcs:
103 Lbs (46.7 kg)



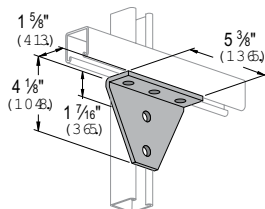
P1727

Wt/100 pcs:
154 Lbs (69.9 kg)



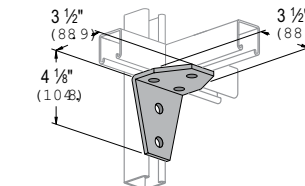
P1728

Wt/100 pcs:
154 Lbs (69.9 kg)



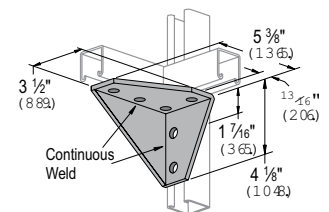
P2235

Wt/100 pcs:
135 Lbs (61.2 kg)



P1956

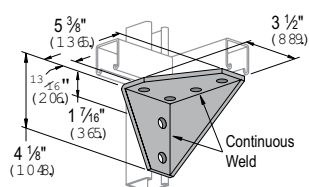
Wt/100 pcs:
230 Lbs (104.3 kg)



P1957

EG, GR, HG

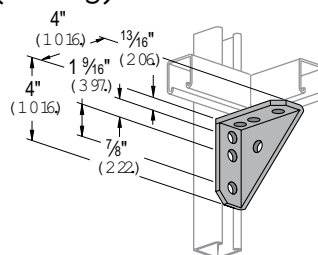
Wt/100 pcs:
230 Lbs (104.3 kg)



P2484

DF, EG, GR, HG

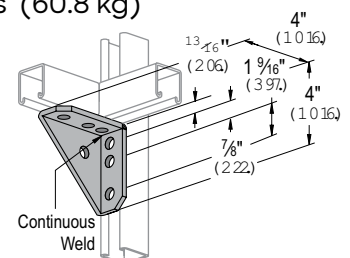
Wt/100 pcs:
134 Lbs (60.8 kg)



P2484W

EG, GR, HG

Wt/100 pcs:
134 Lbs (60.8 kg)



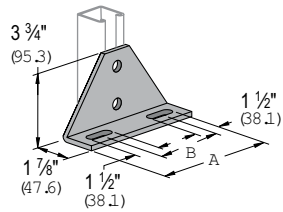
Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

90° Angle & Angular Fittings

P1130, P1131

EG, GR, HG

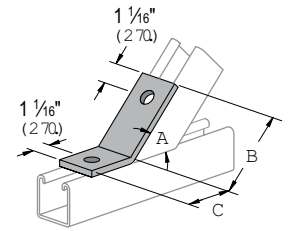


Part Number	"A"		"B"		Wt/100 pcs	
	(in)	(mm)	(in)	(mm)	(lb)	(kg)
P1130	6 ⁵ / ₈	168.3	4	101.6	190	86.2
P1131	8 ⁵ / ₈	219.1	6	152.4	242	109.8

P1546, P2094 thru P2100

DF, EG, GR, HG

Wt/100 pcs:
58 Lbs (26.3 kg)

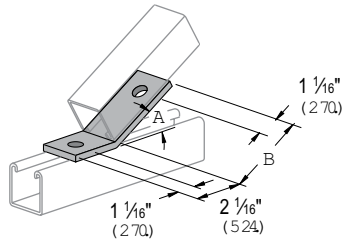


Part Number	"A"		"B"		"C"	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
P2094	82 ¹ / ₂ °	1.44	3 ⁹ / ₁₆	90.5	1 ¹ / ₁₆	42.9
P2095	75°	1.31	3 ⁹ / ₁₆	90.5	1 ¹ / ₁₆	42.9
P2096	67 ¹ / ₂ °	1.18	3 ¹ / ₂	88.9	1 ³ / ₄	44.5
P2097	60°	1.05	3 ³ / ₈	85.7	1 ¹ / ₈	47.6
P2098	52 ¹ / ₂ °	0.92	3 ¹ / ₄	82.6	2 ¹ / ₁₆	52.4
P1546	45°	0.79	3	76.2	2 ⁵ / ₁₆	58.7
P2099	37 ¹ / ₂ °	0.65	3 ¹ / ₂	88.9	1 ¹³ / ₁₆	46.0
P2100	37 ¹ / ₂ °	0.65	2 ¹ / ₁₆	68.3	2 ⁵ / ₈	66.7

P2101 thru P2104

EG, GR, HG

Wt/100 pcs:
58 Lbs (26.3 kg)

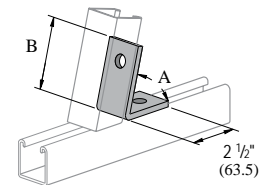


Part Number	"A"		"B"	
	Degree	Radius	(in)	(mm)
P2101	30°	0.52	3 ¹ / ₄	82.6
P2102	22 ¹ / ₂ °	0.39	3 ⁵ / ₁₆	84.1
P2103	15°	0.26	3 ⁵ / ₁₆	84.1
P2104	7 ¹ / ₂ °	0.13	3 ⁵ / ₁₆	84.1

P1186, P2105 thru P2110

DF, EG, GR, HG

Wt/100 pcs:
58 Lbs (26.3 kg)



Part Number	"A"		"B"	
	Degree	Radius	(in)	(mm)
P2105	82 ¹ / ₂ °	1.44	3 ¹ / ₄	82.6
P2106	75°	1.31	3 ¹ / ₄	82.6
P2107	67 ¹ / ₂ °	1.18	3 ³ / ₁₆	81.0
P2108	60°	1.05	3 ³ / ₁₆	81.0
P2109	52 ¹ / ₂ °	0.92	3 ¹ / ₈	79.4
P1186	45°	0.79	3 ¹ / ₈	79.4
P2110	37 ¹ / ₂ °	0.65	3 ¹ / ₁₆	77.8

Standard Dimensions for 1⁵/₈" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

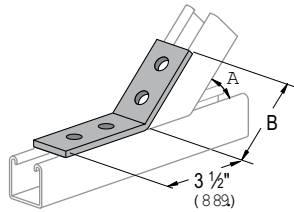
Hole Diameter: ⁹/₁₆" (14.3mm); Hole Spacing - From End: ¹³/₁₆" (20.6mm); Hole Spacing - On Center: 1⁷/₈" (47.6mm); Width: 1⁵/₈" (41.3mm); Thickness: ¹/₄" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

Angular & "Z" Shape Fittings

P2260 thru P2270

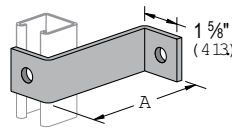
DF, EG, GR, HG

Wt/100 pcs:
78 Lbs (35.4 kg)



Part Number	"A"		"B"	
	Degree	Radius	(in)	(mm)
P2270	82½°	1.44	3⅝	92.1
P2269	75°	1.31	3⅝	92.1
P2268	67½°	1.18	3⅝	92.1
P2267	60°	1.05	3⅞	93.7
P2266	52½°	0.92	3⅞	93.7
P2265	45°	0.79	3⅞	93.7
P2264	37½°	0.65	3⅞	93.7
P2263	30°	0.52	3⅞	93.7
P2262	22½°	0.39	3¾	95.3
P2261	15°	0.26	3¾	95.3
P2260	7½°	0.13	3¾	95.3

P1479A thru P1479E

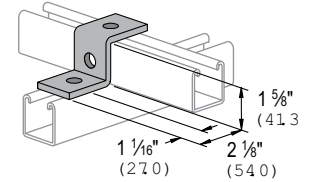


Part Number	"A"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P1479A	4	101.6	81	36.7
P1479B	5	127.0	92	41.7
P1479C	6	152.4	104	47.2
P1479D	7	177.8	115	52.2
P1479E	8	203.2	127	57.6

P1045

DF, EG, GR, HG

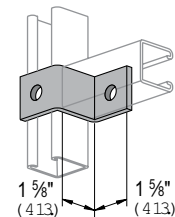
Wt/100 pcs:
55 Lbs (24.9 kg)



P1347

EG, GR, HG

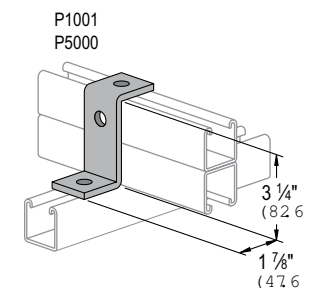
Wt/100 pcs:
55 Lbs (24.9 kg)



P1453

EG, GR, HG

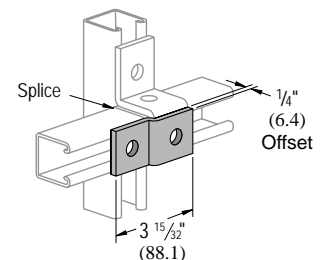
Wt/100 pcs:
70 Lbs (31.8 kg)



P1454

EG, GR, HG

Wt/100 pcs:
38 Lbs (17.2 kg)



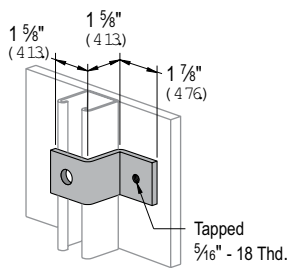
Standard Dimensions for 1½" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

"Z" Shape Fittings

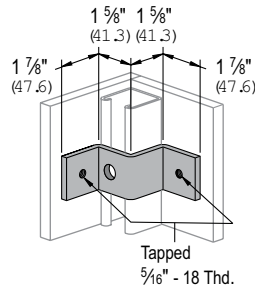
P1730

Wt/100 pcs:
54 Lbs (24.5 kg)



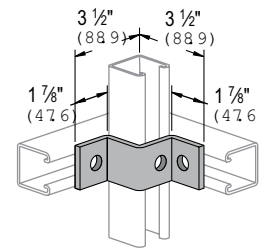
P1734

Wt/100 pcs:
70 Lbs (31.8 kg)



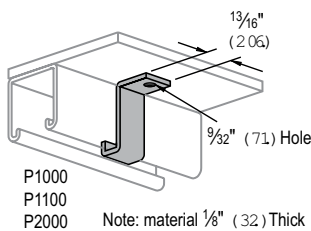
P1736

Wt/100 pcs:
70 Lbs (31.8 kg)



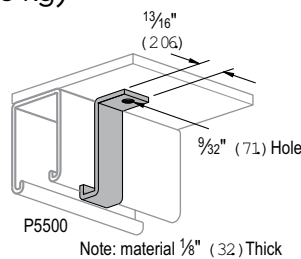
P2360

Wt/100 pcs:
9 Lbs (4.1 kg)



P5560

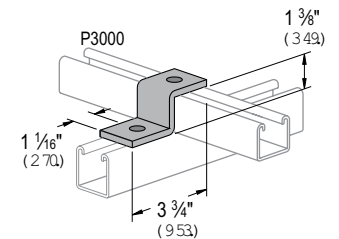
Wt/100 pcs:
11 Lbs (5.0 kg)



P3045

EG, GR, HG

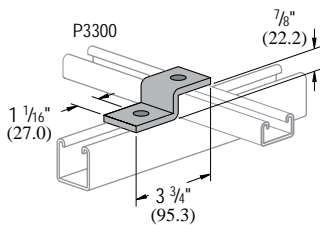
Wt/100 pcs:
53 Lbs (24.0 kg)



P3345

EG, GR, HG

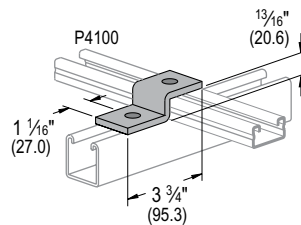
Wt/100 pcs:
47 Lbs (21.3 kg)



P4045

EG, GR, HG

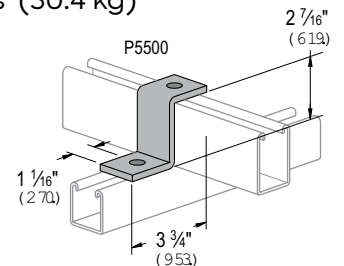
Wt/100 pcs:
47 Lbs (21.3 kg)



P5545

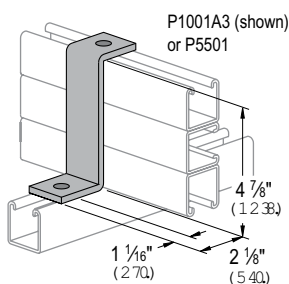
EG, GR, HG

Wt/100 pcs:
67 Lbs (30.4 kg)



P2469

Wt/100 pcs:
93 Lbs (42.2 kg)



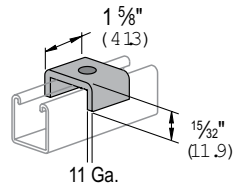
Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 1 3/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

"U" Shape Fittings

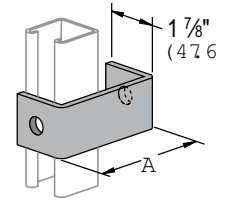
P2800

EG, GR, HG



Part Number	Bolt Size (in)	Hole Size (in)	Wt/100 pcs	
			(lb)	(kg)
P2800-25	1/4	9/32	14	6.4
P2800-37	3/8	7/16	14	6.4
P2800-50	1/2	9/16	13	5.9
P2800-62	5/8	1 1/16	13	5.9
P2800-75	3/4	1 3/16	13	5.9

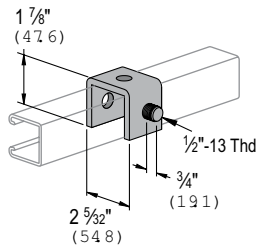
P1363A thru P1363E



Part Number	"A"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P1363A	4	101.6	78	35.4
P1363B	5	127.0	89	40.4
P1363C	6	152.4	101	45.8
P1363D	7	177.8	112	50.8
P1363E	8	203.2	124	56.2

P1320

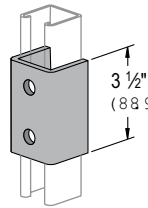
Wt/100 pcs:
63 Lbs (28.6 kg)



P1376

EG, GR, HG

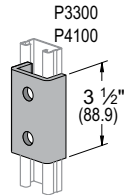
Wt/100 pcs:
128 Lbs (58.1 kg)



P4376

EG, GR, HG

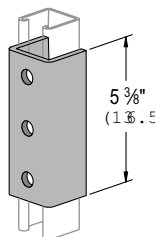
Wt/100 pcs:
85 Lbs (38.6 kg)



P1376A

EG, GR, HG

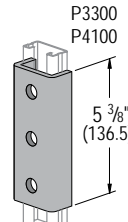
Wt/100 pcs:
197 Lbs (89.4 kg)



P4376A

EG, GR, HG

Wt/100 pcs:
130 Lbs (59.0 kg)



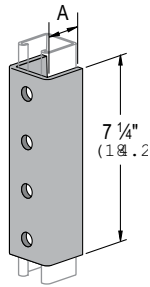
Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 1 3/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

"U" Shape Fittings

P1377, P4377, P5077, P5577

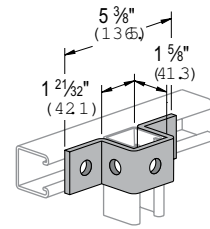
EG, GR, HG



P1047

DF, EG, GR, HG

Wt/100 pcs:
88 Lbs (39.9 kg)

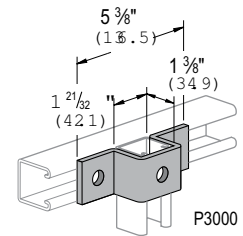


Part Number	For Use With	"A"		Wt/100 pcs	
		(in)	(mm)	(lb)	(kg)
P1377	P1000, P1100	1 9/16	39.7	265	120
P4377	P3300, P4100	1 5/16	23.8	176	80
P5077	P5000	3 3/16	81.0	390	177
P5577	P5500	2 3/8	60.3	310	141

P3047

EG, GR, HG

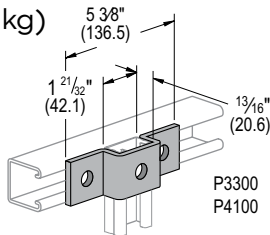
Wt/100 pcs:
84 Lbs (38.1 kg)



P4047

EG, GR, HG

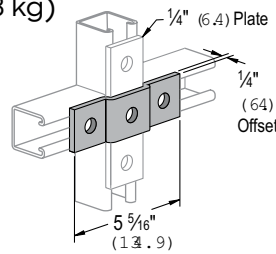
Wt/100 pcs:
71 Lbs (32.2 kg)



P1455

EG, GR, HG

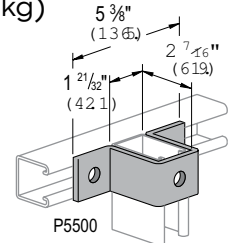
Wt/100 pcs:
58 Lbs (26.3 kg)



P5547

EG, GR, HG

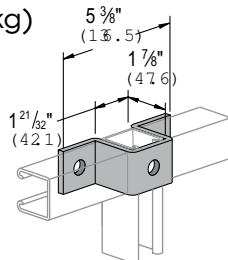
Wt/100 pcs:
108 Lbs (49.0 kg)



P1383

EG, GR, HG

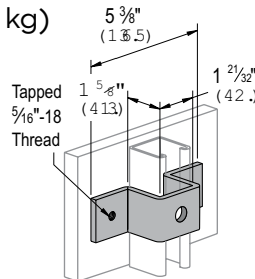
Wt/100 pcs:
95 Lbs (43.1 kg)



P1732

EG, GR, HG

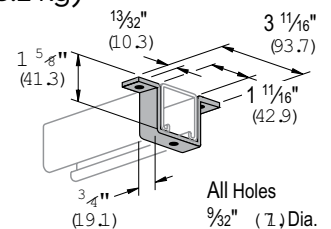
Wt/100 pcs:
88 Lbs (39.9 kg)



P2237

EG, GR, HG

Wt/100 pcs:
18 Lbs (8.2 kg)



Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

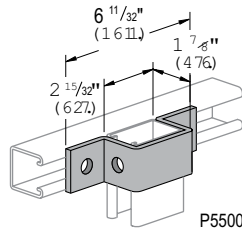
Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 1 3/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

"U" Shape Fittings

P5543

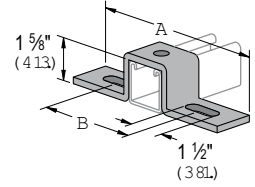
EG, GR, HG

Wt/100 pcs:
97 Lbs (44.0 kg)



P1048, P1049, P1050

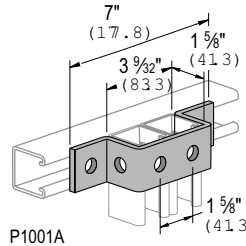
DF, EG, GR, HG



P1043A

EG, GR, HG

Wt/100 pcs:
105 Lbs (47.6 kg)

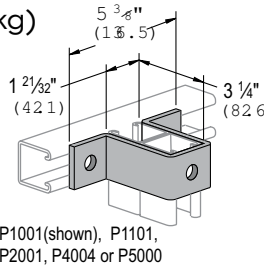


Part Number	"A"		"B"		Wt/100 pcs	
	(in)	(mm)	(in)	(mm)	(lb)	(kg)
P1048	7/4	184.2	4/8	104.8	105	47.6
P1049	8 1/2	215.9	5 3/8	136.5	120	54.4
P1050	10 3/8	263.5	7 1/4	184.2	130	59.0

P1737

EG, GR, HG

Wt/100 pcs:
128 Lbs (58.1 kg)

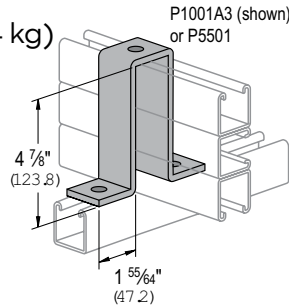


P1001 (shown), P1101, P2001, P4004 or P5000

P2473

EG, GR, HG

Wt/100 pcs:
197 Lbs (89.4 kg)

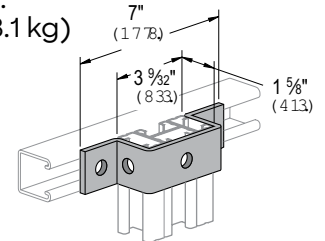


P1001A3 (shown) or P5501

P4043

EG, GR, HG

Wt/100 pcs:
106 Lbs (48.1 kg)

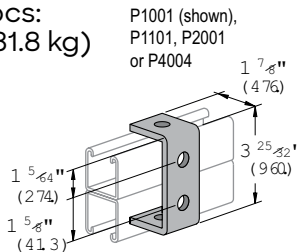


P4004 (shown), P1001, P1101, P2001, or P5000

P1044

EG, GR, HG

Wt/100 pcs:
70 Lbs (31.8 kg)

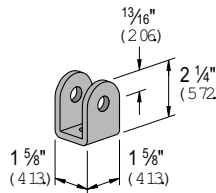


P1001 (shown), P1101, P2001 or P4004

P1973

EG, GR, HG

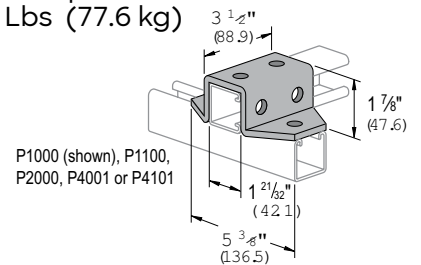
Wt/100 pcs:
53 Lbs (24.0 kg)



P2326

EG, GR, HG

Wt/100 pcs:
171 Lbs (77.6 kg)



P1000 (shown), P1100, P2000, P4001 or P4101

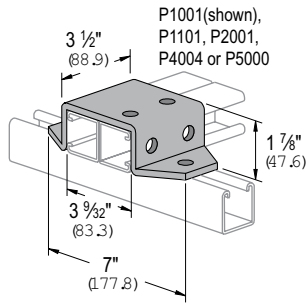
Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

"U" & Wing Shape Fittings

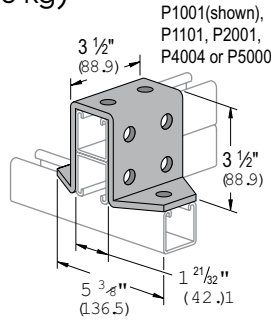
P2328

Wt/100 pcs:
209 Lbs (94.8 kg)



P2329

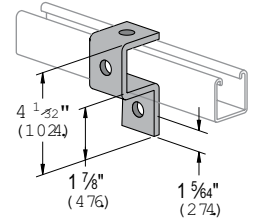
Wt/100 pcs:
257 Lbs (116.6 kg)



P1046A

EG, GR, HG

Wt/100 pcs:
76 Lbs (34.5 kg)

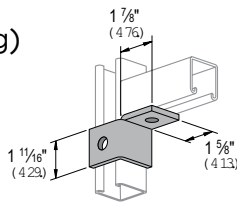


P2341 R-L

EG, GR, HG

Wt/100 pcs:
60 Lbs (27.2 kg)

R - As shown
L - Opposite hand

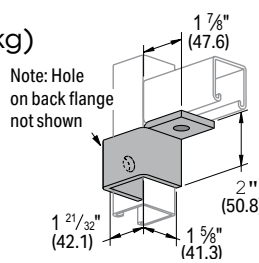


P2472 R-L

EG, GR, HG

Wt/100 pcs:
75 Lbs (34.0 kg)

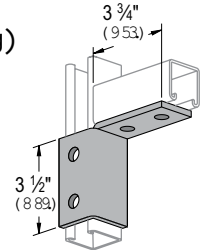
R - As shown
L - Opposite hand



P2343 R-L

Wt/100 pcs:
119 Lbs (54.0 kg)

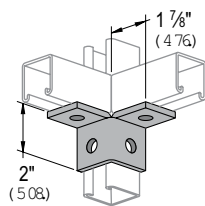
R - As shown
L - Opposite hand



P2223

EG, GR, HG

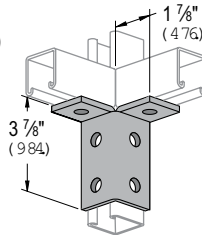
Wt/100 pcs:
76 Lbs (34.5 kg)



P2224

EG, GR, HG

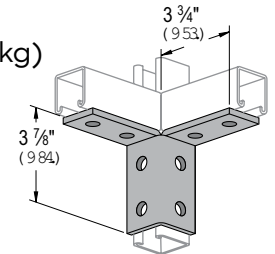
Wt/100 pcs:
115 Lbs (52.2 kg)



P2225

EG, GR, HG

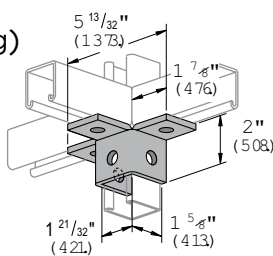
Wt/100 pcs:
155 Lbs (70.3 kg)



P2227

EG, GR, HG

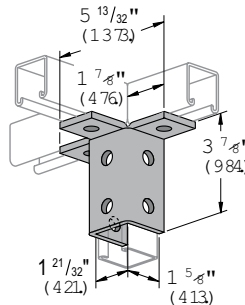
Wt/100 pcs:
113 Lbs (51.3 kg)



P2228

EG, GR, HG

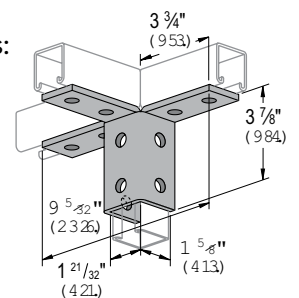
Wt/100 pcs:
177 Lbs (80.3 kg)



P2229

EG, GR, HG

Wt/100 pcs:
230 Lbs (104.3 kg)



Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

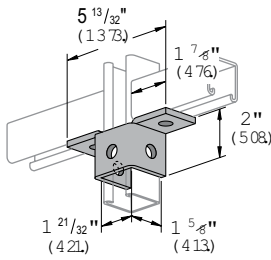
Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

Wing Shape Fittings

P2345

EG, GR, HG

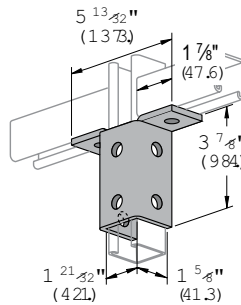
Wt/100 pcs:
93 Lbs
(42.2 kg)



P2346

EG, GR, HG

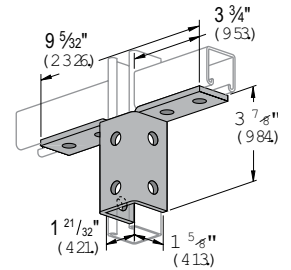
Wt/100 pcs:
150 Lbs
(68.0 kg)



P2347

EG, GR, HG

Wt/100 pcs:
193 Lbs
(87.5 kg)

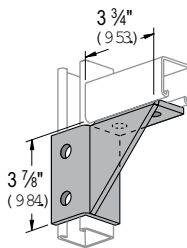


P2344 R-L

EG, GR, HG

Wt/100 pcs:
176 Lbs (79.8 kg)

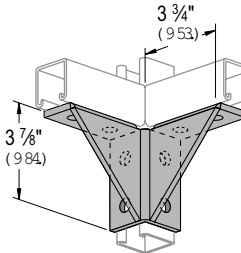
R - As shown
L - Opposite hand



P2226

EG, GR, HG

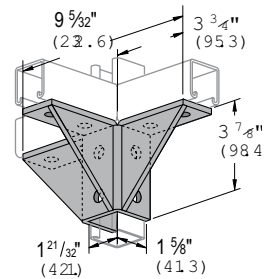
Wt/100 pcs:
217 Lbs
(98.4 kg)



P2230

EG, GR, HG

Wt/100 pcs:
310 Lbs
(140.6 kg)

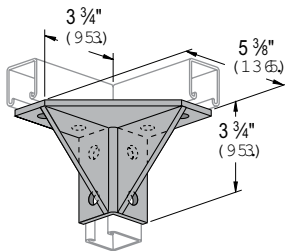


P2245

EG, GR, HG

Wt/100 pcs:
315 Lbs (142.9 kg)

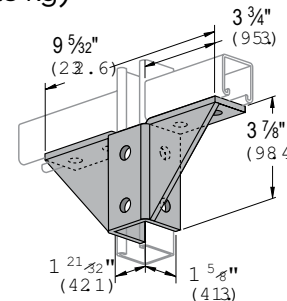
Fitting notched for continuous vertical.



P2348

EG, GR, HG

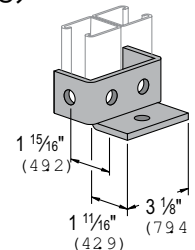
Wt/100 pcs:
274 Lbs (124.3 kg)



P2453

EG, GR, HG

Wt/100 pcs:
116 Lbs (52.6 kg)



Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

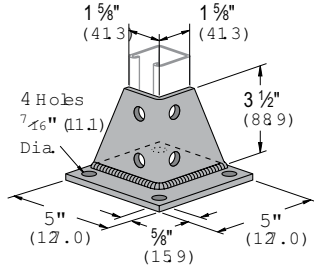
Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

Post Bases

P1887

EG, GR, HG

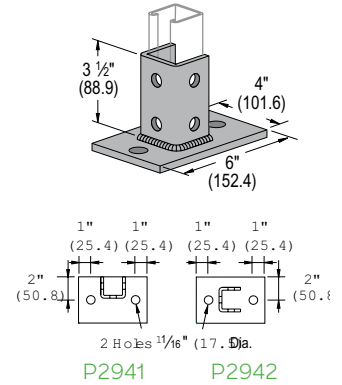
Wt/100 pcs:
297 Lbs (134.8 kg)



P2941, P2942

EG, GR, HG

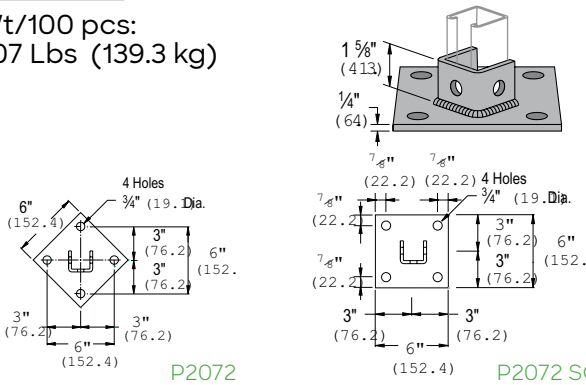
Wt/100 pcs:
358 Lbs (162.4 kg)



P2072, P2072 SQ

EG, GR, HG

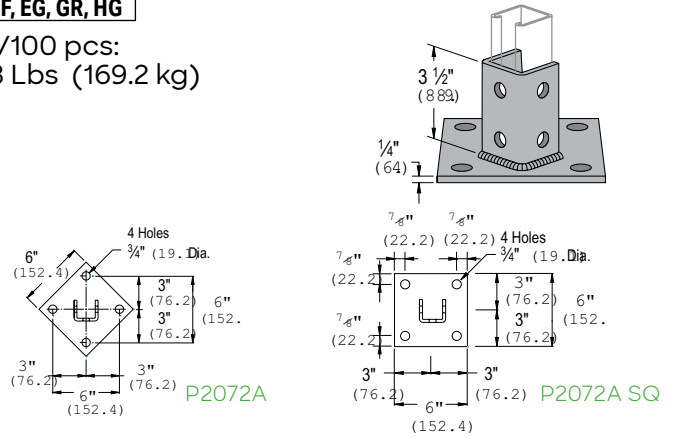
Wt/100 pcs:
307 Lbs (139.3 kg)



P2072A, P2072A SQ

DF, EG, GR, HG

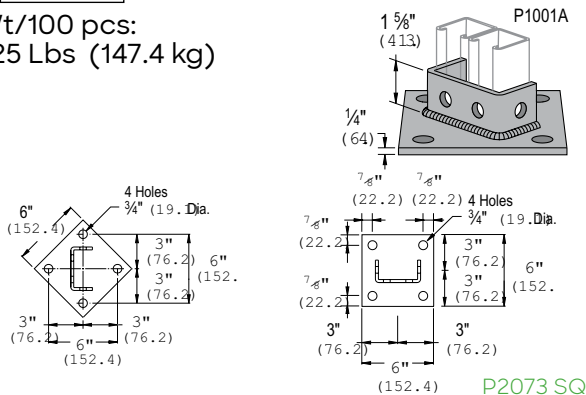
Wt/100 pcs:
373 Lbs (169.2 kg)



P2073, P2073 SQ

EG, GR, HG

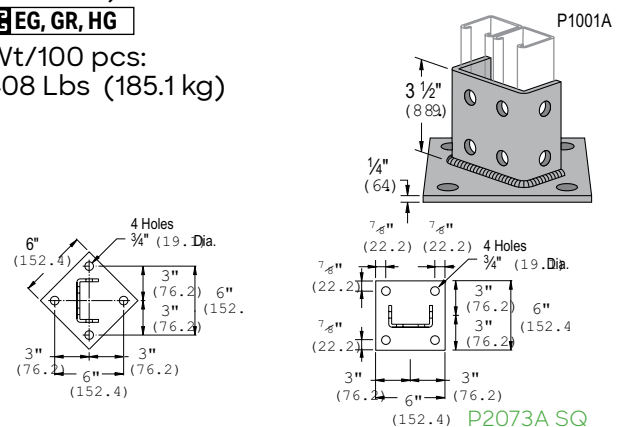
Wt/100 pcs:
325 Lbs (147.4 kg)



P2073A, P2073A SQ

EG, GR, HG

Wt/100 pcs:
408 Lbs (185.1 kg)



Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

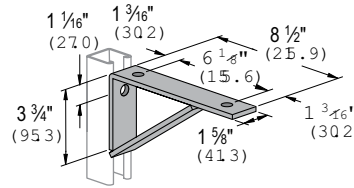
Brackets

P1769

EG, GR

Wt/100 pcs:
174 Lbs (78.9 kg)

- Material: $\frac{1}{4}$ " (6.4) thick steel



Vertical Channel		Uniform Design Load	
Part Number	Gauge	(lb)	(kN)
P1000	12	800	3.56
P1100	14	600	2.67

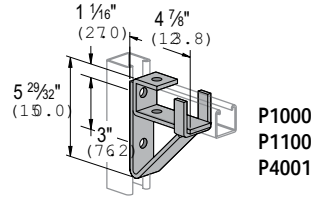
Safety Factor $2\frac{1}{2}$

P1773

EG, GR

Wt/100 pcs:
264 Lbs (119.7 kg)

- Material: $\frac{1}{4}$ " (6.4) thick steel



Vertical Channel		Uniform Design Load	
Part Number	Gauge	(lb)	(kN)
P1000	12	900	4.00
P1100	14	800	3.56

Safety Factor $2\frac{1}{2}$

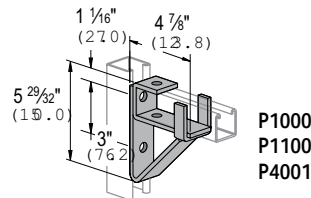
* Allowable moment for fitting only.
Channel may determine overall capacity.

P1075

EG, GR

Wt/100 pcs:
229 Lbs (103.9 kg)

- Material: $\frac{1}{4}$ " (6.4) thick steel



Vertical Channel		Uniform Design Load	
Part Number	Gauge	(lb)	(kN)
P1000	12	5,100	576
P1100	14	4,400	497

Safety Factor $2\frac{1}{2}$

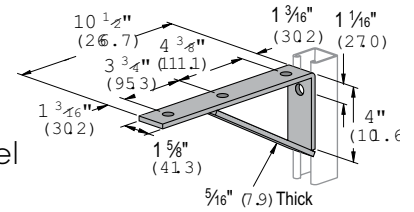
* Allowable moment for fitting only.
Channel may determine overall capacity.

P1771

EG, GR

Wt/100 pcs:
206 Lbs (93.4 kg)

- Material: $\frac{1}{4}$ " (6.4) thick steel



Vertical Channel		Uniform Design Load	
Part Number	Gauge	(lb)	(kN)
P1000	12	800	3.56
P1100	14	600	2.67

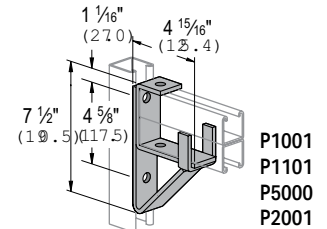
Safety Factor $2\frac{1}{2}$

P1775

EG, GR

Wt/100 pcs:
295 Lbs (133.8 kg)

- Material: $\frac{1}{4}$ " (6.4) thick steel



Vertical Channel		Uniform Design Load	
Part Number	Gauge	(lb)	(kN)
P1000	12	900	4.00
P1100	14	800	3.56

Safety Factor $2\frac{1}{2}$

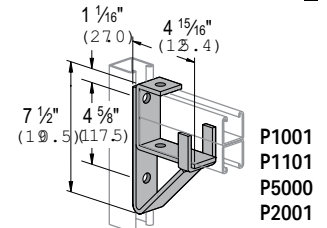
* Allowable moment for fitting only.
Channel may determine overall capacity.

P1593

EG, GR

Wt/100 pcs:
272 Lbs (123.4 kg)

- Material: $\frac{1}{4}$ " (6.4) thick steel



Vertical Channel		Uniform Design Load	
Part Number	Gauge	(lb)	(kN)
P1000	12	13,000	1,469
P1100	14	9,100	1,028

Safety Factor $2\frac{1}{2}$

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

Standard Dimensions for $1\frac{1}{8}$ " (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: $\frac{9}{16}$ " (14.3mm); Hole Spacing - From End: $\frac{13}{16}$ " (20.6mm); Hole Spacing - On Center: $1\frac{7}{8}$ " (47.6mm); Width: $1\frac{5}{8}$ " (41.3mm); Thickness: $\frac{1}{4}$ " (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

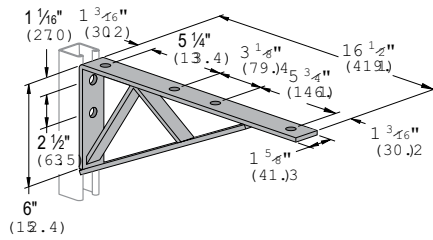
Brackets

P1777

EG, GR

Wt/100 pcs:
385 Lbs (174.6 kg)

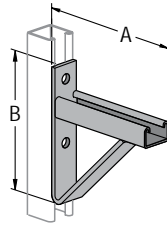
- Material: $\frac{1}{4}$ " (6.4) thick steel



Part Number	Gauge	Uniform Design Load	
		(lb)	(kN)
P1000	12	1,200	5.44
P1100	14	900	4.00

Safety Factor $2\frac{1}{2}$

P2547 thru P2551 - Cable Tray Bracket

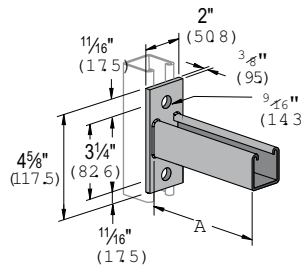


Part Number	"A"		"B"		Wt/100 pcs		Uniform Load*	
	(in)	(mm)	(in)	(mm)	(lb)	(kg)	(lb)	(kN)
P2547	15	381.0	$8\frac{3}{4}$	222	420	190.5	1,000	4.45
P2548	21	533.4	$8\frac{3}{4}$	222	628	284.9	1,000	4.45
P2549	27	685.8	$11\frac{1}{4}$	286	860	390.1	900	4.00
P2550	33	838.2	$11\frac{1}{4}$	286	1,010	458.1	900	4.00
P2551	39	990.6	16	406.4	1,257	683.3	800	3.56

P2944, P2945, P2946, P2947

EG, GR, HG

- Material:
12 Gauge Steel.



Part Number	"A"		Wt/100 pcs		Uniform Load*	
	(in)	(mm)	(lb)	(kg)	(lb)	(kN)
P2944	6	152.4	185	84	1200	5.34
P2945	12	304.8	293	133	600	2.67
P2946	18	457.2	401	182	400	1.78
P2947	24	609.6	509	231	300	1.33

Safety Factor $2\frac{1}{2}$

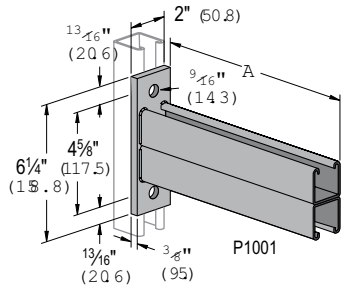
Standard Dimensions for $1\frac{1}{8}$ " (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: $\frac{9}{16}$ " (14.3mm); Hole Spacing - From End: $\frac{13}{16}$ " (20.6mm); Hole Spacing - On Center: $1\frac{7}{8}$ " (47.6mm); Width: $1\frac{1}{8}$ " (41.3mm); Thickness: $\frac{1}{4}$ " (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

Brackets

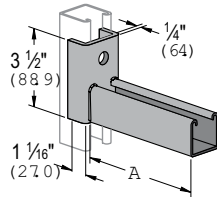
P2542 thru P2546

EG, GR, HG



Part Number	"A"		Wt/100 pcs		Vertical Channel		Uniform Design Load	
	(in)	(mm)	(lb)	(kg)	Part Number	Gauge	(lb)	(kN)
P2542	12	304.8	502	228	P1000	12	2,000	8.90
					P1100	14	1,400	6.23
					P1100	16	1,000	4.45
P2543	18	457.2	692	314	P1000	12	1,300	5.78
					P1100	14	900	4.00
					P1100	16	650	2.89
P2544	24	609.6	882	400	P1000	12	1,000	4.45
					P1100	14	700	3.11
					P1100	16	500	2.22
P2545	30	762.0	1,072	486	P1000	12	800	3.56
					P1100	14	560	2.49
					P1100	16	400	1.78
P2546	36	914.4	1,262	572	P1000	12	650	2.89
					P1100	14	450	2.00
					P1100	16	320	1.42

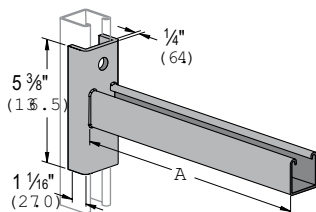
P2231, P2232



Part Number	"A"		Wt/100 pcs		Vertical Channel		Uniform Design Load	
	(in)	(mm)	(lb)	(kg)	Part Number	Gauge	(lb)	(kN)
P2231	6	152.4	191	86.6	P1000	12	600	7.12
					P1100	14	450	5.34
					P1100	16	300	3.56
P2232	12	304.8	292	132.4	P1000	12	450	3.56
					P1100	14	330	2.67
					P1100	16	220	1.78

Safety Factor - 2 1/2

P2233, P2234



Part Number	"A"		Wt/100 pcs		Vertical Channel		Uniform Design Load	
	(in)	(mm)	(lb)	(kg)	Part Number	Gauge	(lb)	(kN)
P2233	18	457.2	436	197.8	P1000	12	600	7.12
					P1100	14	450	5.34
					P1100	16	300	3.56
P2234	24	609.6	536	243.1	P1000	12	450	3.56
					P1100	14	330	2.67
					P1100	16	220	1.78

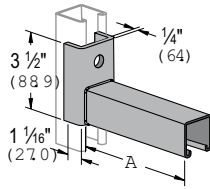
Safety Factor - 2 1/2

Standard Dimensions for 1 1/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

Brackets

P2231A, P2232A

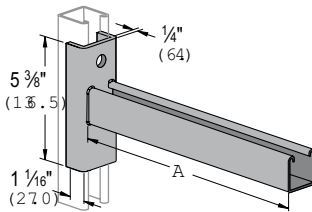


Part Number	"A"		Wt/100 pcs		Vertical Channel		Uniform Design Load	
	(in)	(mm)	(lb)	(kg)	Part Number	Gauge	(lb)	(kN)
P2231A	6	152.4	191	86.6	P1000	12	1,600	7.12
					P1100	14	1,200	5.34
					P1100	16	800	3.56
P2232A	12	304.8	292	132.4	P1000	12	800	3.56
					P1100	14	600	2.67
					P1100	16	400	1.78

Safety Factor - 2 1/2

P2233A, P2234A

GR, HG

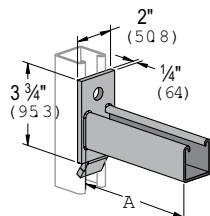


Part Number	"A"		Wt/100 pcs		Vertical Channel		Uniform Design Load	
	(in)	(mm)	(lb)	(kg)	Part Number	Gauge	(lb)	(kN)
P2233A	18	457.2	436	197.8	P1000	12	600	7.12
					P1100	14	450	5.34
					P1100	16	300	3.56
P2234A	24	609.6	536	243.1	P1000	12	450	3.56
					P1100	14	330	2.67
					P1100	16	220	1.78

Safety Factor - 2 1/2

P2513 thru P2516

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



Part Number	"A"		Wt/100 pcs		Vertical Channel		Uniform Design Load	
	(in)	(mm)	(lb)	(kg)	Part Number	Gauge	(lb)	(kN)
P2513	6	152.4	161	73.0	P1000	12	1,200	5.34
					P1100	14	800	3.56
					P1100	16	600	2.67
P2514	12	304.8	261	118.4	P1000	12	600	2.67
					P1100	14	400	1.78
					P1100	16	300	1.33
P2515	18	457.2	361	163.7	P1000	12	400	1.78
					P1100	14	270	1.20
					P1100	16	200	0.89
P2516	24	609.6	461	209.1	P1000	12	300	1.33
					P1100	14	200	0.89
					P1100	16	150	0.67

Safety Factor - 2 1/2

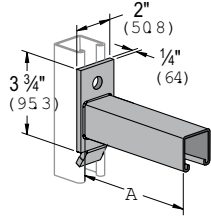
Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

Brackets & Brace Fittings

P2513A thru P2516A

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



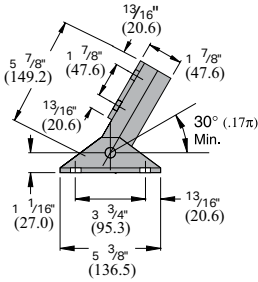
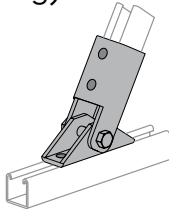
Part Number	"A"		Wt/100 pcs		Vertical Channel		Uniform Design Load	
	(in)	(mm)	(lb)	(kg)	Part Number	Gauge	(lb)	(kN)
P2513A	6	152.4	161	73.0	P1000	12	1,200	5.34
					P1100	14	800	3.56
					P1100	16	600	2.67
P2514A	12	304.8	261	118.4	P1000	12	600	2.67
					P1100	14	400	1.78
					P1100	16	300	1.33
P2515A	18	457.2	361	163.7	P1000	12	400	1.78
					P1100	14	270	1.20
					P1100	16	200	0.89
P2516A	24	609.6	461	209.1	P1000	12	300	1.33
					P1100	14	200	0.89
					P1100	16	150	0.67

Safety Factor - 2 1/2

P2815 - Adjustable Brace Fitting

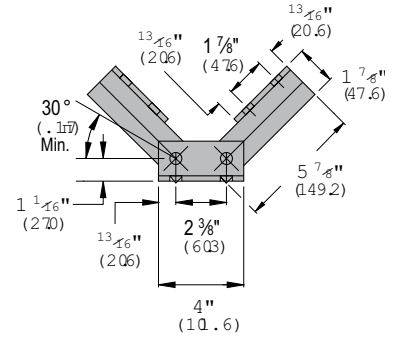
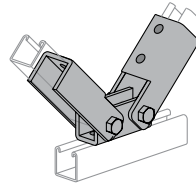
EG, HG

Wt/100 pcs:
307 Lbs (139.3 kg)



P2815D - Adjustable Brace Fitting

Wt/100 pcs:
497 Lbs (225.4 kg)

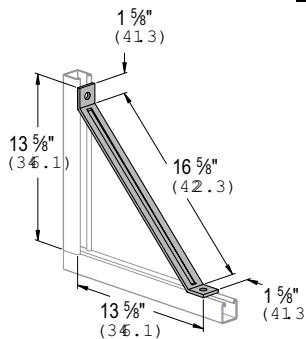


P2452 - Knee Brace

EG, GR

Wt/100 pcs:
277 Lbs (125.6 kg)

- Material: 1/4" (6.4) thick steel.
- Design Axial Load 1200 Lbs (5.34 kN)



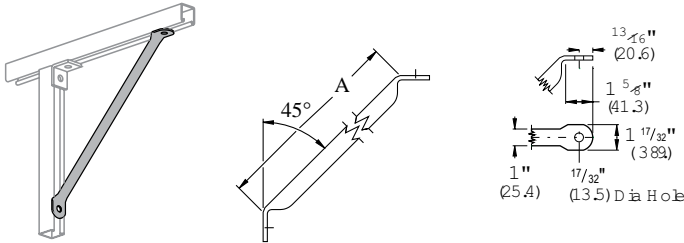
Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

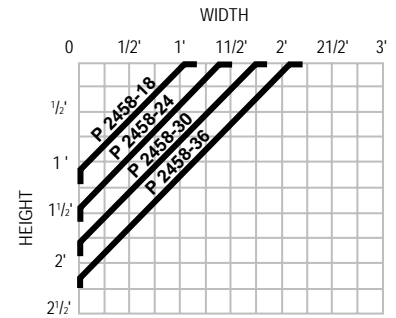
Brace Fittings

P2458-18 thru P2458-36 - Tubular Knee Braces

- Design Loads
 Compression = 1500 Lbs (6.67 kN)
 Tension = 300 Lbs (1.33 kN)



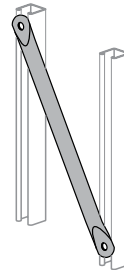
Part Number	"A"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P2458-18	18	457.2	146	66.2
P2458-24	24	609.6	186	84.4
P2458-30	30	762.0	227	103.0
P2458-36	36	914.4	267	121.1



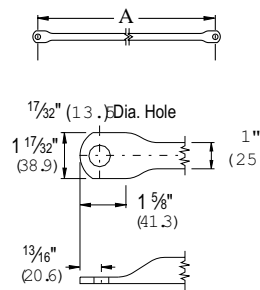
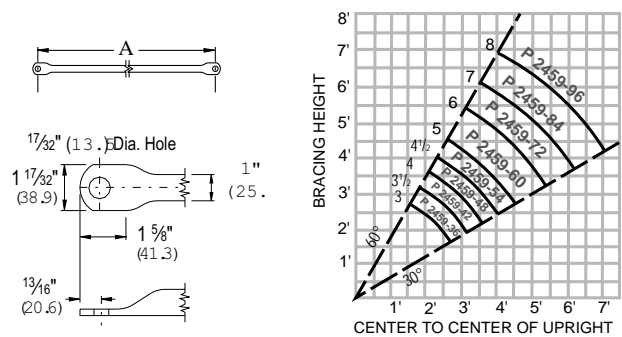
P2459-36 thru P2459-96 - Tubular Back Braces

EG, GR

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



Part Number	"A"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P2459-36	36	914.4	255	115.7
P2459-42	42	1,066.8	296	134.3
P2459-48	48	1,219.2	336	152.4
P2459-54	54	1,371.6	377	171.0
P2459-60	60	1,524.0	418	189.6
P2459-72	72	1,828.8	499	226.3
P2459-84	84	2,133.6	580	263.1
P2459-96	96	2,438.4	661	299.8



Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

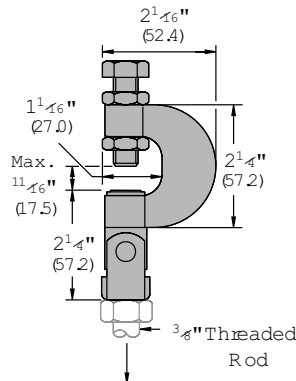


Beam Clamps

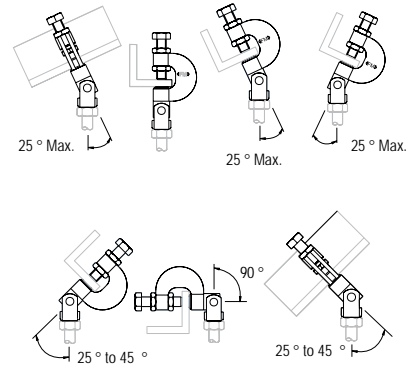
P2897

Wt/100 pcs:
33 Lbs (15.0 kg)

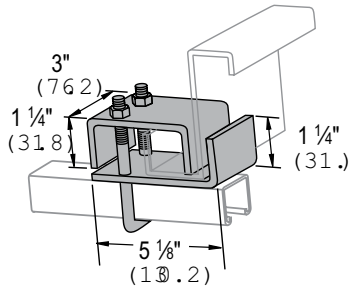
- Safety Factor 4
- Torque: 13 Ft-Lbs (18 N·m)



Design Load (Safety Factor of 4)
(angles $\leq 25^\circ$) - 550 Lbs (2.45 kN)
(angles $> 25^\circ$) - 330 Lbs (1.47 kN)



P2784



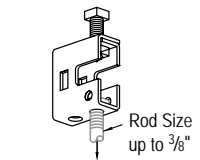
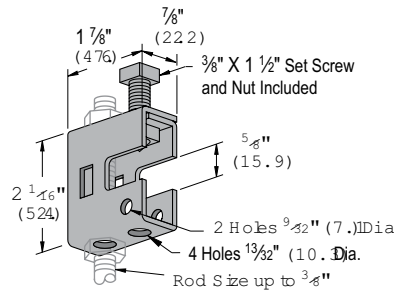
Part Number	For Use With	Load		Wt/100 pcs	
		(lb)	(kN)	(lb)	(kg)
P2784-1	P1000, P1100,	1,200	5.34	175	79.3
P2784-2	P1001, P1101, P2001	1,200	5.34	179	81.1
P2784-3	P5001, P5501	1,200	5.34	180	81.5

P2675

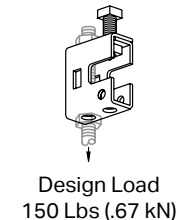
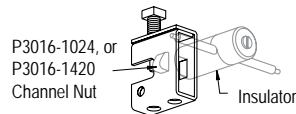
EG, GR

Wt/100 pcs:
33 Lbs (15.0 kg)

- Clamp Materials: .105" (2.7) thick steel
- Clamp P2675 is designed for light duty rod suspension
- It also may be used with P3016-1024 or P3016-1420 nut as illustrated above for mounting insulators, etc



Design Load
250 Lbs (1.11 kN)



Design Load
150 Lbs (.67 kN)

Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

Beam Clamps

P8000, P8001 – Junior Ductile Iron Top Beam Clamp

- Material: $\frac{3}{8}$ " and $\frac{1}{2}$ " rod sizes
- Finish: Plain (PL) and Electro-Galvanized (EG)
- Function: Structural attachment to top or bottom of metal beams, purlins, channel, or angle iron
- Features:
 - Set screw made of hardened steel
 - Complies with Federal Specification A-A192A (Type 19) and MSS SP-69 (Type 19)

Part Number Plain & EG	Rod Size (in)	Max Load Top (lb)	Max Load Bottom (lb)	Weight (lb)	W (in)
P8000	$\frac{3}{8}$	500	250	0.33	$\frac{7}{8}$
P8001	$\frac{1}{2}$	950	760	0.34	$1 \frac{1}{16}$

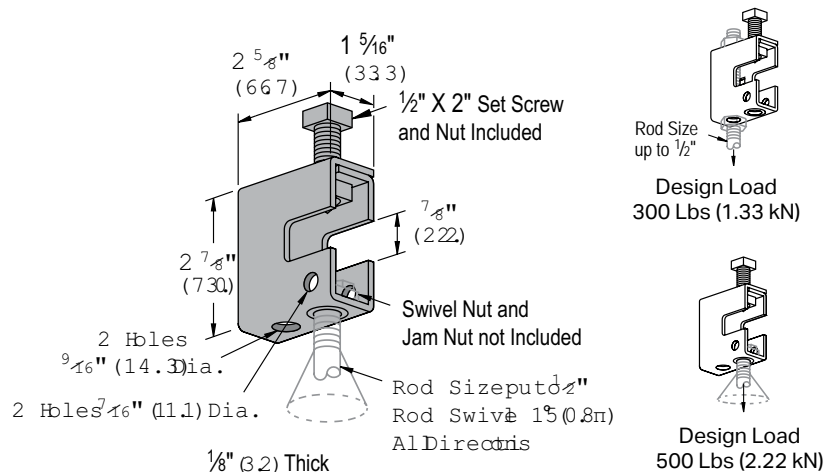
Note: *Max load may exceed allowable load for threaded rod size shown.

P2676

EG, GR

Wt/100 pcs:
72 Lbs (32.7 kg)

- Clamp P2676 provides a means of rod suspension where a free swing of up to 15° (0.8π) is required. Clamp will accommodate $\frac{1}{4}$ " (6.4), $\frac{3}{8}$ " (9.5), or $\frac{1}{2}$ " (12.7) rods. Order swivel nuts P2679-4,-6, or -8 as required
- Clamp may also be used with P2677 as illustrated in application drawings.
- Clamp Materials: $\frac{1}{8}$ " (3.2) thick steel. Not available in SS or ST



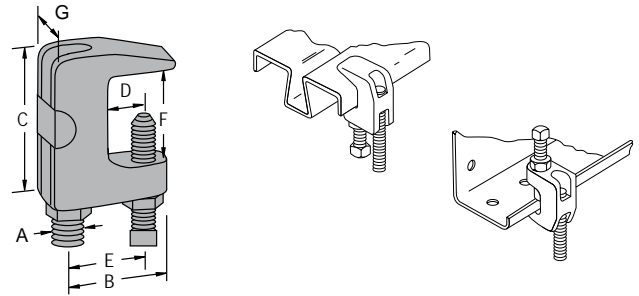
Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

Beam Clamps

P2898 - Universal Beam Clamp



- Maximum temperature of 450° F (232° C)
- At least one full thread must be exposed

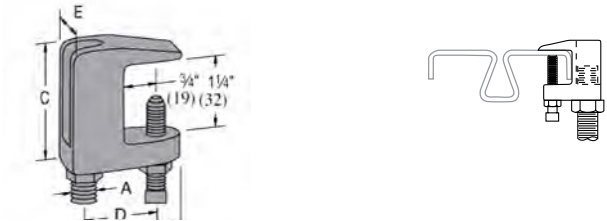


Part Number	A	B		C		D		E		F		G		Max Load		Wt/100 pcs	
	(in)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kg)
P2898-37	3/8	1	25.4	1 1/2	38.1	1/2	12.7	1	25.4	3/4	19.1	7/8	22.2	400	1.78	33	15.0
P2898-50	1/2	1 5/16	25.4	1 1/2	38.1	1/2	12.7	1	25.4	3/4	19.1	7/8	22.2	500	2.22	33	15.0
P2898-62	5/8	1 1/2	38.1	1 1/2	38.1	1/2	12.7	1	25.4	3/4	19.1	1	25.4	600	2.67	22	10.0
P2898-75	3/4	1 7/8	47.6	1 3/4	44.5	5/8	15.9	1 3/8	34.9	1	25.4	1 1/4	31.8	800	3.56	88	40.0

P2899 - Wide Throat Beam Clamp



- Maximum temperature of 450° F (232° C)



Part Number	Rod Size A (in)	B		C		D		E		Max Load		Wt/100 pcs	
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kg)
P2899-37	3/8	1 5/8	41.3	2	50.8	1	25.4	7/8	22.2	400	1.78	28	12.7
P2899-50	1/2	1 5/8	41.3	2	50.8	1	25.4	7/8	22.2	500	2.22	34	15.4
P2899-62	5/8	1 3/4	44.5	2 1/4	57.2	1 1/4	31.8	1	25.4	600	2.67	66	30.0
P2899-75	3/4	1 7/8	47.6	2 3/8	60.3	1 3/8	34.9	1 1/4	31.8	800	3.56	83	37.7

Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

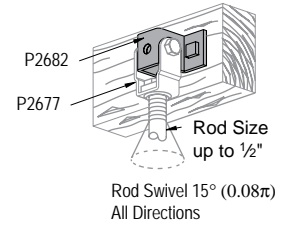
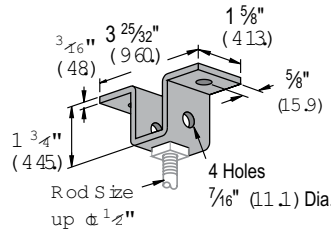
Beam Clamps

P2682

EG

Wt/100 pcs:
55 Lbs (24.9 kg)

- Hanger clevis for up to 1/2" (12.7) rod suspension from wood ceilings. May also be used with P2677 as illustrated in application drawings

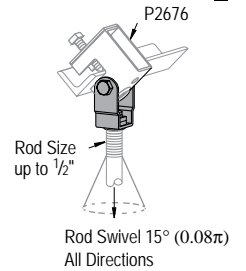
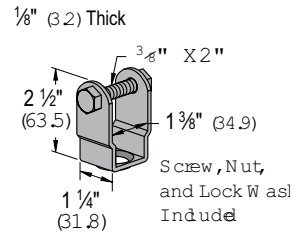


P2677

EG

Wt/100 pcs:
30 Lbs (13.6 kg)

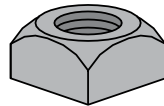
- Clevis hanger to be used with P2676 or P2682 to provide angle adjustment and 15° (0.08 π) free swing for up to 1/2" (12.7) rod suspension. Order swivel nuts P2679-4, -6, or -8 as required
- Design Load 500 Lbs (2.22 kN)



P2679-4, -6 & -8 Swivel Nut

EG

- Use w/P2676 and P2677
- Order size as required



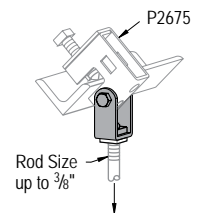
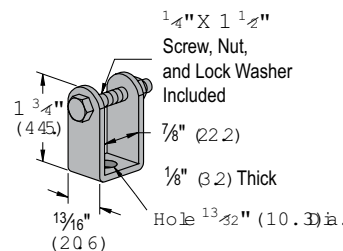
Part Number	Thread Size	Wt/100 pcs	
		(lb)	(kg)
P2679-4	1/4"-20	4	1.8
P2679-6	3/8"-16	5	2.3
P2679-8	1/2"-13	6	2.7

P2674

EG, GR

Wt/100 pcs:
17 Lbs (7.7 kg)

- Clevis hanger to be used with P2675 to provide angle adjustment for up to 3/8" rod suspension as illustrated
- Design Load 250 Lbs (1.11 kN)



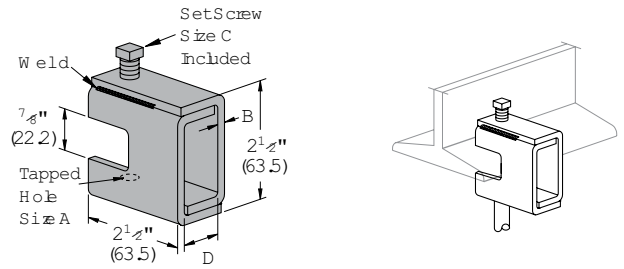
Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

Beam Clamps

P1648S thru P1653S

EG, GR

- Weld is not continuous it is either 1¼" (31.8) - 1¾" (44.5) long or 2 spot welds
- All welds are on the top and bottom
- For beams under 7⁄8" (22.2) thick flange

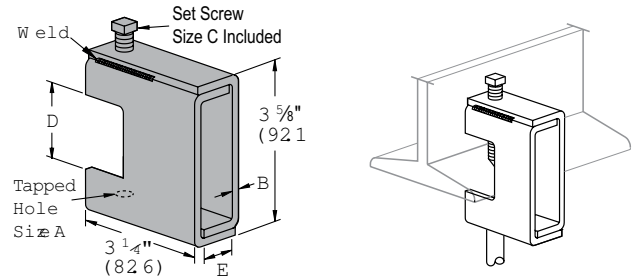


Part Number	"A" (in)	"B"		"C" (in)	"D"		Wt/100 pcs		Design Load	
		(in)	(mm)		(in)	(mm)	(lb)	(kg)	(lb)	(kN)
P1648S	¼ - 20	⅛	3.2	¾ x 1½	⅞	22.2	67	30.4	650	2.89
P1649S	⅕ - 18	⅛	3.2	¾ x 1½	⅞	22.2	67	30.4	650	2.89
P1650S	⅜ - 16	⅜	4.8	½ x 1½	15⁄16	23.8	100	45.4	1,100	4.89
P1651S	½ - 13	¼	6.4	½ x 1½	15⁄16	23.8	130	59.0	1,600	7.12
P1652S	⅝ - 11	⅕	7.9	⅝ x 1½	15⁄16	33	160	72.6	2,400	10.68
P1653S	¾ - 10	⅕	7.9	⅝ x 1½	15⁄16	33.3	160	72.6	2,400	10.68

P2398S, P2401S, P2403S, P2405S

EG, GR

- Weld is not continuous it is either 1¼" (31.8) - 1¾" (44) long or 2 spot welds
- All welds are on the top and bottom
- For beams between ¾" (19.1) to 1⅝" (41.3) thick flanges



Part Number	"A" (in)	"B"		"C" (in)	"D"		"E"		Wt/100 pcs		Design Load	
		(in)	(mm)		(in)	(mm)	(in)	(mm)	(lb)	(kg)	(lb)	(kN)
P2398S	¼ - 20	⅛	3.2	¾ x 2	12 1/32	42.1	⅞	22.2	109	49.4	800	3.56
P2401S	⅜ - 16	⅜	4.8	½ x 2	11 1/16	42.9	29/32	23.0	156	70.8	1,300	5.78
P2403S	½ - 13	¼	6.4	½ x 2	11 1/16	42.9	15/16	23.8	201	91.2	1,900	8.45
P2405S	⅝ - 11	⅕	7.9	⅝ x 2	11 1/16	42.9	15/16	33.3	311	141.1	2,400	10.68

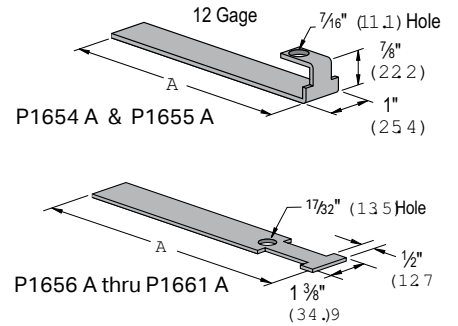
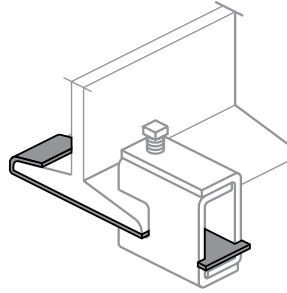
Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

Beam Clamps

P1654A thru P1661A - Retainer Strap

EG, GR

- For beams under 7/8" (22.2) thick flange



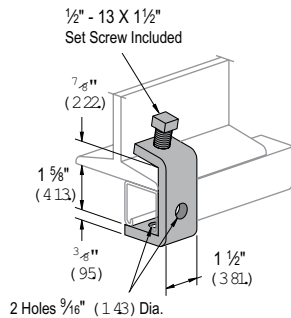
Strap Part Number	Flange Width		"A"		Wt/100 pcs		Beam Clamp Used With
	(in)	(mm)	(in)	(mm)	(lb)	(kg)	
P1654A	6	152.4	7	177.8	25	11.3	P2675
P1655A	9	228.6	10	254.0	34	15.4	P2675
P1656A	6	152.4	9	228.6	35	15.9	P1648 S Thru P1651 S, P2398S, P2401S & P2403S
P1657A	9	228.6	12	304.8	47	21.3	
P1658A	12	304.8	15	381.0	59	26.8	
P1659A	6	152.4	9	228.6	33	15.0	P2676
P1660A	9	228.6	12	304.8	45	20.4	P2676
P1661A	12	304.8	15	381.0	57	25.9	P2676

P1271S

DF, EG, GR, HG

Wt/100 pcs:
95 Lbs (43.1 kg)

- Design Load Each 500 Lbs (2.22 kN)
- Use in Pairs Only



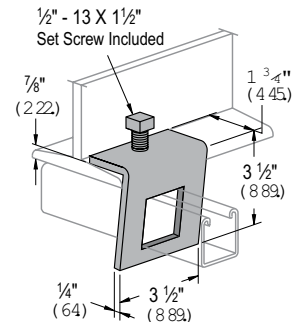
Note: Requires P1010 Channel Nut and bolt.

P1796S

EG, GR, HG

Wt/100 pcs:
91 Lbs (41.3 kg)

- Design Load Each 500 Lbs (2.22 kN)
- Use in Pairs Only



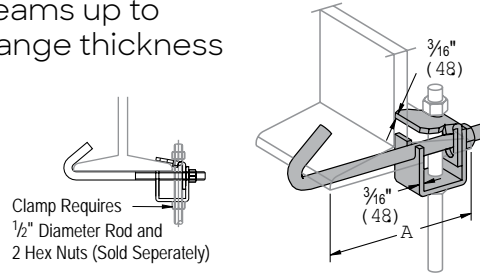
Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

Beam Clamps

P2824-6,-9,-12

EG, GR, HG

- For use with Beams up to $\frac{3}{4}$ " (19.1) max flange thickness



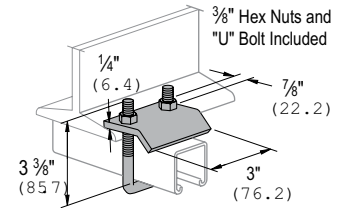
Part Number	"A"		Wt/100 pcs		Design Load	
	(in)	(mm)	(lb)	(kg)	(lb)	(kN)
P2824-6	2 $\frac{1}{2}$ - 6	63.5 - 152.4	125	56.7	500	2.22
P2824-9	5 $\frac{1}{2}$ - 9	139.7 - 228.6	140	63.5	500	2.22
P2824-12	8 $\frac{1}{2}$ - 12	215.9 - 304.8	171	77.6	500	2.22

P2785

DF, EG, GR, HG

Wt/100 pcs: 83 Lbs (37.6 kg)

- For use with Beams up to $\frac{3}{4}$ " (19.1) Flanges and with Channels P1000, P1100, P3000, P3300, P3301, P4001, P4100, and P4101
- Design Load Each 1000 Lbs (4.45 kN)
- Use in Pairs Only

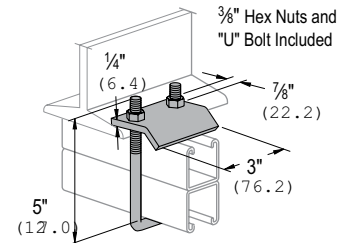


P2786

DF, EG, GR, HG

Wt/100 pcs: 92 Lbs (41.7 kg)

- For use with Beams up to $\frac{3}{4}$ " (19.1) Flanges and with Channels P1001, P1101, P2001, P3001, P5000, and P5500
- Design Load Each 1000 Lbs (4.45 kN)
- Use in Pairs Only

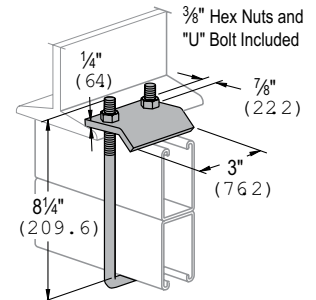


P2787

DF, EG, HG

Wt/100 pcs: 112 Lbs (50.8 kg)

- For use with Beams up to $\frac{3}{4}$ " (19.1) Flanges and with Channels P5001 and P5501
- Design Load Each 1000 Lbs (4.45 kN)
- Use in Pairs Only



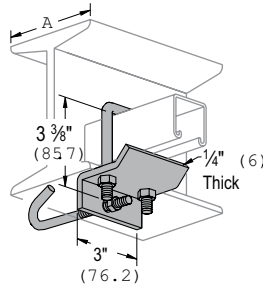
Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

Beam Clamps

P2867

EG, GR, HG

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

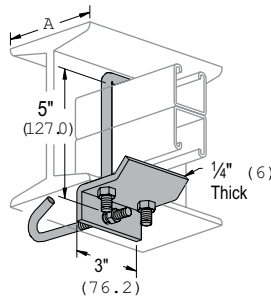


Part Number	Beam Size "A"	Wt/100 pcs	
		(lb)	(kg)
P2867	4"-6"	142	64.4
P2867-9	6"-9"	151	68.5
P2867-12	9"-12"	160	72.6
P2867-15	12"-15"	170	77.1
P2867-18	15"-18"	179	81.2

P2867A

EG, GR, HG

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

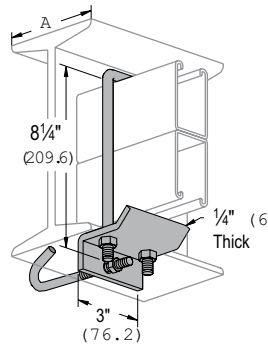


Part Number	Beam Size "A"	Wt/100 pcs	
		(lb)	(kg)
P2867A	4"-6"	151	68.5
P2867A-9	6"-9"	157	71.2
P2867A-12	9"-12"	166	75.3
P2867A-15	12"-15"	176	79.8
P2867A-18	15"-18"	185	83.9

P2867B

EG, GR, HG

- Includes: "J" Bolt, "U" Bolt and Hex Nuts
- For use with Channel P5001, and P5501

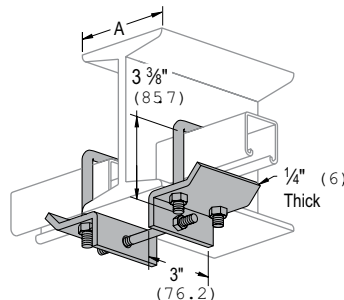


Part Number	Beam Size "A"	Wt/100 pcs	
		(lb)	(kg)
P2867B	4"-6"	161	73.0
P2867B-9	6"-9"	167	75.7
P2867B-12	9"-12"	176	79.8
P2867B-15	12"-15"	186	84.4
P2867B-18	15"-18"	195	88.5

P2868

EG, GR, HG

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



Part Number	Beam Size "A"	Wt/100 pcs	
		(lb)	(kg)
P2868	4"-6"	282	127.9
P2868-9	6"-9"	289	131.1
P2868-12	9"-12"	296	134.3
P2868-15	12"-15"	304	137.7
P2868-18	15"-18"	311	141.1

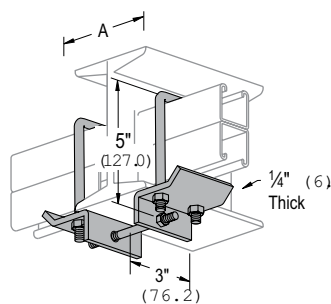
Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

Beam Clamps

P2868A

EG, GR, HG

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

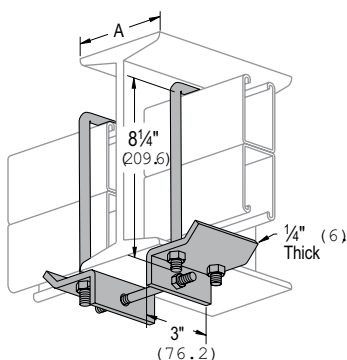


Part Number	Beam Size "A"	Wt/100 pcs	
		(lb)	(kg)
P2868A	4"-6"	300	136.1
P2868A-9	6"-9"	307	139.3
P2868A-12	9"-12"	314	142.2
P2868A-15	12"-15"	322	146.1
P2868A-18	15"-18"	329	149.2

P2868B

EG, GR, HG

- Includes: Center Rod, "U" Bolts and Hex Nuts
- For use with Channels P5001, and P5501



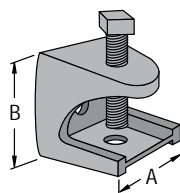
Part Number	Beam Size "A"	Wt/100 pcs	
		(lb)	(kg)
P2868B	4"-6"	320	145.1
P2868B-9	6"-9"	327	148.3
P2868B-12	9"-12"	334	151.5
P2868B-15	12"-15"	342	155.1
P2868B-18	15"-18"	349	153.3

P2894

EG

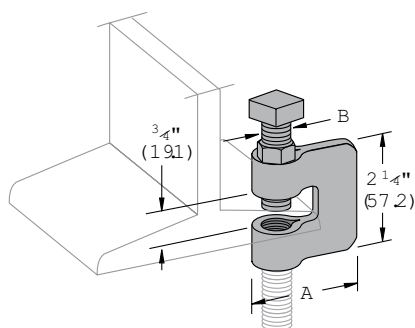
Wt/100 pcs: 14 lbs. (6.4 kg)

- Material: Steel
- Use With: 1/4" rod
- Load Rating: 75 lbs. (.33 kN)



Part Number	Rod Size (in)	"A"		"B"		Load Ratings		Wt/100 pcs	
		(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kg)
P2894-25	1/4	1 1/8	28.6	1 1/4	31.8	150	0.67	23	10.4
P2894-37	3/8	2	50.8	2	50.8	350	1.56	95	43.1
P2894-50	1/2	2 5/8	66.7	2 1/2	63.5	400	1.78	195	88.5

P2895



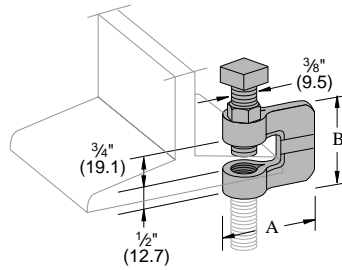
Part Number	Rod Size (in)	"A"		"B"		Load Ratings		Wt/100 pcs	
		(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kg)
P2895-37	3/8	2 5/16	58.7	3/8	9.5	330	1.47	35	15.9
P2895-50	1/2	2 1/4	57.2	1/2	12.7	380	1.69	41	18.6
P2895-62	5/8	2 3/8	60.3	5/8	15.9	450	2.00	67	30.4
P2895-75	3/4	2 1/4	57.2	1/2	12.7	500	2.22	72	32.7

Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.

Beam Clamps

P2896

- Material: Malleable Iron, Steel Set Screw



Part Number	Rod Size (in)	"A"		"B"		Load Ratings		Wt/100 pcs	
		(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kg)
P2896-37	3/8	1 1/16	42.9	1 3/4	44.5	400	1.78	38	17.2
P2896-50	1/2	1 29/32	43.7	1 3/4	44.5	400	1.78	52	23.6
P2896-62	5/8	1 15/16	49.2	2	50.8	450	2.00	68	30.8
P2896-75	3/4	2 1/32	51.6	2	50.8	600	2.67	128	58.1

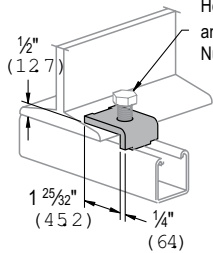
P1386

DF, EG, GR, HG

Wt/100 pcs:
27 Lbs (12.2 kg)

Channel Style	Design Load Each (Use in Pairs Only)	
	(lb)	(kN)
P1000	600	2.67
P1100	500	2.22

Clamp Requires 1/2" - 13 X 1 1/2" Hex Head Cap Screw and 1/2" Channel Nut Not Included.



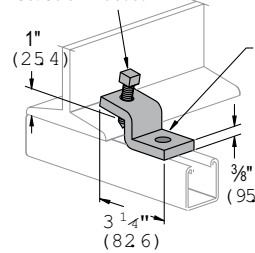
P1379S

EG, GR, HG

Wt/100 pcs:
75 Lbs (34.0kg)

Channel Style	Design Load Each (Use in Pairs Only)	
	(lb)	(kN)
P1000	600	2.67
P1100	500	2.22

1/2" - 13 X 1 1/2" Set Screw Included



Clamp Requires 1/2" x 1 3/16" Hex Head Cap Screw and 1/2" Channel Nut Not Included.

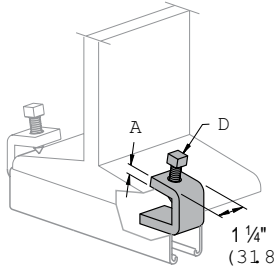
Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.



Beam Clamps

P1272S, P1985S, P1986S

EG, GR, HG



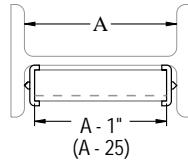
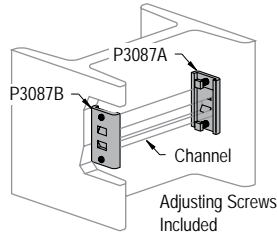
Part Number	"A"		Flange Thickness		"D" Set Screw Included	Wt/100 pcs		Design Load Per Pair (Use in Pairs Only)	
	(in)	(mm)	(in)	(mm)		(lb)	(kg)	(lb)	(kN)
P1272S	1/4	6.4	Up to 3/4	Up to 19.1	3/8-16 x 1 1/2	39	17.7	450	2.00
P1985S	3/8	9.5	Up to 3/4	Up to 19.1	1/2-13 x 1 1/2	62	28.1	1,000	4.45
P1986S	3/8	9.5	7/8 to 2	22.2 - 50.8	1/2-13 x 1 1/2	74	33.6	900	4.00

P3087 - Column Insert

EG

Wt/100 pcs: 136 Lbs (61.7 kg)

- Adjusting Screws Included
- Channel not included
- Part number P3087 consists of:
 - (1) piece P3087A,
 - (1) piece P3087B and
 - (2) set screws, 3/8" Dia.



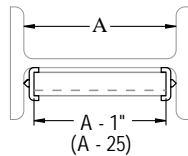
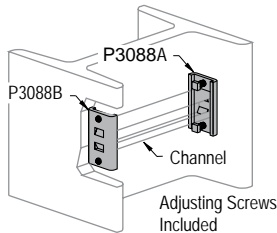
Channel Part Number	Design Pull Out Load Lbs (kN)		Design Slip Load Lbs (kN)	
	(lb)	(kN)	(lb)	(kN)
P1000	1,000	4.45	800	3.56
P1100	700	3.34	500	2.22

Safety factor of 3

P3088 - Column Insert

Wt/100 pcs: 120 Lbs (54.4 kg)

- Adjusting Screws Included
- Channel not included
- Part number P3088 consists of:
 - (1) piece P3088A,
 - (1) piece P3088B and
 - (2) set screws, 3/8" Dia.



Channel Part Number	Design Pull Out Load Lbs (kN)		Design Slip Load Lbs (kN)	
	(lb)	(kN)	(lb)	(kN)
P3300	1,000	4.45	800	3.56
P4100	700	3.34	500	2.22

Safety factor of 3

Note: When used for mechanical supports, load capacities of brackets, fittings and other supporting elements should be in compliance with the American Standard Code for Pressure Piping. Clamps are designed to be used with W, M, S & HP Shape beams, Standard C & Misc. MC Channels, Angles & Structural Tees. Clamps must be used in pairs where indicated. For beam clamps with HG finish, standard hardware is EG finish. For optional stainless steel hardware, please contact the factory for availability.



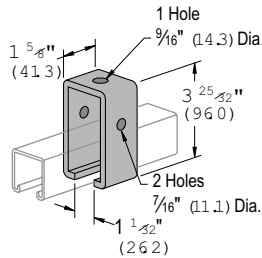
Trolley Assemblies

P1834- Channel Trolley Support



Wt/100 pcs: 102 Lbs (46.3 kg)

- Requires $\frac{3}{8}$ " x $2\frac{1}{2}$ " Bolt and $\frac{3}{8}$ " Nut (not included)
- Design Load 1200 Lbs (5.34 kN)

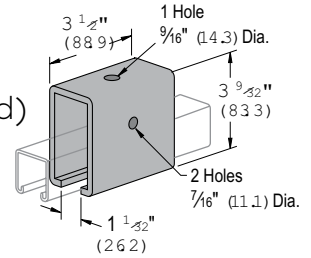


P1834A - Channel Trolley Support



Wt/100 pcs: 220 Lbs (99.8 kg)

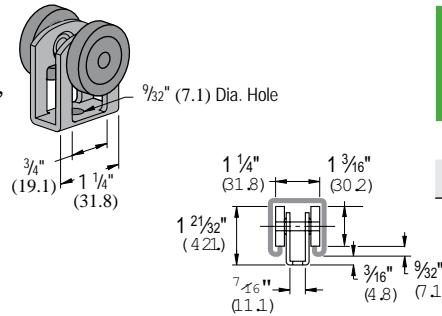
- Requires $\frac{3}{8}$ " x $2\frac{1}{2}$ " Bolt and $\frac{3}{8}$ " Nut (not included)
- Design Load 2500 Lbs (11.12 kN)



P2749, P2749N†



- Clevis Material: 12 gauge
- *Wheel bearings are stainless steel, and should not be lubricated
- † "N" indicates acetal wheels

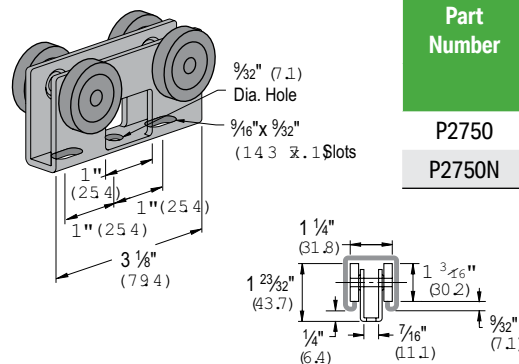


Part Number	Design Load		Wt/100 pcs	
	(lb)	(kN)	(lb)	(kg)
P2749	50	0.22	21	9.5
P2749N	10	0.04	13	5.9

P2750, P2750N†



- Clevis Material: 12 gauge
- *Wheel bearings are stainless steel, and should not be lubricated
- † "N" indicates acetal wheels



Part Number	Design Load		Wt/100 pcs	
	(lb)	(kN)	(lb)	(kg)
P2750	100	0.44	55	24.9
P2750N	20	0.09	32	14.5

Standard Dimensions for $1\frac{5}{8}$ " (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

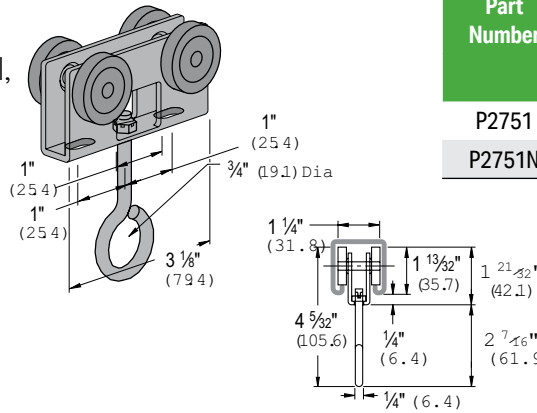
Hole Diameter: $\frac{9}{16}$ " (14.3mm); Hole Spacing - From End: $\frac{13}{16}$ " (20.6mm); Hole Spacing - On Center: $1\frac{7}{8}$ " (47.6mm); Width: $1\frac{5}{8}$ " (41.3mm); Thickness: $\frac{1}{4}$ " (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45

Trolley Assemblies

P2751, P2751 N†

EG

- Clevis Material: 12 gauge
- *Wheel bearings are stainless steel, and should not be lubricated
- † "N" indicates acetal wheels



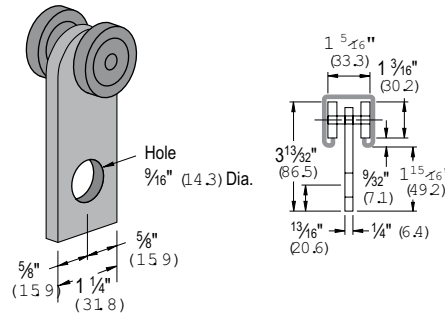
Part Number	Design Load		Wt/100 pcs	
	(lb)	(kN)	(lb)	(kg)
P2751	100	0.44	63	28.6
P2751N	20	0.09	40	18.1

P2949

EG

Wt/100 pcs: 46 Lbs (20.9 kg)

- Wheel bearings are stainless steel
- Do not lubricate



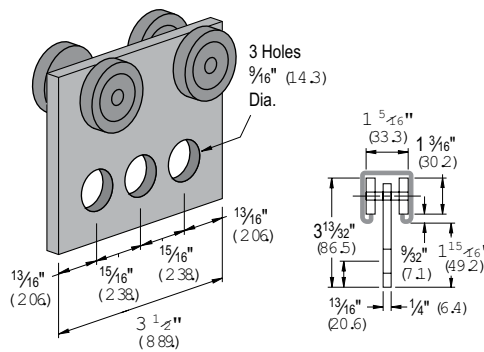
FPM	RPM	Design Load In P1000	
		(lb)	(kN)
180	600	150	0.67
90	300	225	1.00
30	100	437	1.94

P2950

EG

Wt/100 pcs: 110 Lbs (49.9 kg)

- Wheel bearings are stainless steel
- Do not lubricate



FPM	RPM	Design Load In P1000	
		(lb)	(kN)
180	600	300	1.33
90	300	450	2.00
30	100	600	2.67

Standard Dimensions for 1 5/8" (41.3mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/16" (14.3mm); Hole Spacing - From End: 13/16" (20.6mm); Hole Spacing - On Center: 1 7/8" (47.6mm); Width: 1 5/8" (41.3mm); Thickness: 1/4" (6.4mm) with steel meeting or exceeding ASTM A1011 SS GR 33, or 0.220" (5.6mm) with steel meeting or exceeding ASTM A1011 HSLAS GR 45



Seismic Components

Seismic Components

Seismic Retrofit Fittings..... 119



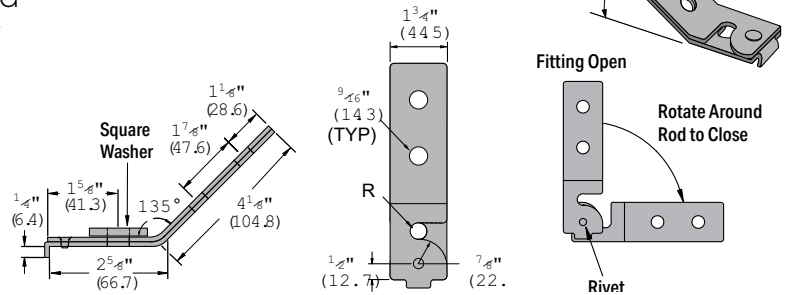
Seismic Retrofit Fittings

SPF® 100 - Seismic Pivot Fittings

- Notes:
 - Design load is limited to slip capacity of a channel nut at hole "R".
 - Allowable loads have been determined by the manufacturers testing, analysis and technical specifications.
 - For retrofit application, engineer of record must verify.
 - Square washer provided with fitting.
 - When a hanger rod is thru-bolted (in lieu of channel nut installation), higher transverse loads may be transmitted due to the higher allowed rod shear loads compared to channel nut slip values. This higher load may be used with verification through engineering calculations.

Part Number	Rod Size		"R" - Hole Diameter		Design Load	
	(in)	(mm)	(in)	(mm)	(lb)	(kN)
SPF 100-037	3/8	9.5	7/16	11.1	1,400	6.23
SPF 100-050	1/2	12.7	9/16	14.3	2,100	9.34
SPF 100-062	5/8	15.9	11/16	17.5	2,100	9.34
SPF 100-075	3/4	19.1	13/16	20.6	2,400	10.68

Safety Factor = 3
 FINISH
 Electro-galvanized (EG), conforming to ASTM B633 Type III SC1.

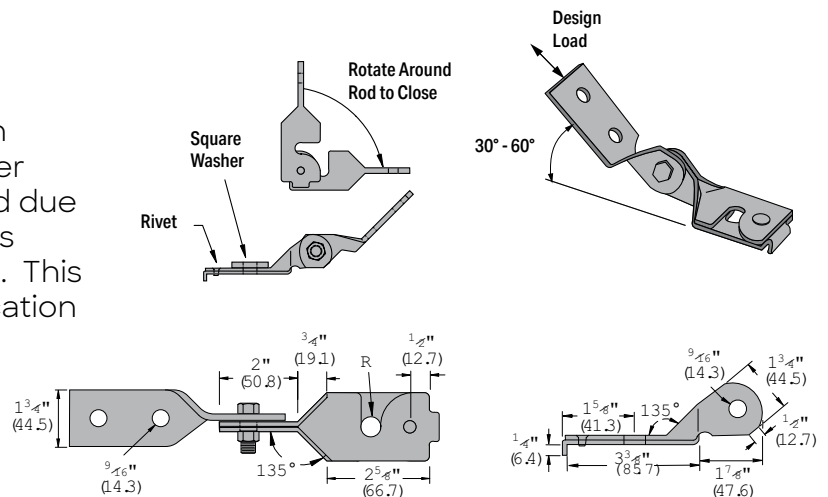


SPF® 200 - Adjustable Seismic Pivot Fittings

- FINISH: Electro-galvanized (EG), conforming to ASTM B633 Type III SC1
- Notes:
 - Design load is limited to slip capacity of a channel nut at hole "R".
 - Allowable loads have been determined by the manufacturers testing, analysis and technical specifications at 45° from horizontal.
 - For retrofit application, engineer of record must verify.
 - Square washer provided with fitting.
 - When a hanger rod is thru-bolted (in lieu of channel nut installation), higher transverse loads may be transmitted due to the higher allowed rod shear loads compared to channel nut slip values. This higher load may be used with verification through engineering calculations.

Part Number	Rod Size		"R" - Hole Diameter		Design Load	
	(in)	(mm)	(in)	(mm)	(lb)	(kN)
SPF 200-037	3/8	9.5	7/16	11.1	1,400	6.23
SPF 200-050	1/2	12.7	9/16	14.3	2,100	9.34
SPF 200-062	5/8	15.9	11/16	17.5	2,100	9.34
SPF 200-075	3/4	19.1	13/16	20.6	2,400	10.68

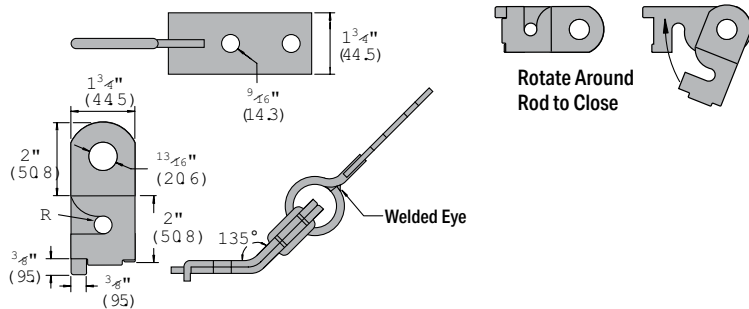
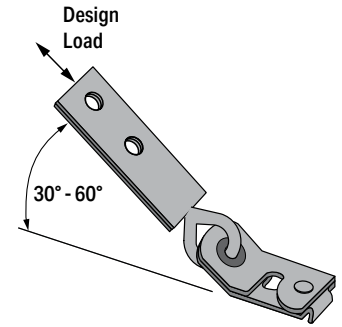
Safety Factor = 3



Seismic Retrofit Fittings

SPF® 300 - Seismic Pivot Fittings

- Notes:
 - Design load is limited to slip capacity of a channel nut at hole "R".
 - Allowable loads have been determined by the manufacturers testing, analysis and technical specifications at 45° from horizontal.
 - For retrofit application, engineer of record must verify.
 - Square washer provided with fitting.
 - When a hanger rod is thru-bolted (in lieu of channel nut installation), higher transverse loads may be transmitted due to the higher allowed rod shear loads compared to channel nut slip values. This higher load may be used with verification through engineering calculations.

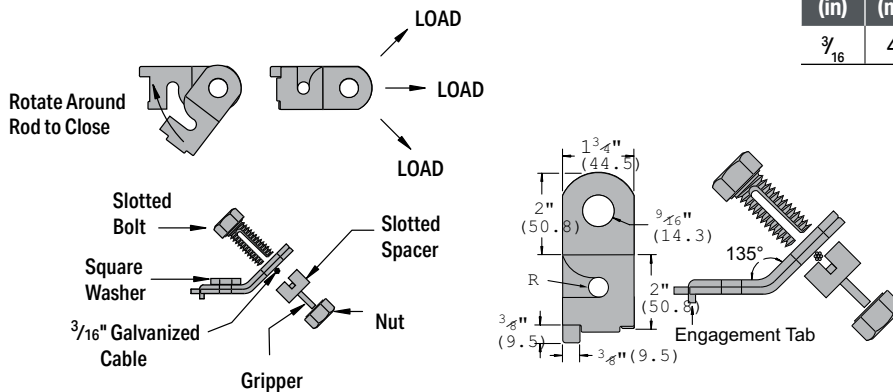
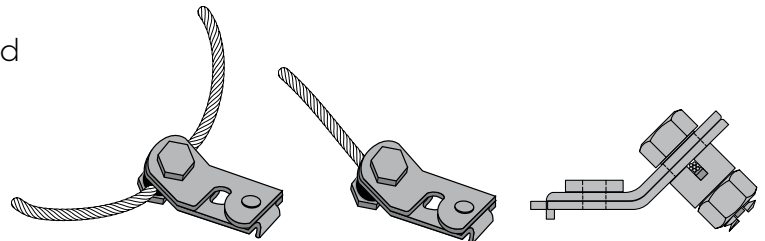


Part Number	Rod Size		"R" - Hole Diameter		Design Load	
	(in)	(mm)	(in)	(mm)	(lb)	(kN)
SPF 300-037	3/8	9.5	7/16	11.1	1,400	6.23
SPF 300-050	1/2	12.7	9/16	14.3	2,100	9.34
SPF 300-062	5/8	15.9	1 1/16	17.5	2,100	9.34
SPF 300-075	3/4	19.1	1 3/16	20.6	2,400	10.68

Safety Factor = 3
 FINISH
 Electro-galvanized (EG), conforming to
 ASTM B633 Type III SC1.

SPF® 400 - Seismic Pivot Fittings

- Notes:
 - Allowable loads have been determined by the manufacturers testing, analysis and technical specifications
 - Galvanized wire rope, 7 x 19 IWSC, RHRL (Prestretched)
 - Torque on nut/spacer: 50 ft-lbs
 - Safety Factor of 3 for prestretched cable



Wire Rope Diameter		Horizontal Design Load					
		4-Way Splayed		Single Cable			
(in)	(mm)	Transverse (lb)	Transverse (kN)	Longitudinal (lb)	Longitudinal (kN)	Transverse (lb)	Transverse (kN)
3/16	4.8	1050	4.67	1116	4.96	650	2.89

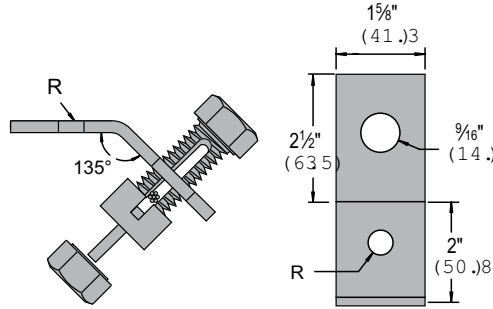
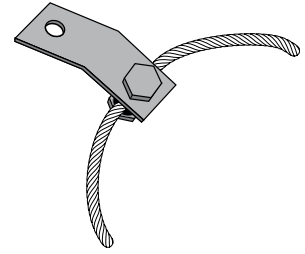
Part Number	Rod Size		"R" - Hole Diameter	
	(in)	(mm)	(in)	(mm)
SPF 400-037	3/8	9.5	7/16	11.1
SPF 400-050	1/2	12.7	9/16	14.3
SPF 400-062	5/8	15.9	1 1/16	17.5
SPF 400-075	3/4	19.1	1 3/16	20.6

FINISH
 Electro-galvanized (EG), conforming to
 ASTM B633 Type III SC1.

Seismic Retrofit Fittings

LS 410 - Seismic Pivot Fittings

- Note:
 - Allowable loads have been determined by the manufacturers testing, analysis and technical specifications.
 - For retrofit application, engineer of record must verify.
 - Torque on nut/spacer: 50 ft-lbs.
 - Square washer provided with fitting.
 - Loads are the same as the SPF 400

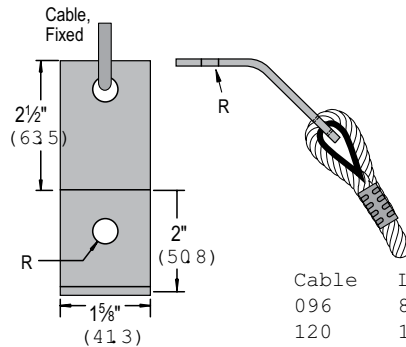


Part Number	Rod Size		"R" - Hole Diameter	
	(in)	(mm)	(in)	(mm)
LS 410-037	3/8	9.5	7/16	11.1
LS 410-050	1/2	12.7	9/16	14.3
LS 410-062	5/8	15.9	1 1/16	17.5
LS 410-075	3/4	19.1	1 3/16	20.6

FINISH
Electro-galvanized (EG), conforming to
ASTM B633 Type III SC1.

LS 500 - Seismic Pivot Fittings

- Note:
 - Allowable loads have been determined by the manufacturers testing, analysis and technical specifications.
 - For retrofit application, engineer of record must verify.
 - Square washer provided with fitting.
 - Loads are the same as the SPF 400



Example
LS500-037-096

┌ Cable Length
├ Anchor Size
└ Fitting Number

Cable	Length
096	8' (2.4M)
120	10' (3.0M)
144	12' (3.6M)
180	15' (4.5M)
240	20' (6.1M)
300	25' (7.6M)
360	30' (9.1M)
480	40' (12.2M)

Part Number	Rod Size		"R" - Hole Diameter	
	(in)	(mm)	(in)	(mm)
LS 500-037	3/8	9.5	7/16	11.1
LS 500-050	1/2	12.7	9/16	14.3
LS 500-062	5/8	15.9	1 1/16	17.5
LS 500-075	3/4	19.1	1 3/16	20.6

FINISH
Electro-galvanized (EG), conforming to
ASTM B633 Type III SC1.



Pipe/Conduit Supports

Pipe/Conduit Supports

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Pipe & Conduit Clamps..... 127
Pipe Hangers..... 136
Pipe & Conduit Reference Data 137



Pipe/Conduit Supports

Material

Unistrut and Power-Strut pipe clamps, unless noted, are punch-press made from hot-rolled, pickled and oiled steel plates, strip, bar or coil, and conform to one or more of the following specifications: ASTM A1008, A575, A576, A635, A1011 SS GR 33, A1011 HSLAS GR 45, A1046 or A36. The fitting steel also meets or exceeds the physical properties of ASTM A1011 GR 33. The pickling of the steel produces a smooth surface free from scale.

Many items are also available in stainless steel, aluminum and fiberglass.

Consult factory for ordering information.

Finishes

Pipe supports are available in:

- Electro-galvanized (EG), conforming to ASTM B633 Type III SC1
- Hot-dipped galvanized (HG), conforming to ASTM A123 or A153 (hardware)
- Green Powder Coat (GR), conforming to commercial standards for Powder Coating, and plain (PL)
- Defender (DF), conforming to ASTM A1059 or A1046

Application

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

Pipe Clamps In Special Materials (P1109, P1211, P1425, P2024 Series)

Material/Finish	Part Number Suffix	Pipe Clamp Material / Finish	Fasteners (Screw & Nut) Material / Finish	Example
Electro-galvanized	EG	EG	EG	P1109 EG
Hot-dipped galvanized	HG	HG	SS	P1109 HG
Defender	DF	DF	DF	P1109 DF
Stainless Steel Type 304	SS	SS	SS	P1109 SS
Stainless Steel Type 316	ST	ST	SS	P1109 ST
Aluminum	AL	AL	AL	P1109 AL

Dimensions

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

Design Bolt Torque

Bolt Size	Rec. Torque		Max. Torque	
	(ft/lb)	(N•m)	(ft/lb)	(N•m)
1/4"-20	6	8	7	9
5/16"-18	11	15	15	20
3/8"-16	19	26	25	34
1/2"-13	50	68	70	95
5/8"-11	100	136	125	170
3/4"-10	125	170	135	183

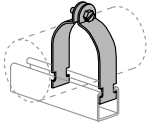
Note: When tightening 1/4" screws used with a two piece pipe clamp, a torque of 5 foot pounds (60 inch-pounds) should be used.

Design Load

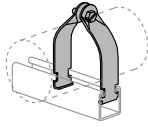
Design load data, where shown, is based on the ultimate strength of the connection with a safety factor of 5.0, unless otherwise noted.

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

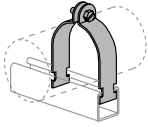
Pipe & Conduit Pictorial Index



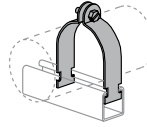
P1109



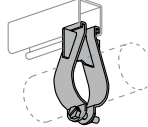
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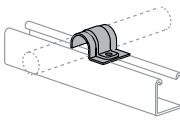
P1425



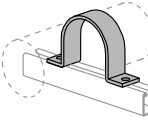
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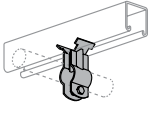
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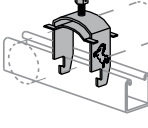
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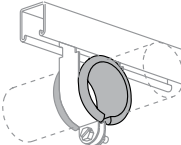
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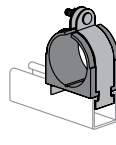
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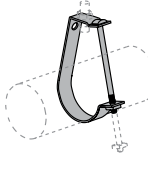
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P2600



004T008

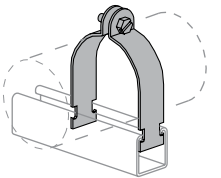
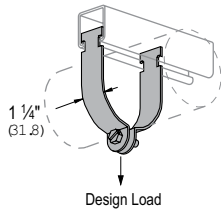


J1205

Pipe & Conduit Clamps

P1109 thru P1126 - Pipe Clamps for Rigid Steel Conduit

EG, HG

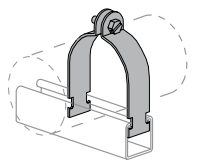
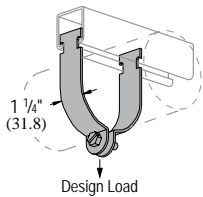


Part Number	Conduit Size		O.D. Size		Thickness		Wt/100 pcs		Design Load	
	(in)	(mm)	(in)	(mm)	(ga)	(mm)	(lb)	(kg)	(lb)	(kN)
P1109	3/8	9.5	0.675	17.1	16	1.5	10	4.5	400	1.78
P1111	1/2	12.7	0.840	21.3	16	1.5	11	5.0	400	1.78
P1112	3/4	19.1	1.050	26.7	14	1.9	15	6.8	600	2.67
P1113	1	25.4	1.315	33.4	14	1.9	17	7.7	600	2.67
P1114	1 1/4	31.8	1.660	42.2	14	1.9	19	8.6	600	2.67
P1115	1 1/2	38.1	1.900	48.3	12	2.7	29	13.2	800	3.56
P1117	2	50.8	2.375	60.3	12	2.7	34	15.4	800	3.56
P1118	2 1/2	63.5	2.875	73.0	12	2.7	40	18.1	800	3.56
P1119	3	76.2	3.500	88.9	12	2.7	47	21.3	800	3.56
P1120	3 1/2	88.9	4.000	101.6	11	3.0	62	28.1	1,000	4.45
P1121	4	101.6	4.500	114.3	11	3.0	67	30.4	1,000	4.45
P1123	5	127.0	5.563	141.3	11	3.0	80	36.3	1,000	4.45
P1124	6	152.4	6.625	168.3	10	3.4	102	46.3	1,000	4.45
P1126	8	203.2	8.625	219.1	10	3.4	130	59.0	1,000	4.45

Slotted hex head screw and nut included

P1425 thru P1431 - Pipe Clamps for Thin Wall Conduit (E.M.T.)

DF, EG, HG

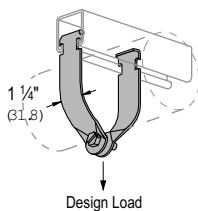
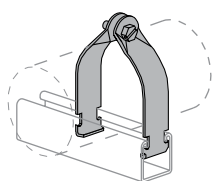


Part Number	Conduit Size		O.D. Size		Thickness		Wt/100 pcs		Design Load	
	(in)	(mm)	(in)	(mm)	(ga)	(mm)	(lb)	(kg)	(lb)	(kN)
P1425	3/8	9.5	0.577	14.7	16	1.5	9	4.1	400	1.78
P1426	1/2	12.7	0.706	17.9	16	1.5	11	5.0	400	1.78
P1427	3/4	19.1	0.922	23.4	16	1.5	12	5.4	400	1.78
P1428	1	25.4	1.163	29.5	14	1.9	15	6.8	600	2.67
P1429	1 1/4	31.8	1.510	38.4	14	1.9	18	8.2	600	2.67
P1430	1 1/2	38.1	1.740	44.2	12	2.7	29	13.2	800	3.56
P1431	2	50.8	2.197	55.8	12	2.7	33	15.0	800	3.56

Slotted hex head screw and nut included

P1211 thru P1217 - Universal Clamps for Rigid or Thinwall Conduit

DF, EG, HG



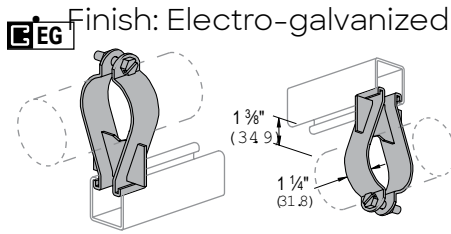
Part Number	Conduit Size		Thickness		Wt/100 pcs		Design Load	
	(in)	(mm)	(ga)	(mm)	(lb)	(kg)	(lb)	(kN)
P1211	1/2	12.7	16	1.5	10	4.5	400	1.78
P1212	3/4	19.1	16	1.5	11	5.0	400	1.78
P1213	1	25.4	16	1.5	12	5.4	400	1.78
P1214	1 1/4	31.8	14	1.9	18	8.2	600	2.67
P1215	1 1/2	38.1	14	1.9	20	9.1	600	2.67
P1217	2	50.8	14	1.9	22	15.0	600	2.67

Slotted hex head screw and nut included

Pipe & Conduit Clamps

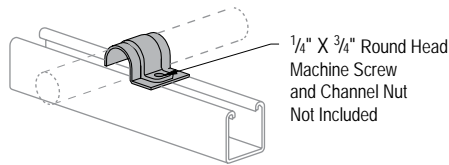
P1563 thru P1573 - Parallel Clamps for Rigid Conduit and Pipe

Slotted hex head screw and nut included.



Part Number	Pipe Size		O.D. Size		Thickness		Wt/100 pcs	
	(in)	(mm)	(in)	(mm)	(ga)	(mm)	(lb)	(kg)
P1563	3/8	9.5	0.675	17.1	14	1.9	27	12.2
P1564	1/2	12.7	0.840	21.3	14	1.9	29	13.2
P1565	3/4	19.1	1.050	26.7	14	1.9	30	13.6
P1566	1	25.4	1.315	33.4	14	1.9	31	14.1
P1567	1 1/4	31.8	1.660	42.2	14	1.9	38	17.2
P1568	1 1/2	38.1	1.900	48.3	12	2.7	40	18.1
P1569	2	50.8	2.375	60.3	12	2.7	47	21.3
P1570	2 1/2	63.5	2.875	73.0	12	2.7	66	29.9
P1571	3	76.2	3.500	88.9	12	2.7	78	35.4
P1572	3 1/2	88.9	4.000	101.6	14	2.7	87	39.5
P1573	4	101.6	4.500	114.3	14	2.7	90	40.8

P2008 thru P2020 - One Hole Clamp for O.D. Tubing

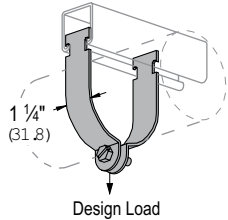
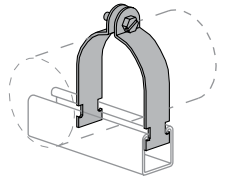


Part Number	O.D. Size		Thickness		Wt/100 pcs	
	(in)	(mm)	(ga)	(mm)	(lb)	(kg)
P2008	1/4	6.4	16	1.5	4	1.8
P2009	5/16	7.9	16	1.5	5	2.3
P2010	3/8	9.5	16	1.5	5	2.3
P2012	1/2	12.7	16	1.5	6	2.7
P2014	5/8	15.9	14	1.9	8	3.6
P2016	3/4	19.1	14	1.9	9	4.1
P2018	7/8	22.2	14	1.9	10	4.5
P2020	1	25.4	14	1.9	11	5.0

Pipe & Conduit Clamps

P2024 thru P2070-84 - Pipe Clamps for O.D. Tubing

EG, HG



Part Number	O.D. Size		Wt/100 pcs		Design Load		Part Number	O.D. Size		Wt/100 pcs		Design Load	
	(in)	(mm)	(lb)	(kg)	(lb)	(kN)		(in)	(mm)	(lb)	(kg)	(lb)	(kN)
P2024	1/4	6.4	8	3.6	400	1.78	P2051	358	92.1	56	25.4	1000	4.45
P2025	3/8	9.5	8	3.6			P2052	33/4	95.3	58	26.3		
P2026	1/2	12.7	9	4.1			P2053	37/8	98.4	60	27.2		
P2027	5/8	15.9	10	4.5			P1120	4	101.6	62	28.1		
P2028	3/4	19.1	11	5.0			P2055	41/8	104.8	62	28.1		
P2029	7/8	22.2	12	5.4			P2056	41/4	108.0	64	29.0		
P2030	1	25.4	14	6.4	600	2.67	P2057	43/8	111.1	66	29.9		
P2031	11/8	28.6	15	6.8			P1121	41/2	114.3	67	30.4		
P2032	11/4	31.8	16	7.3			P2059	45/8	117.5	70	31.8		
P2033	13/8	34.9	17	7.7			P2060	43/4	120.7	72	32.7		
P2034	11/2	38.1	18	8.2			P2061	47/8	123.8	73	33.1		
P2035	15/8	41.3	19	8.6			P2062	5	127.0	74	33.6		
P1430	13/4	44.5	29	13.2	800	3.56	P2063	51/8	130.2	76	34.5		
P2037	17/8	47.6	28	12.7			P2064	51/4	133.4	77	34.9		
P2038	2	50.8	31	14.1			P2065	53/8	136.5	78	35.4		
P2039	21/8	54.0	32	14.5			P2066	51/2	140.0	79	35.8		
P2040	21/4	57.2	33	15			P2067	55/8	142.9	88	39.9		
P1117	23/8	60.3	34	15.4			P2068	53/4	146.1	90	40.8		
P2042	21/2	63.5	35	15.9			P2069	57/8	149.2	92	41.7		
P2043	25/8	66.7	37	16.8			P2070	6	152.4	94	42.6		
P2044	23/4	69.9	38	17.2			P2070-61	61/8	155.6	96	43.5		
P1118	27/8	73.0	40	18.1			P2070-62	61/4	158.8	98	44.5		
P2046	3	76.2	41	18.6			P2070-63	63/8	161.9	99	44.9		
P2047	31/8	79.4	43	19.5			P2070-64	61/2	165.1	100	45.4		
P2048	31/4	82.6	45	20.4			P1124	65/8	168.3	102	46.3		
P2049	33/8	85.7	46	20.9			P2070-66	63/4	171.5	104	47.2		
P1119	31/2	88.9	47	21.3	P2070-67	67/8	174.6	106	48.1				
							P2070-70	7	177.8	108	49.0		
							P2070-71	71/8	181.0	110	49.9		
							P2070-72	71/4	184.2	112	50.8		
							P2070-73	73/8	187.3	114	51.7		
							P2070-74	71/2	190.5	116	52.6		
							P2070-75	75/8	193.7	117	53.1		
							P2070-76	73/4	196.9	119	54.0		
							P2070-77	77/8	200.0	121	54.9		
							P2070-80	8	203.2	123	55.8		
							P2070-81	81/8	206.4	125	56.7		
							P2070-82	81/4	209.6	126	57.2		
							P2070-83	83/8	212.7	128	58.1		
							P2070-84	81/2	215.9	129	58.5		

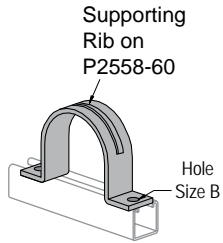
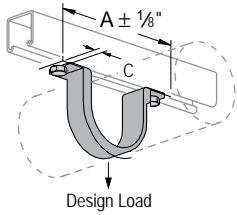
Slotted hex head screw and nut included

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

Pipe & Conduit Clamps

P2558-5 thru P2558-60 - Single Piece Pipe Strap

EG, GR HG



Part Number	Nom. Pipe Size (in)	"A"		"B"		"C"		Thickness		Wt/100 pcs		Design Load	
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kg)	(lb)	(kN)
P2558-05	1/2	2 7/8	73.0	5/16	7.1	7/16	11.1	1/8	3.2	23	10.4	500	2.22
P2558-07	3/4	3 1/8	79.4							26	11.8		
P2558-10	1	3 3/8	85.7							31	14.1		
P2558-12	1 1/4	3 3/4	95.3							35	15.9		
P2558-15	1 1/2	3 7/8	98.4							39	17.7		
P2558-20	2	5 3/4	146.1	7/16	11.1	1 1/16	17.5	1/4	6.4	94	42.6	1,000	4.45
P2558-25	2 1/2	6 1/4	158.8							114	51.7		
P2558-30	3	6 7/8	174.6							133	60.3		
P2558-35	3 1/2	7 3/8	187.3							152	68.9		
P2558-40	4	7 7/8	200.0							176	79.8		
P2558-50	5	9	228.6							198	89.9		
P2558-60	6	10	254.0							225	102.1		

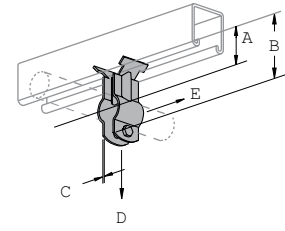
Hardware sold separately.

Pipe & Conduit Clamps

P3409 thru P3417 - Stand-off Pipe Clamps

EG, HG

- Hardware included
- Finish: Electro-galvanized
- Pipe Clamp 1¼" Wide



Part Number	Pipe Size		O.D. Size		Load "D"		Load "E"		A		B		C		Wt/100 pcs	
	(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kN)	(in)	(mm)	(in)	(mm)	(ga)	(mm)	(lb)	(kg)
P3409	3/8	9.5	0.675	17.1	100	0.44	25	0.11	1 1/8	28.6	2 1/8	54.0	14	1.9	14	6.4
P3411	1/2	12.7	0.840	21.3	150	0.67	35	0.16	1 1/4	31.8	2 5/16	58.7	14	1.9	15	6.8
P3412	3/4	19.1	1.050	26.7	175	0.78	40	0.18	1 5/16	33.3	2 1/2	63.5	14	1.9	19	8.6
P3413	1	25.4	1.315	33.4	200	0.89	50	0.22	1 1/2	38.1	2 3/4	69.9	14	1.9	22	10.0
P3414	1 1/4	31.8	1.660	42.2	300	1.33	70	0.31	1 11/16	42.9	3 1/4	82.6	12	2.7	34	15.4
P3415	1 1/2	38.1	1.900	48.3	400	1.78	80	0.36	1 3/4	44.5	3 1/2	88.9	11	3.0	49	22.2
P3417	2	50.8	2.375	60.3	500	2.22	120	0.53	2	50.8	4	101.6	10	3.4	55	24.9

Safety factor of 5

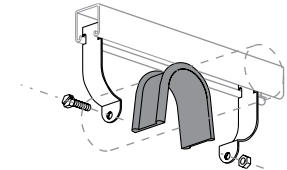
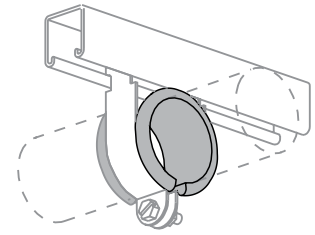
Pipe & Conduit Clamps

P2600 - UNICUSHION®: Isolation Material

- Wt/Carton: 2.5 Lbs (1.1 kg)
- 25 feet per carton
- Cut to length as shown in chart below

Features

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



UNICUSHION® Clamp Selection Guide

Nominal Size (in)	Use with Clamp	UNICUSHION Length	
		(in)	(mm)
3/8	P1426	1 3/4	44.5
1/2	P1111	2 1/8	54.0
3/4	P1112	2 3/4	69.9
1	P2032	3 3/8	92.1
1 1/4	P2035	4 3/4	120.7
1 1/2	P2037	5 1/2	139.7
2	P1117	6 3/4	171.5

Nominal Size (in)	Use with Clamp	UNICUSHION Length	
		(in)	(mm)
3/8	P1111	2 1/8	54.0
1/2	P2030	3	76.2
3/4	P2031	3 1/4	82.6
1	P2034	4 1/4	108.0
1 1/4	P2037	5 1/4	133.4
1 1/2	P2038	6	152.4
2	P2042	7 1/2	190.5
2 1/2	P2046	9	228.6
3	P2051	11	279.4
3 1/2	P2055	12 1/4	311.2
4	P2059	14	355.6
5	P2067	17 1/2	444.5
6	P2070-66	20 3/4	527.1

Nominal Size (in)	Use with Clamp	UNICUSHION Length	
		(in)	(mm)
1/4	P2026	1 1/16	27.0
3/8	P2027	1 1/2	38.1
1/2	P2028	2 1/8	54.0
5/8	P2029	2 1/4	57.2
3/4	P2030	3	76.2
1	P2032	3 5/8	92.1
1 1/4	P2034	4 1/2	114.3
1 1/2	P1430	5 1/4	133.4
2	P2040	6 3/4	171.5
2 1/2	P2044	8 1/4	209.6
3	P2048	10	254.0
3 1/2	P2052	11 1/4	285.8
4	P2056	12 1/2	317.5
5	P2064	16	406.4
6	P2070-62	19	482.6
8	P2070-82	25	635.0

Pipe & Conduit Clamps

P2600 - UNICUSHION®: Isolation Material

UNICUSHION® Clamp Selection Guide

O. D. Size In (mm)		Use With Clamp	UNICUSHION Length In (mm)	
(in)	(mm)		(in)	(mm)
1/4	6.4	P2025	7/8	22.2
3/8	9.5	P2026	1 1/8	27.0
1/2	12.7	P2027	1 1/2	38.1
5/8	15.9	P2028	2 1/8	54.0
3/4	19.1	P2029	2 1/4	57.2
7/8	22.2	P2030	3	76.2
1	25.4	P2031	3 1/4	82.6
1 1/8	28.6	P2032	3 5/8	92.1
1 1/4	31.8	P2033	4	101.6
1 3/8	34.9	P2034	4 1/2	114.3
1 1/2	38.1	P2035	4 7/8	123.8
1 5/8	41.3	P1430	5 1/4	133.4
1 3/4	44.5	P2037	5 1/2	139.7
1 7/8	47.6	P2038	6	152.4
2	50.8	P2039	6 1/2	165.1
2 1/8	54.0	P2040	6 3/4	171.5
2 1/4	57.2	P1117	7 1/4	184.2
2 3/8	60.3	P2042	7 1/2	190.5
2 1/2	63.5	P2043	8	203.2
2 5/8	66.7	P2044	8 1/4	209.6
2 3/4	69.9	P1118	8 3/4	222.3
2 7/8	73.0	P2046	9 1/4	235.0
3	76.2	P2047	9 1/2	241.3
3 1/8	79.4	P2048	10	254.0
3 1/4	82.6	P2049	10 1/2	266.7
3 3/8	85.7	P1119	10 3/4	273.1
3 1/2	88.9	P2051	11	279.4
3 5/8	92.1	P2052	11 1/4	285.8
3 3/4	95.3	P2053	11 1/2	292.1
3 7/8	98.4	P1120	11 3/4	298.5

O. D. Size In (mm)		Use With Clamp	UNICUSHION Length In (mm)	
(in)	(mm)		(in)	(mm)
4	101.6	P2055	12	304.8
4 1/8	104.8	P2056	12 1/2	317.5
4 1/4	108.0	P2057	13	330.2
4 3/8	111.1	P1121	13 1/2	342.9
4 1/2	114.3	P2059	14	355.6
4 5/8	117.5	P2060	14 1/4	362.0
4 3/4	120.7	P2061	14 3/4	374.7
4 7/8	123.8	P2062	15	381.0
5	127.0	P2063	15 1/2	393.7
5 1/8	130.2	P2064	16	406.4
5 1/4	133.4	P2065	16 1/4	412.8
5 3/8	136.5	P2066	16 1/2	419.1
5 1/2	139.7	P2067	17	431.8
5 5/8	142.9	P2068	17 1/2	444.5
5 3/4	146.1	P2069	17 3/4	450.9
5 7/8	149.2	P2070	18 1/4	463.6
6	152.4	P2070-61	18 1/2	469.9
6 1/8	155.6	P2070-62	19	482.6
6 1/4	158.8	P2070-63	19 1/4	489.0
6 3/8	161.9	P2070-64	19 3/4	501.7
6 1/2	165.1	P1124	20	508.0
6 5/8	168.3	P2070-66	20 1/2	520.7
6 3/4	171.5	P2070-67	21	533.4
6 7/8	174.6	P2070-70	21 1/4	539.8

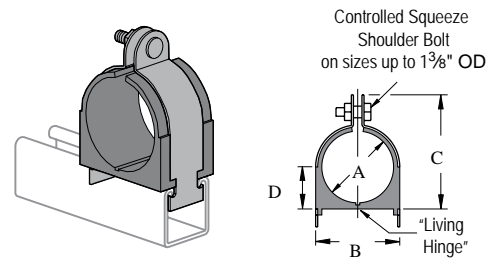
O. D. Size In (mm)		Use With Clamp	UNICUSHION Length In (mm)	
(in)	(mm)		(in)	(mm)
7	177.8	P2070-71	21 3/4	552.5
7 1/8	181.0	P2070-72	22	558.8
7 1/4	184.2	P2070-73	22 1/2	571.5
7 3/8		P2070-74	22 3/4	
7 1/2		P2070-75	23 1/4	
7 5/8	193.7	P2070-76	23 1/2	596.9
7 3/4	196.9	P2070-77	24	609.6
7 7/8	200.0	P2070-80	24 1/2	622.3
8	203.2	P2070-81	24 3/4	628.7
8 1/8	206.4	P2070-82	25	635.0
8 1/4	209.6	P2070-83	25 1/2	647.7
8 3/8	212.7	P2070-84	26	660.4
8 1/2	215.9	P1126	26 1/4	666.8

Pipe & Conduit Clamps

004T008 thru 098N106, 009N012 thru 106N114 - CUSH-A-CLAMP® Assembly



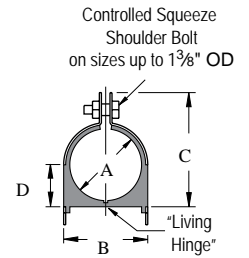
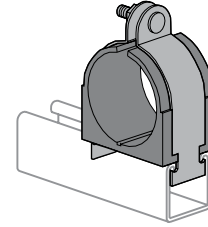
- Materials:
 - Clamp: Electro-galvanized or stainless steel
 - Cushion: Thermoplastic elastomer. (UV Resistant)
- Includes cushion, clamp and hardware
- Temperature Rating:
 - 50°F to +275°F (-45°C to +135°C)
- Insert Width: 1.56" (39.6)
- Part Numbers are "coded" to designate cushion size and clamp size. Examples:
- 004T008 004
 - Cushion Size $\frac{3}{16}$ " (6.4)
 - T - With Controlled Squeeze Shoulder Bolt Available on sizes up to $1\frac{3}{8}$ "
 - 008 - Clamp Size $\frac{5}{16}$ " (12.7)
- 009N012009
 - Cushion Size $\frac{3}{16}$ " (14.3)
 - N - With Standard Bolt
 - 012 - Clamp Size $1\frac{1}{16}$ " (19.1)



Part Number	Nominal Pipe Size (in)	Dimensions								Wt/100 pcs	
		"A"		"B"		"C"		"D"		(lb)	(kg)
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)		
009N012	$\frac{1}{4}$	0.54	13.7	0.98	24.9	1.34	34.0	0.43	10.9	13	5.9
011N014	$\frac{3}{8}$	0.67	17.0	1.13	28.7	1.54	39.1	0.49	12.4	14	6.4
014N018	$\frac{1}{2}$	0.84	21.3	1.29	32.8	1.82	46.2	0.58	14.7	15	6.8
017N022	$\frac{3}{4}$	1.05	26.7	1.5	38.1	1.95	49.2	0.7	17.8	17	7.7
021N026	1	1.31	33.3	1.76	44.7	2.34	59.4	0.81	20.6	19	8.6
027N032	$1\frac{1}{4}$	1.66	42.2	2.17	55.1	2.73	69.3	0.99	25.1	35	15.9
030N034	$1\frac{1}{2}$	1.9	48.3	2.35	59.7	2.86	72.6	1.09	27.7	39	17.7
038N044	2	2.37	60.2	2.82	71.6	3.67	93.2	1.41	35.8	49	22.2
046N052	$2\frac{1}{2}$	2.87	72.9	3.32	84.3	4.17	105.9	1.66	42.2	57	25.9
056N062	3	3.5	88.9	3.95	100.3	4.79	121.7	1.97	50.0	55	24.9
064N072	$3\frac{1}{2}$	4	101.6	4.45	113.0	5.42	137.7	2.28	57.9	88	39.9
072N080	4	4.5	114.3	4.95	125.7	5.92	150.4	2.53	64.3	110	49.9
089N096	5	5.56	141.2	6.01	152.7	6.92	175.8	3.06	77.7	130	59.0

Pipe & Conduit Clamps

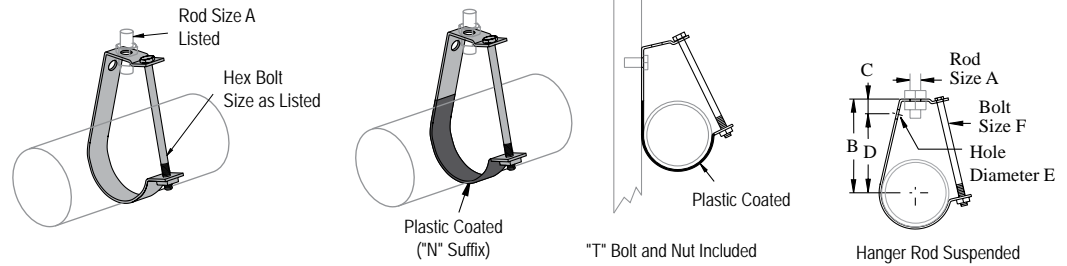
004T008 thru 098N106, 009N012 thru 106N114 - CUSH-A-CLAMP® Assembly



Part Number	Copper & Steel Tube O. D. Size	Copper Water Pipe (Nominal)	Dimensions								Wt/100 pcs	
			"A"		"B"		"C"		"D"		(lb)	(kg)
			(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)		
004T008	1/4		0.25	6.4	0.62	15.7	0.98	24.9	0.27	6.9	10	4.5
006T010	3/8	1/4	0.37	9.4	0.82	20.8	1.13	28.7	0.33	8.4	11	5.0
008T012	1/2	3/8	0.50	12.7	0.94	23.9	1.34	34.0	0.4	10.2	13	5.9
010T014	5/8	1/2	0.62	15.7	1.06	26.9	1.54	39.1	0.46	11.7	14	6.4
012T016	3/4	5/8	0.75	19.1	1.2	30.5	1.68	42.7	0.52	13.2	14	6.4
014T018	7/8	3/4	0.87	22.1	1.31	33.3	1.82	46.2	0.58	14.7	15	6.8
016T020	1		1.00	25.4	1.44	36.6	1.95	49.5	0.65	16.5	17	7.7
018T022	1 1/8	1	1.12	28.4	1.57	39.9	2.08	52.8	0.7	17.8	18	8.2
020T024	1 1/4		1.25	31.8	1.7	43.2	2.21	56.1	0.77	19.6	18	8.2
022T026	1 3/8	1 1/4	1.37	34.8	1.82	46.2	2.34	59.4	0.83	21.1	20	9.1
024N028	1 1/2		1.5	38.1	1.95	49.5	2.47	62.7	0.9	22.9	33	15.0
026N030	1 5/8	1 1/2	1.62	41.1	2.07	52.6	2.6	66.0	0.96	24.4	35	15.9
028N032	1 3/4		1.75	44.5	2.2	55.9	2.73	69.3	1.02	25.9	37	16.8
030N034	1 7/8		1.90	48.3	2.35	59.7	2.86	72.6	1.09	27.7	39	17.7
032N036	2		2.00	50.8	2.45	62.2	3.04	77.2	1.15	29.2	46	20.9
034N040	2 1/8	2	2.12	53.8	2.57	65.3	3.23	82.0	1.27	32.3	47	21.3
038N044	2 3/8		2.37	60.2	2.82	71.6	3.67	93.2	1.41	35.8	49	22.2
040N046	2 1/2		2.50	63.5	2.94	74.7	3.79	96.3	1.46	37.1	51	23.1
042N048	2 5/8	2 1/2	2.62	66.5	3.1	78.0	3.92	99.6	1.53	38.9	55	24.9
046N052	2 7/8		2.87	72.9	3.3	84.3	4.17	105.9	1.66	42.2	57	25.9
050N054	3		3.00	76.2	3.6	90.7	4.42	112.3	1.78	45.2	60	27.2
050N056	3 1/8	3	3.12	79.2	3.6	90.7	4.42	112.3	1.78	45.2	60	27.2
053N060	3 1/4		3.31	84.1	4.0	100.6	4.75	120.7	1.9	48.3	62	28.1
056N062	3 1/2		3.5	88.9	4.0	100.3	4.79	121.7	1.97	50.0	55	24.9
058N064	3 5/8	3 1/2	3.62	91.9	4.2	106.7	4.99	126.7	2.03	51.6	70	31.8
064N072	4		4	101.6	4.5	113.0	5.42	137.7	2.28	57.9	88	39.9
066N074	4 1/8	4	4.12	104.6	4.6	116.1	5.54	140.7	2.34	59.4	94	42.6
069N076	4 1/4		4.34	110.2	5.0	126.0	5.84	148.3	2.4	61.0	100	45.4
072N080	4 1/2		4.5	114.3	5.0	125.7	5.92	150.4	2.53	64.3	110	49.9
082N090	5 1/8	5	5.12	130.0	5.6	141.5	6.54	166.1	2.84	72.1	125	56.7
098N106	6 1/8	6	6.12	155.4	6.6	166.9	7.54	191.5	3.34	84.8	130	59.0

Pipe Hangers

J1205 thru J1280, J1205 N thru J1280 N (Plastic Coated) - "J" Conduit & Pipe Hanger



Part Number	Wt/100 pcs		Part Number	Wt/100 pcs		Pipe Size (in)	"A"		"B"		"C"		"D"		"E"		"F"		Load	
	(lb)	(kg)		(lb)	(kg)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kN)
J1205	20	9.1	J1205N	21	9.5	1/2	3/8	9.5	2 5/8	66.7	1	25.4	2	50.8	13 1/32	10.3	1/4 x 2 1/4	6.4x57.2	400	1.78
J1207	21	9.5	J1207N	22	10.0	3/4	3/8	9.5	2 7/8	73.0	1	25.4	2 1/4	57.2	13 1/32	10.3	1/4 x 2 1/4	6.4x57.2	400	1.78
J1210	24	10.9	J1210N*	25	11.3	1	3/8	9.5	3	76.2	1	25.4	2 3/8	60.3	13 1/32	10.3	1/4 x 2 1/2	6.4 x 63.5	400	1.78
J1212	27	12.2	J1212N	29	13.2	1 1/4	3/8	9.5	3 1/4	82.6	1	25.4	2 1/2	63.5	13 1/32	10.3	1/4 x 2 3/4	6.4 x 69.9	400	1.78
J1215	29	13.2	J1215N*	31	14.1	1 1/2	3/8	9.5	3 1/2	88.9	1	25.4	2 5/8	66.7	13 1/32	10.3	1/4 x 3	6.4 x 76.2	400	1.78
J1220	33	15.0	J1220N*	35	15.9	2	3/8	9.5	3 3/4	95.3	1 1/8	28.6	2 5/8	66.7	13 1/32	10.3	1/4 x 3 1/2	6.4 x 88.9	400	1.78
J1225	71	32.2	J1225N	74	33.6	2 1/2	1/2	12.7	4 3/8	111.1	1 1/8	28.6	3 3/8	92.1	9 1/16	14.3	3/8 x 4 1/2	9.5 x 114.3	800	3.56
J1230	78	35.4	J1230N*	81	36.7	3	1/2	12.7	4 7/8	123.8	1 1/8	28.6	4	101.6	9 1/16	14.3	3/8 x 5	9.5 x 127.0	800	3.56
J1235	85	38.6	J1235N	88	39.9	3 1/2	1/2	12.7	5 1/8	130.2	1 1/8	28.6	4 1/4	108.0	9 1/16	14.3	3/8 x 6	9.5 x 152.4	800	3.56
J1240	178	80.7	J1240N*	182	82.6	4	5/8	15.9	6 1/8	155.6	1 1/8	28.6	5 1/8	130.2	9 1/16	14.3	3/8 x 6	9.5 x 152.4	800	3.56
J1250	199	90.3	J1250N	203	92.1	5	5/8	15.9	6 3/4	171.5	1 1/8	28.6	5 3/4	146.1	9 1/16	14.3	3/8 x 7 1/2	9.5 x 190.5	800	3.56
J1260	231	104.8	J1260N*	236	107.0	6	3/4	19.1	7 3/4	196.9	1 1/4	31.8	6 1/2	165.1	9 1/16	14.3	3/8 x 8 1/2	9.5 x 215.9	1,000	4.45
J1280	449	203.7	J1280N	458	207.7	8	7/8	22.2	9 1/4	235.0	1 1/4	31.8	8	203.2	9 1/16	14.3	3/8 x 10	9.5x254.0	1,200	5.34

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

Pipe & Conduit Reference Data

Nominal Pipe Dia. (in)		Centerline to Centerline Standard																
		3/4"		1"			1 1/4"			1 1/2"			2"			2 1/2"		
		T (in)	S (in)	T (in)	F (in)	S (in)	T (in)	F (in)	S (in)	T (in)	F (in)	S (in)	T (in)	F (in)	S (in)	T (in)	F (in)	S (in)
3/4"	T	4 3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	S	4 1/2	4 3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	T	5	4 3/4	5 1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	6	5 3/4	6 1/4	7 1/4	-	-	-	-	-	-	-	-	-	-	-	-	-
	S	4 3/4	4 1/2	5	6	4 1/2	-	-	-	-	-	-	-	-	-	-	-	-
1 1/4"	T	5 1/4	5	5 1/2	6 1/2	5	5 1/2	-	-	-	-	-	-	-	-	-	-	-
	F	6 1/4	6	6 1/2	7 1/2	6 1/4	6 3/4	7 3/4	-	-	-	-	-	-	-	-	-	-
	S	4 3/4	4 1/2	5	6	4 1/2	5 1/4	6 1/4	4 3/4	-	-	-	-	-	-	-	-	-
1 1/2"	T	5 1/4	5	5 1/2	6 1/2	5 1/4	5 3/4	6 3/4	5 1/4	5 3/4	-	-	-	-	-	-	-	-
	F	6 1/2	6 1/4	6 3/4	7 3/4	6 1/4	6 3/4	8	6 1/2	7	8	-	-	-	-	-	-	-
	S	5	4 3/4	5 1/4	6 1/4	4 3/4	5 1/4	6	5	5 1/2	6 1/2	5	-	-	-	-	-	-
2"	T	5 3/4	5 1/2	6	7	5 1/2	6	7 1/4	5 3/4	6 1/4	7 1/4	5 3/4	6 1/2	-	-	-	-	-
	F	7	6 3/4	7 1/4	8 1/4	6 3/4	7 1/4	8 1/2	7	7 1/2	8 1/2	7	7 3/4	9	-	-	-	-
	S	5 1/4	5	5 1/2	6 1/2	5	5 1/2	6 3/4	5 1/4	5 3/4	6 3/4	5 1/4	6	7 1/4	5 1/2	-	-	-
2 1/2"	T	6	5 3/4	6 1/4	7 1/4	6	6 1/2	7 1/2	6	6 1/2	7 3/4	6 1/4	7	8 1/4	6 1/2	7 1/4	-	-
	F	7 1/2	7 1/4	7 3/4	8 3/4	7 1/4	7 3/4	9	7 1/2	8	9	7 1/2	8 1/4	9 1/2	7 3/4	8 3/4	10	-
	S	5 1/2	5 1/4	5 3/4	6 3/4	5 1/4	5 3/4	7	5 1/2	6	7	5 1/2	6 1/4	7 1/2	5 3/4	6 3/4	8	6
3"	T	6 1/4	6	6 1/2	7 1/2	6 1/4	6 3/4	7 3/4	6 1/4	6 3/4	8	6 1/2	7 1/4	8 1/2	6 3/4	7 1/2	9	7
	F	7 3/4	7 1/2	8	9	7 1/2	8	9 1/4	7 3/4	8 1/4	9 1/4	7 3/4	8 1/2	9 3/4	8	9	10 1/4	8 1/4
	S	5 3/4	5 1/2	6	7	5 1/2	6	7 1/4	5 3/4	6 1/4	7 1/4	5 3/4	6 1/2	7 3/4	6	7	8 1/4	6 1/4
4"	T	7 1/2	7 1/4	7 3/4	8 3/4	7 1/4	7 3/4	9	7 1/2	8	9	7 1/2	8 1/4	9 1/2	7 3/4	8 3/4	10	8
	F	9	8 3/4	9 1/4	10 1/4	8 3/4	9 1/4	10 1/2	9	9 1/2	10 1/2	9	9 3/4	11	9 1/4	10 1/4	11 1/2	9 1/2
	S	6 3/4	6 1/2	7	8	6 1/2	7	8 1/4	6 3/4	7 1/4	8 1/4	6 3/4	7 1/2	8 3/4	7	8	9 1/4	7 1/4
5"	T	8	7 3/4	8 1/4	9 1/4	7 3/4	8 1/4	9 1/2	8	8 1/2	9 1/2	8	8 3/4	10	8 1/4	9 1/4	10 1/2	8 1/2
	F	9 1/2	9 1/4	9 3/4	10 3/4	9 1/4	9 3/4	11	9 1/2	10	11	9 1/2	10 1/4	11 1/2	9 3/4	10 3/4	12	10
	S	7 1/4	7	7 1/2	8 1/4	7	7 1/2	8 3/4	7 1/4	7 3/4	8 3/4	7 1/4	8	9 1/4	7 1/2	8 1/2	9 3/4	7 3/4
6"	T	8 3/4	8 1/2	9	10	8 1/2	9	10 1/4	8 3/4	9 1/4	10 1/4	8 3/4	9 1/2	10 3/4	9	10	11 1/4	9 1/4
	F	10	9 3/4	10 1/4	11 1/4	9 3/4	10 1/4	11 1/2	10	10 1/2	11 1/2	10	10 3/4	12	10 1/4	11 1/4	12 1/2	10 1/2
	S	7 3/4	7 1/2	8	9	7 1/2	8	9 1/4	7 3/4	8 1/4	9 1/4	7 3/4	8 1/2	9 3/4	8	9	10 1/4	8 1/4
8"	T	8 3/4	9 1/2	10	11	9 3/4	10 1/2	11 1/4	9 3/4	10 1/4	11 1/2	10	10 3/4	12	10 1/2	11	12 1/2	10 1/2
	F	11 1/4	11	11 1/2	12 1/2	11	11 1/2	12 3/4	11 1/4	11 3/4	12 3/4	11 1/4	12	13 1/4	11 1/2	12 1/2	13 3/4	11 3/4
10"	T	11 1/4	11	11 1/2	12 1/2	11	11 1/2	12 3/4	11 1/4	11 3/4	12 3/4	11 1/4	12	13 1/4	11 1/2	12 1/2	13 3/4	11 3/4
	F	12 1/2	12 1/4	12 3/4	13 3/4	12 1/4	12 3/4	14	12 1/2	13	14	12 1/2	13 1/4	14 1/2	12 3/4	13 3/4	15	13
12"	T	12 1/4	12	12 1/2	13 1/2	12	12 1/2	13 3/4	12 1/4	12 3/4	13 3/4	12 1/4	13	14 1/4	12 1/2	13 1/2	14 3/4	12 3/4
	F	14	13 3/4	14 1/4	15 1/4	13 3/4	14 1/4	15 1/2	14	14 1/2	15 1/2	14	14 3/4	16	14 1/4	15 1/4	16 1/2	14 1/2

Pipe & Conduit Reference Data

Nominal Pipe Dia. (mm)		Centerline to Centerline Metric																
		19.1		25.4			31.8			38.1			50.8			63.5		
		T (mm)	S (mm)	T (mm)	S (mm)	S (mm)	T (mm)	S (mm)	S (mm)	T (mm)	S (mm)	S (mm)	T (mm)	S (mm)	S (mm)	T (mm)	F (mm)	S (mm)
19.1	T	120.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	S	114.3	120.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.4	T	127.0	120.7	133.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	152.4	146.1	158.8	184.2	-	-	-	-	-	-	-	-	-	-	-	-	-
	S	120.7	114.3	127.0	152.4	114.3	-	-	-	-	-	-	-	-	-	-	-	-
31.8	T	133.4	127.0	139.7	165.1	127.0	139.7	-	-	-	-	-	-	-	-	-	-	-
	F	158.8	152.4	165.1	190.5	158.8	171.5	196.9	-	-	-	-	-	-	-	-	-	-
	S	120.7	114.3	127.0	152.4	114.3	133.4	158.8	120.7	-	-	-	-	-	-	-	-	-
38.1	T	133.4	127.0	139.7	165.1	133.4	146.1	171.5	133.4	146.1	-	-	-	-	-	-	-	-
	F	165.1	158.8	171.5	196.9	158.8	171.5	203.2	165.1	177.8	203.2	-	-	-	-	-	-	-
	S	127.0	120.7	133.4	158.8	120.7	133.4	152.4	127.0	139.7	165.1	127.0	-	-	-	-	-	-
50.8	T	146.1	139.7	152.4	177.8	139.7	152.4	184.2	146.1	158.8	184.2	146.1	165.1	-	-	-	-	-
	F	177.8	171.5	184.2	209.6	171.5	184.2	215.9	177.8	190.5	215.9	177.8	196.9	228.6	-	-	-	-
	S	133.4	127.0	139.7	165.1	127.0	139.7	171.5	133.4	146.1	171.5	133.4	152.4	184.2	139.7	-	-	-
63.5	T	152.4	146.1	158.8	184.2	152.4	165.1	190.5	152.4	165.1	196.9	158.8	177.8	209.6	165.1	184.2	-	-
	F	190.5	184.2	196.9	222.3	184.2	196.9	228.6	190.5	203.2	228.6	190.5	209.6	241.3	196.9	222.3	254.0	-
	S	139.7	133.4	146.1	171.5	133.4	146.1	177.8	139.7	152.4	177.8	139.7	158.8	190.5	146.1	171.5	203.2	152.4
76.2	T	158.8	152.4	165.1	190.5	158.8	171.5	196.9	158.8	171.5	203.2	165.1	184.2	215.9	171.5	190.5	228.6	177.8
	F	196.9	190.5	203.2	228.6	190.5	203.2	235.0	196.9	209.6	235.0	196.9	215.9	247.7	203.2	228.6	260.4	209.6
	S	146.1	139.7	152.4	177.8	139.7	152.4	184.2	146.1	158.8	184.2	146.1	165.1	196.9	152.4	177.8	209.6	158.8
101.6	T	190.5	184.2	196.9	222.3	184.2	196.9	228.6	190.5	203.2	228.6	190.5	209.6	241.3	196.9	222.3	254.0	203.2
	F	228.6	222.3	235.0	260.4	222.3	235.0	266.7	228.6	241.3	266.7	228.6	247.7	279.4	235.0	260.4	292.1	241.3
	S	171.5	165.1	177.8	203.2	165.1	177.8	209.6	171.5	184.2	209.6	171.5	190.5	222.3	177.8	203.2	235.0	184.2
127.0	T	203.2	196.9	209.6	235.0	196.9	209.6	241.3	203.2	215.9	241.3	203.2	222.3	254.0	209.6	235.0	266.7	215.9
	F	241.3	235.0	247.7	273.1	235.0	247.7	279.4	241.3	254.0	279.4	241.3	260.4	292.1	247.7	273.1	304.8	254.0
	S	184.2	177.8	190.5	209.6	177.8	190.5	222.3	184.2	196.9	222.3	184.2	203.2	235.0	190.5	215.9	247.7	196.9
152.4	T	222.3	215.9	228.6	254.0	215.9	228.6	260.4	222.3	235.0	260.4	222.3	241.3	273.1	228.6	254.0	285.8	235.0
	F	254.0	247.7	260.4	285.8	247.7	260.4	292.1	254.0	266.7	292.1	254.0	273.1	304.8	260.4	285.8	317.5	266.7
	S	196.9	190.5	203.2	228.6	190.5	203.2	235.0	196.9	209.6	235.0	196.9	215.9	247.7	203.2	228.6	260.4	209.6
203.2	T	222.3	241.3	254.0	279.4	247.7	266.7	285.8	247.7	260.4	292.1	254.0	273.1	304.8	266.7	279.4	317.5	266.7
	F	285.8	279.4	292.1	317.5	279.4	292.1	323.9	285.8	298.5	323.9	285.8	304.8	336.6	292.1	317.5	349.3	298.5
254.0	T	285.8	279.4	292.1	317.5	279.4	292.1	323.9	285.8	298.5	323.9	285.8	304.8	336.6	292.1	317.5	349.3	298.5
	F	317.5	311.2	323.9	349.3	311.2	323.9	355.6	317.5	330.2	355.6	317.5	336.6	368.3	323.9	349.3	381.0	330.2
304.8	T	311.2	304.8	317.5	342.9	304.8	317.5	349.3	311.2	323.9	349.3	311.2	330.2	362.0	317.5	342.9	374.7	323.9
	F	355.6	349.3	362.0	387.4	349.3	362.0	393.7	355.6	368.3	393.7	355.6	374.7	406.4	362.0	387.4	419.1	368.3

Pipe & Conduit Reference Data

Pipe Spacing Table ■

This chart enables one to quickly determine the centerline-to-centerline dimension between any two size pipes on a rack.

Select the smaller pipe size at top and select the other at the side of the table. Where the appropriate columns intersect, the dimension is given.

These factors are included in the dimensions given:

- O.D. of flanges and fittings
- 1" insulation over flanges and fittings
- All fractional dimensions less than $\frac{1}{4}$ " increased to the next larger $\frac{1}{4}$ "
- Clear space between fittings as follows:
 1. 1" between piping 3" and smaller
 2. $1\frac{1}{2}$ " between a pipe 3" and smaller and a pipe 4" or larger
 3. 2" between piping 4" and larger

Pipe & Conduit Reference Data

Pipe Spacing Table

Centerline to Centerline Standard																		Nominal Pipe Dia. (in)	
3"			4"			5"			6"			8"		10"		12"			
T (in)	F (in)	S (in)	T (in)	F (in)	S (in)	T (in)	F (in)	S (in)	T (in)	F (in)	S (in)	T (in)	F (in)	T (in)	F (in)	T (in)	F (in)		
7 ³ / ₄	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T	3
9 ¹ / ₄	10 ¹ / ₂	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	F	
7 ¹ / ₄	8 ¹ / ₂	6 ¹ / ₂	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	
9	10 ¹ / ₄	8 ³ / ₄	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T	4
10 ¹ / ₂	11 ³ / ₄	9 ³ / ₄	11 ¹ / ₂	13	-	-	-	-	-	-	-	-	-	-	-	-	-	F	
8 ³ / ₄	9 ¹ / ₂	7 ¹ / ₂	9 ³ / ₄	10 ³ / ₄	8 ¹ / ₂	-	-	-	-	-	-	-	-	-	-	-	-	S	
9 ¹ / ₂	10 ³ / ₄	8 ³ / ₄	10 ¹ / ₄	12	9 ³ / ₄	11	-	-	-	-	-	-	-	-	-	-	-	T	5
11	12 ¹ / ₄	10 ¹ / ₄	12	13 ¹ / ₂	11 ¹ / ₄	12 ¹ / ₂	14	-	-	-	-	-	-	-	-	-	-	F	
8 ³ / ₄	10	8	9 ³ / ₄	11 ¹ / ₄	9	10 ¹ / ₄	11 ³ / ₄	9 ¹ / ₂	-	-	-	-	-	-	-	-	-	S	
10 ¹ / ₄	11 ¹ / ₂	9 ¹ / ₂	11 ¹ / ₄	12 ³ / ₄	10 ¹ / ₂	11 ³ / ₄	13 ³ / ₄	11	12 ¹ / ₂	-	-	-	-	-	-	-	-	T	6
11 ¹ / ₂	12 ¹ / ₄	10 ³ / ₄	12 ¹ / ₂	14	11 ³ / ₄	13	14 ¹ / ₂	12 ¹ / ₄	13 ³ / ₄	15	-	-	-	-	-	-	-	F	
9 ¹ / ₄	10 ¹ / ₂	8 ¹ / ₂	10 ¹ / ₄	11 ³ / ₄	9 ¹ / ₂	10 ³ / ₄	12 ¹ / ₄	10	11 ¹ / ₂	12 ³ / ₄	10 ¹ / ₂	-	-	-	-	-	-	S	
11 ¹ / ₄	12 ³ / ₄	10 ³ / ₄	12 ¹ / ₂	14	11 ³ / ₄	13	14 ¹ / ₂	12 ¹ / ₄	13 ³ / ₄	15	12 ³ / ₄	14 ³ / ₄	-	-	-	-	-	T	8
12 ³ / ₄	14	12	13 ³ / ₄	15 ¹ / ₄	13	14 ¹ / ₄	15 ³ / ₄	13 ¹ / ₂	15	16 ¹ / ₄	14	16 ¹ / ₄	17.5	-	-	-	-	F	
12 ¹ / ₄	14	12	13 ¹ / ₄	15 ¹ / ₄	13	14 ¹ / ₄	15 ³ / ₄	13 ¹ / ₂	15	16 ¹ / ₄	14	16 ¹ / ₄	17 ¹ / ₂	17 ¹ / ₂	-	-	-	T	
14	15 ¹ / ₄	13 ¹ / ₄	15	16 ¹ / ₂	14 ¹ / ₄	15 ¹ / ₂	17	14 ³ / ₄	16 ¹ / ₄	17 ¹ / ₂	15 ¹ / ₄	17 ¹ / ₂	18 ³ / ₄	18 ³ / ₄	20	-	-	F	10
13 ³ / ₄	15	13	14 ³ / ₄	16 ¹ / ₄	14	15 ¹ / ₄	16 ³ / ₄	14 ¹ / ₂	16	17 ¹ / ₄	15	17 ¹ / ₄	18 ¹ / ₂	18 ¹ / ₂	19 ³ / ₄	19 ¹ / ₂	-	T	12
15 ¹ / ₂	16 ³ / ₄	14 ³ / ₄	16 ¹ / ₂	18	15 ³ / ₄	17	18 ¹ / ₄	16 ¹ / ₄	17 ³ / ₄	19	16 ³ / ₄	14	20 ¹ / ₄	20 ¹ / ₄	21 ¹ / ₂	21 ¹ / ₄	29	F	

T - denotes threaded IPS pipe. F - denotes flanged fittings on pipe. S - denotes soldered or brazed tubing.

Centerline to Centerline Metric																		Nominal Pipe Dia. (mm)	
76.2mm			101.6mm			127.0mm			152.4mm			203.2mm		254.0mm		304.8mm			
T (mm)	F (mm)	S (mm)	T (mm)	F (mm)	S (mm)	T (mm)	F (mm)	S (mm)	T (mm)	F (mm)	S (mm)	T (mm)	F (mm)	T (mm)	F (mm)	T (mm)	F (mm)		
196.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T	76.2
235.0	266.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	F	
184.2	215.9	165.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	
228.6	260.4	209.6	254.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T	101.6
266.7	298.5	247.7	292.1	330.2	-	-	-	-	-	-	-	-	-	-	-	-	-	F	
209.6	241.3	190.5	235.0	273.1	215.9	-	-	-	-	-	-	-	-	-	-	-	-	S	
241.3	273.1	222.3	260.4	304.8	247.7	279.4	-	-	-	-	-	-	-	-	-	-	-	T	127.0
279.4	311.2	260.4	304.8	342.9	285.8	317.5	355.6	-	-	-	-	-	-	-	-	-	-	F	
222.3	254.0	203.2	247.7	285.8	228.6	260.4	298.5	241.3	-	-	-	-	-	-	-	-	-	S	
260.4	292.1	241.3	285.8	323.9	266.7	298.5	336.6	279.4	317.5	-	-	-	-	-	-	-	-	T	152.4
292.1	311.2	273.1	317.5	355.6	298.5	330.2	368.3	311.2	336.6	381.0	-	-	-	-	-	-	-	F	
235.0	266.7	215.9	260.4	298.5	241.3	273.1	311.2	254.0	292.1	323.9	266.7	-	-	-	-	-	-	S	
285.8	323.9	273.1	317.5	355.6	298.5	330.2	368.3	311.2	349.3	381.0	323.9	374.7	-	-	-	-	-	T	203.2
323.9	355.6	304.8	349.3	387.4	330.2	362.0	400.1	342.9	381.0	412.8	355.6	412.8	17.5	-	-	-	-	F	
323.9	355.6	304.8	349.3	387.4	330.2	362.0	400.1	342.9	381.0	412.8	355.6	412.8	444.5	444.5	-	-	-	T	
355.6	387.4	336.6	381.0	419.1	362.0	393.7	431.8	374.7	412.8	444.5	387.4	444.5	476.3	476.3	508.0	-	-	F	254.0
349.3	381.0	330.2	374.7	412.8	355.6	387.4	425.5	368.3	406.4	438.2	381.0	438.2	469.9	469.9	501.7	495.3	-	T	304.8
393.7	425.5	374.7	419.1	457.2	400.1	431.8	463.6	412.8	450.9	482.6	425.5	355.6	514.4	514.4	546.1	539.8	736.6	F	

T - denotes threaded IPS pipe. F - denotes flanged fittings on pipe. S - denotes soldered or brazed tubing.

Pipe & Conduit Reference Data

Channel Selection for Schedule 10 Sprinkler Pipe Trapeze Hangers

Note: Based on NFPA-13-2013-Table 9.1.1.7.1(a). Each of the following tables indicates the allowable span of the trapeze and the nominal pipe size for the specified channel. An entry of "N/A" indicates that the channel cannot be used for this span/pipe size combination. The table is based on a maximum allowable bending stress of 15 KSI and a midspan concentrated load from 15 ft of water-filled pipe, plus 250 lbs.

Channel	Section Modulus		Channel	Section Modulus	
	(in ³)	(cm ³)		(in ³)	(cm ³)
P3000	0.154	2.52	P3001	0.431	7.06
P1000	0.202	3.31	P1001	0.572	9.37
P5500	0.391	6.41	P5501	1.153	18.89
P5000	0.628	10.29	P5001	1.916	31.40

Nominal Pipe Dia. (in)	Schedule 10 Pipe					
	O.D. (in)	Wall Thickness (in)	I.D. (in)	Pipe Weight (p/f)	Water Weight (p/f)	Total Weight (p/f)
1	1.315	0.109	1.097	1.41	0.42	1.83
1 1/4	1.660	0.109	1.442	1.81	0.73	2.54
1 1/2	1.900	0.109	1.682	2.09	0.99	3.08
2	2.375	0.109	2.157	2.64	1.63	4.28
2 1/2	2.875	0.120	2.635	3.53	2.44	5.97
3	3.500	0.120	3.260	4.34	3.73	8.07
3 1/2	4.000	0.120	3.760	4.98	4.97	9.95
4	4.500	0.120	4.260	5.62	6.38	12.00
5	5.563	0.134	5.295	7.78	9.85	17.63
6	6.625	0.134	6.357	9.30	14.20	23.50
8	8.625	0.188	8.249	16.96	23.91	40.87
10	10.750	0.188	10.374	21.23	37.82	59.04

Trapeze Span	NFPA 13 Required Trapeze Section Modulus for Sch 10 Pipe											
	Pipe Diameter											
	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	8"	10"
1'-6"	0.08	0.08	0.09	0.09	0.10	0.11	0.12	0.13	0.15	0.18	0.26	0.34
2'-0"	0.11	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.2	0.24	0.34	0.45
2'-6"	0.14	0.14	0.15	0.16	0.18	0.21	0.23	0.25	0.3	0.36	0.5	0.69
3'-0"	0.16	0.17	0.18	0.19	0.2	0.22	0.24	0.26	0.31	0.36	0.51	0.67
4'-0"	0.22	0.22	0.24	0.25	0.27	0.30	0.32	0.34	0.41	0.48	0.68	0.89
5'-0"	0.27	0.28	0.3	0.31	0.34	0.37	0.40	0.43	0.51	0.60	0.85	1.12
6'-0"	0.33	0.34	0.35	0.38	0.41	0.44	0.48	0.51	0.61	0.71	1.02	1.34
7'-0"	0.38	0.39	0.41	0.44	0.47	0.52	0.56	0.6	0.71	0.83	1.19	1.56
8'-0"	0.43	0.45	0.47	0.5	0.54	0.59	0.63	0.68	0.82	0.95	1.36	1.79
9'-0"	0.49	0.50	0.53	0.56	0.61	0.66	0.71	0.77	0.92	1.07	1.53	2.01
10'-0"	0.54	0.56	0.59	0.63	0.68	0.74	0.79	0.85	1.02	1.19	1.7	2.23

Values taken from NFPA 13 (2013 Edition), Table 9.1.1.7.1(a)

Trapeze Span	Single Channel Trapeze for Sch 10 Pipe											
	Pipe Diameter											
	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	8"	10"
1'-6"	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P1000	P5500	P5500
2'-0"	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P1000	P1000	P5500	P5500	P5000
2'-6"	P3000	P3000	P3000	P1000	P1000	P5500	P5500	P5500	P5500	P5500	P5000	N/A
3'-0"	P1000	P1000	P1000	P1000	P1000	P5500	P5500	P5500	P5500	P5500	P5000	N/A
4'-0"	P5500	P5500	P5500	P5500	P5500	P5500	P5500	P5500	P5000	P5000	N/A	N/A
5'-0"	P5500	P5500	P5500	P5500	P5500	P5500	P5000	P5000	P5000	P5000	N/A	N/A
6'-0"	P5500	P5500	P5500	P5500	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A
7'-0"	P5500	P5500	P5000	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A
8'-0"	P5000	P5000	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A
9'-0"	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10'-0"	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Trapeze Span	Double Channel Trapeze for Sch 10 Pipe											
	Pipe Diameter											
	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	8"	10"
1'-6"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001
2'-0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001
2'-6"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501
3'-0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501
4'-0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501	P5501
5'-0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501	P5501	P5501
6'-0"	P3001	P3001	P3001	P3001	P3001	P1001	P1001	P1001	P5501	P5501	P5501	P5001
7'-0"	P3001	P3001	P3001	P1001	P1001	P1001	P1001	P5501	P5501	P5501	P5001	P5001
8'-0"	P3001	P1001	P1001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5001	P5001
9'-0"	P1001	P1001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5501	P5001	N/A
10'-0"	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5501	P5501	P5501	P5001	N/A

Pipe & Conduit Reference Data

Channel Selection for Schedule 40 Sprinkler Pipe Trapeze Hangers

Note: Based on NFPA-13-2013-Table 9.1.1.7.1(a). Each of the following tables indicates the allowable span of the trapeze and the nominal pipe size for the specified channel. An entry of "N/A" indicates that the channel cannot be used for this span/pipe size combination. The table is based on a maximum allowable bending stress of 15 KSI and a midspan concentrated load from 15 ft of water-filled pipe, plus 250 lbs.

Channel	Section Modulus		Channel	Section Modulus	
	(in ³)	(cm ³)		(in ³)	(cm ³)
P3000	0.154	2.52	P3001	0.431	7.06
P1000	0.202	3.31	P1001	0.572	9.37
P5500	0.391	6.41	P5501	1.153	18.89
P5000	0.628	10.29	P5001	1.916	31.40

Schedule 40 Pipe						
Nominal Pipe Dia. (in)	O.D. (in)	Wall Thickness (in)	I.D. (in)	Pipe Weight (p/f)	Water Weight (p/f)	Total Weight (p/f)
1	1.315	0.133	1.049	1.68	0.39	2.07
1 ¹ / ₄	1.660	0.140	1.380	2.27	0.67	2.94
1 ¹ / ₂	1.900	0.145	1.610	2.72	0.91	3.63
2	2.375	0.154	2.067	3.66	1.50	5.16
2 ¹ / ₂	2.875	0.203	2.469	5.80	2.14	7.94
3	3.500	0.216	3.068	7.58	3.31	10.89
3 ¹ / ₂	4.000	0.226	3.548	9.12	4.42	13.54
4	4.500	0.237	4.026	10.80	5.70	16.50
5	5.563	0.258	5.047	14.63	8.95	23.58
6	6.625	0.280	6.065	18.99	12.93	31.92
8	8.625	0.322	7.981	28.58	22.38	50.96
10	10.750	0.365	10.020	40.52	35.28	75.80

Trapeze Span	NFPA 13 Required Trapeze Section Modulus for Sch 40 Pipe											
	Pipe Diameter											
	1"	1 ¹ / ₄ "	1 ¹ / ₂ "	2"	2 ¹ / ₂ "	3"	3 ¹ / ₂ "	4"	5"	6"	8"	10"
1'-6"	0.08	0.09	0.09	0.1	0.11	0.12	0.14	0.15	0.18	0.22	0.3	0.41
2'-0"	0.11	0.11	0.12	0.13	0.15	0.16	0.18	0.2	0.24	0.29	0.4	0.55
2'-6"	0.14	0.14	0.15	0.16	0.17	0.18	0.2	0.21	0.25	0.3	0.43	0.56
3'-0"	0.16	0.17	0.18	0.2	0.22	0.25	0.27	0.3	0.36	0.43	0.6	0.82
4'-0"	0.22	0.23	0.24	0.26	0.29	0.33	0.36	0.4	0.48	0.58	0.8	1.1
5'-0"	0.27	0.29	0.3	0.33	0.37	0.41	0.45	0.49	0.6	0.72	1	1.37
6'-0"	0.33	0.34	0.36	0.39	0.44	0.49	0.54	0.59	0.72	0.87	1.2	1.64
7'-0"	0.38	0.4	0.43	0.46	0.52	0.58	0.63	0.69	0.84	1.01	1.41	1.92
8'-0"	0.44	0.46	0.49	0.52	0.59	0.66	0.72	0.79	0.96	1.16	1.61	2.19
9'-0"	0.49	0.51	0.55	0.59	0.66	0.74	0.81	0.89	1.08	1.3	1.81	2.47
10'-0"	0.55	0.57	0.61	0.65	0.74	0.82	0.9	0.99	1.2	1.45	2.01	2.74

Values taken from NFPA 13 (2013 Edition), Table 9.1.1.7.1(a)

Trapeze Span	Single Channel Trapeze for Sch 40 Pipe											
	Pipe Diameter											
	1"	1 ¹ / ₄ "	1 ¹ / ₂ "	2"	2 ¹ / ₂ "	3"	3 ¹ / ₂ "	4"	5"	6"	8"	10"
1'-6"	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P1000	P5500	P5500	P5000
2'-0"	P3000	P3000	P3000	P3000	P3000	P1000	P1000	P1000	P5500	P5500	P5000	P5000
2'-6"	P3000	P3000	P3000	P1000	P1000	P1000	P1000	P1000	P5500	P5500	P5000	P5000
3'-0"	P1000	P1000	P1000	P1000	P5500	P5500	P5500	P5500	P5500	P5000	P5000	N/A
4'-0"	P5500	P5500	P5500	P5500	P5500	P5500	P5000	P5000	P5000	P5000	N/A	N/A
5'-0"	P5500	P5500	P5500	P5500	P5500	P5000	P5000	P5000	P5000	N/A	N/A	N/A
6'-0"	P5500	P5500	P5500	P5500	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A
7'-0"	P5500	P5000	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A
8'-0"	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9'-0"	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10'-0"	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Trapeze Span	Double Channel Trapeze for Sch 40 Pipe											
	Pipe Diameter											
	1"	1 ¹ / ₄ "	1 ¹ / ₂ "	2"	2 ¹ / ₂ "	3"	3 ¹ / ₂ "	4"	5"	6"	8"	10"
1'-6"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001
2'-0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001
2'-6"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001
3'-0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P5501	P5501
4'-0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501	P5501	P5501
5'-0"	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P1001	P5501	P5501	P5501	P5001
6'-0"	P3001	P3001	P3001	P3001	P1001	P1001	P1001	P5501	P5501	P5501	P5001	P5001
7'-0"	P3001	P3001	P3001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5001	P5001
8'-0"	P1001	P1001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5001	P5001	N/A
9'-0"	P1001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5501	P5001	P5001	N/A
10'-0"	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5501	P5001	P5001	N/A	N/A

Pipe & Conduit Reference Data

Electrical Metallic Tubing (EMT) - Thin Wall

Tubing Size (Nominal)	Outside Diameter		Inside Diameter		Weight of Tubing	
	(in)	(mm)	(in)	(mm)	(lb/ft)	(kg/m)
3/8	0.577	14.7	0.497	12.6	0.23	0.34
1/2	0.706	17.9	0.626	15.9	0.29	0.43
3/4	0.922	23.4	0.830	21.1	0.44	0.65
1	1.163	29.5	1.055	26.8	0.64	0.95
1 1/4	1.510	38.4	1.388	35.3	0.95	1.41
1 1/2	1.740	44.2	1.618	41.1	1.10	1.64
2	2.197	55.8	2.075	52.7	1.40	2.08
2 1/2	2.875	73.0	2.731	69.4	2.30	3.42
3	3.500	88.9	3.356	85.2	2.70	4.02
3 1/2	4.000	101.6	3.834	97.4	3.40	5.06
4	4.500	114.3	4.334	110.1	4.00	5.95

Copper Tube (Type K)

Nominal Tube Size	O.D. Tubing		O.D.		Wall Thick.		Weight		Weight Water	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/ft)	(kg/m)	(lb/ft)	(kg/m)
1/4	3/8	9.5	0.375	9.53	0.035	0.89	0.145	0.22	0.032	0.05
3/8	1/2	12.7	0.500	12.70	0.005	0.13	0.269	0.40	0.055	0.08
1/2	5/8	15.9	0.625	15.88	0.049	1.24	0.344	0.51	0.094	0.14
5/8	3/4	19.1	0.750	19.05	0.049	1.24	0.418	0.62	0.144	0.21
3/4	7/8	22.2	0.875	22.23	0.065	1.65	0.641	0.95	0.188	0.28
1	1 1/8	28.6	1.125	28.58	0.065	1.65	0.839	1.25	0.337	0.50
1 1/4	1 3/8	34.9	1.375	34.93	0.065	1.65	1.040	1.55	0.527	0.78
1 1/2	1 5/8	41.3	1.625	41.28	0.072	1.83	1.360	2.02	0.743	1.11
2	2 1/8	54.0	2.125	53.98	0.083	2.11	2.060	3.07	1.310	1.95
2 1/2	2 5/8	66.7	2.625	66.68	0.095	2.41	2.920	4.35	2.000	2.98
3	3 1/8	79.4	3.125	79.38	0.109	2.77	4.000	5.95	2.960	4.40
3 1/2	3 5/8	92.1	3.625	92.08	0.120	3.05	5.120	7.62	3.900	5.80
4	4 1/8	104.8	4.125	104.78	0.134	3.40	6.510	9.69	5.060	7.53
5	5 1/8	130.2	5.125	130.18	0.160	4.06	9.670	14.39	8.000	11.91
6	6 1/8	155.6	6.125	155.58	0.192	4.88	13.870	20.64	11.200	16.67
8	8 1/8	206.4	8.125	206.38	0.271	6.88	25.900	38.54	19.500	29.02
10	10 1/8	257.2	10.125	257.18	0.338	8.59	40.300	59.97	30.423	45.27
12	12 1/8	308.0	12.125	307.98	0.405	10.29	57.800	86.02	43.675	65.00

Pipe & Conduit Reference Data

Intermediate Metallic Conduit (IMC)

Conduit Size (Nominal)	Outside Diameter		Inside Diameter		Weight of Conduit		Weight of Conduit and Conductor	
	(in)	(mm)	(in)	(mm)	(lb/ft)	(kg/m)	(lb/ft)	(kg/m)
½	0.815	20.7	0.745	18.9	0.60	0.89	0.12	0.18
¾	1.029	26.1	0.954	24.2	0.82	1.22	1.13	1.68
1	1.290	32.8	1.205	30.6	1.16	1.73	1.82	2.71
1 ¼	1.638	41.6	1.553	39.4	1.50	2.23	2.67	3.97
1 ½	1.883	47.8	1.793	45.5	1.82	2.71	3.42	5.09
2	2.360	59.9	2.266	57.6	2.42	3.60	5.04	7.50
2 ½	2.857	72.6	2.727	69.3	4.01	5.97	7.75	11.53
3	3.476	88.3	3.346	85.0	4.43	6.59	10.69	15.91
3 ½	3.971	100.9	3.841	97.6	5.73	8.53	13.46	20.03
4	4.466	113.4	4.336	110.1	6.38	9.49	16.37	24.36

Copper Tube (Type L)

Nominal Tube Size	O.D. Tubing		O.D.		Wall Thick.		Weight		Weight Water	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/ft)	(kg/m)	(lb/ft)	(kg/m)
¼	⅜	9.5	0.375	9.5	0.030	0.8	0.126	0.19	0.034	0.05
⅜	½	12.7	0.500	12.7	0.035	0.9	0.198	0.29	0.062	0.09
½	⅝	15.9	0.625	15.9	0.040	1.0	0.285	0.42	0.100	0.15
⅝	¾	19.1	0.750	19.1	0.042	1.1	0.362	0.54	0.151	0.22
¾	⅞	22.2	0.875	22.2	0.045	1.1	0.455	0.68	0.209	0.31
1	1 ⅛	28.6	1.125	28.6	0.050	1.3	0.655	0.97	0.357	0.53
1 ¼	1 ⅜	34.9	1.375	34.9	0.055	1.4	0.884	1.32	0.546	0.81
1 ½	1 ⅝	41.3	1.625	41.3	0.060	1.5	1.140	1.70	0.767	1.14
2	2 ⅛	54.0	2.125	54.0	0.070	1.8	1.750	2.60	1.341	2.00
2 ½	2 ⅝	66.7	2.625	66.7	0.080	2.0	2.480	3.69	2.064	3.07
3	3 ⅛	79.4	3.125	79.4	0.090	2.3	3.330	4.96	2.949	4.39
3 ½	3 ⅝	92.1	3.625	92.1	0.100	2.5	4.290	6.38	3.989	5.94
4	4 ⅛	104.8	4.125	104.8	0.110	2.8	5.380	8.01	5.188	7.72
5	5 ⅛	130.2	5.125	130.2	0.125	3.2	7.610	11.32	8.081	12.03
6	6 ⅛	155.6	6.125	155.6	0.140	3.6	10.200	15.18	11.616	17.29
8	8 ⅛	206.4	8.125	206.4	0.200	5.1	19.290	28.71	20.289	30.19
10	10 ⅛	257.2	10.125	257.2	0.250	6.4	30.100	44.79	31.590	47.01
12	12 ⅛	308.0	12.125	308.0	0.280	7.1	40.400	60.12	45.426	67.60

Pipe & Conduit Reference Data

Rigid Steel (Heavy Duty) Conduit

Conduit Size (Nominal)	I.D. of Conduit		O.D. of Conduit		O.D. of Coupling		Weight of Conduit		Maximum Weight* of Conduit and Conductor Lead Covered		Not Lead Covered	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/ft)	(kg/m)	(lb/ft)	(kg/m)	(lb/ft)	(kg/m)
½	0.622	15.8	0.840	21.3	1.063	27.0	0.85	1.26	1.20	1.79	1.00	1.49
¾	0.824	20.9	1.050	26.7	1.297	32.9	1.13	1.68	1.80	2.68	1.40	2.08
1	1.049	26.6	1.315	33.4	1.563	39.7	1.68	2.50	2.60	3.87	2.30	3.42
1¼	1.380	35.1	1.660	42.2	1.969	50.0	2.28	3.39	4.30	6.40	3.60	5.36
1½	1.610	40.9	1.900	48.3	2.234	56.7	2.73	4.06	5.90	8.78	4.50	6.70
2	2.067	52.5	2.375	60.3	2.719	69.1	3.68	5.48	8.50	12.65	7.20	10.71
2½	2.469	62.7	2.875	73.0	3.313	84.2	5.82	8.66	11.50	17.11	10.20	15.18
3	3.068	77.9	3.500	88.9	3.938	100.0	7.62	11.34	16.50	24.55	14.50	21.58
3½	3.548	90.1	4.000	101.6	4.438	112.7	9.20	13.69	19.00	28.28	17.50	26.04
4	4.026	102.3	4.500	114.3	4.938	125.4	10.89	16.21	24.80	36.91	21.50	32.00
5	5.047	128.2	5.563	141.3	6.296	159.9	14.81	22.04	35.90	53.43	30.80	45.84
6	6.065	154.1	6.625	168.3	7.358	186.9	19.19	28.56	50.70	75.45	43.40	64.59

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

Water Filled Pipe Support Spacing

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

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

Conduit Support Spacing

346-12. Supports. Rigid metal conduit shall be installed as a complete system as provided in Article 344 and shall be securely fastened in place. Conduit shall be firmly fastened within 3 feet (914.4 mm) of each outlet box, junction box, cabinet, or fitting. Conduit shall be supported at least every 10 feet (3.05 m).

Exception: If made up with threaded couplings, it shall be permissible to support straight runs of rigid metal conduit in accordance with Table 344.30 (B)(2), provided such supports prevent transmission of stresses to termination where conduit is deflected between supports.

Table 344.30 (B)(2)
Support for Rigid Metal Conduit

Conduit Size (Nominal)	Maximum Distance Between Supports	
	(ft)	(m)
½ - ¾	10	3.05
1	12	3.66
1¼ - 1½	14	4.27
2 - 2½	16	4.88
3 - larger	20	6.10

Pipe & Conduit Reference Data

Data for Schedule Steel Pipe

Nominal Size	Pipe Schedule	Outside Diameter		Inside Diameter		Pipe Weight		Pipe and Water Weight		Nominal Size	Pipe Schedule	Outside Diameter		Inside Diameter		Pipe Weight		Pipe and Water Weight		
		(in)	(mm)	(in)	(mm)	(lb/ft)	(kg/m)	(lb/ft)	(kg/m)			(in)	(mm)	(in)	(mm)	(lb/ft)	(kg/m)	(lb/ft)	(kg/m)	
1/8	40	0.405	10.3	0.269	6.8	0.24	0.36	0.27	0.40	6	40	6.625	168.3	6.065	154.1	18.95	28.20	31.48	46.85	
	80	0.405	10.3	0.215	5.5	0.31	0.46	0.33	0.49		80	6.625	168.3	5.761	146.3	28.54	42.47	39.84	59.29	
1/4	40	0.540	13.7	0.364	9.2	0.42	0.63	0.47	0.70	120	6.625	168.3	5.501	139.7	36.35	54.09	46.66	69.44		
	80	0.540	13.7	0.302	7.7	0.53	0.79	0.57	0.85		160	6.625	168.3	5.187	131.7	45.30	67.41	54.47	81.06	
3/8	40	0.675	17.1	0.493	12.5	0.57	0.85	0.65	0.97	8	20	8.625	219.1	8.125	206.4	22.34	33.25	44.82	66.70	
	80	0.675	17.1	0.423	10.7	0.74	1.10	0.80	1.19		30	8.625	219.1	8.071	205.0	24.67	36.71	46.85	69.72	
1/2	40	0.840	21.3	0.622	15.8	0.85	1.26	0.98	1.46	40	8.625	219.1	7.981	202.7	28.52	42.44	50.21	74.72		
	80	0.840	21.3	0.546	13.9	1.09	1.62	1.19	1.77		60	8.625	219.1	7.813	198.5	35.60	52.98	56.39	83.92	
	160	0.840	21.3	0.464	11.8	1.31	1.95	1.38	2.05		80	8.625	219.1	7.625	193.7	43.34	64.50	63.14	93.96	
3/4	40	1.050	26.7	0.824	20.9	1.13	1.68	1.36	2.02	100	8.625	219.1	7.437	188.9	50.89	75.73	69.73	103.77		
	80	1.050	26.7	0.742	18.8	1.47	2.19	1.66	2.47		120	8.625	219.1	7.187	182.5	60.65	90.26	78.23	116.42	
	160	1.050	26.7	0.612	15.5	1.94	2.89	2.07	3.08		140	8.625	219.1	7.001	177.8	67.68	100.72	84.37	125.56	
1	40	1.315	33.4	1.049	26.6	1.68	2.50	2.05	3.05	160	8.625	219.1	6.813	173.1	74.61	111.03	90.42	134.56		
	80	1.315	33.4	0.957	24.3	2.17	3.23	2.48	3.69		10	20	10.750	273.1	10.250	260.4	28.01	41.68	63.78	94.92
	160	1.315	33.4	0.815	20.7	2.84	4.23	3.07	4.57			30	10.750	273.1	10.136	257.5	34.20	50.90	69.19	102.97
1 1/4	40	1.660	42.2	1.380	35.1	2.27	3.38	2.92	4.35	40		10.750	273.1	10.020	254.5	40.44	60.18	74.63	111.06	
	80	1.660	42.2	1.278	32.5	2.99	4.45	3.55	5.28		60	10.750	273.1	9.750	247.7	54.68	81.37	87.05	129.54	
	160	1.660	42.2	1.160	29.5	3.76	5.60	4.22	6.28		80	10.750	273.1	9.562	242.9	64.36	95.78	95.50	142.12	
1 1/2	40	1.900	48.3	1.610	40.9	2.71	4.03	3.60	5.36	100	10.750	273.1	9.312	236.5	76.95	114.51	106.47	158.44		
	80	1.900	48.3	1.500	38.1	3.63	5.40	4.39	6.53		120	10.750	273.1	9.062	230.2	89.20	132.74	117.16	174.35	
	160	1.900	48.3	1.338	34.0	4.85	7.22	5.46	8.13		140	10.750	273.1	8.750	222.3	104.02	154.80	130.09	196.60	
2	40	2.375	60.3	2.067	52.5	3.65	5.43	5.10	7.59	160	10.750	273.1	8.500	215.9	115.52	171.91	140.13	208.54		
	80	2.375	60.3	1.939	49.3	5.02	7.47	6.30	9.38		Schedule 40: PVC Plastic Pipe	Pipe Size (Nominal)	Outside Diameter		Inside Diameter		Pipe Weight		Pipe and Water Weight	
	160	2.375	60.3	1.687	42.8	7.45	11.09	8.42	12.53			(in)	(in)	(mm)	(in)	(mm)	(lb/ft)	(kg/m)	(lb/ft)	(kg/m)
2 1/2	40	2.875	73.0	2.469	62.7	5.79	8.62	7.86	11.70	1/4		0.540	13.7	0.354	9.0	0.081	0.12	0.12	0.18	
	80	2.875	73.0	2.323	59.0	7.65	11.38	9.49	14.12	3/8	0.675	17.1	0.483	12.3	0.109	0.16	0.19	0.28		
	160	2.875	73.0	2.125	54.0	10.00	14.88	11.54	17.17	1/2	0.840	21.3	0.608	15.4	0.161	0.24	0.29	0.43		
3	40	3.500	88.9	3.068	77.9	7.57	11.27	10.77	16.03	3/4	1.050	26.7	0.810	20.6	0.214	0.32	0.44	0.65		
	80	3.500	88.9	2.900	73.7	10.24	15.24	13.11	19.51	1	1.315	33.4	1.033	26.2	0.315	0.47	0.68	1.01		
	160	3.500	88.9	2.624	66.6	14.31	21.30	16.65	24.78	1 1/4	1.660	42.2	1.364	34.6	0.426	0.63	1.06	1.58		
3 1/2	40	4.000	101.6	3.548	90.1	9.10	13.54	13.39	19.93	1 1/2	1.900	48.3	1.592	40.4	0.509	0.76	1.37	2.04		
	80	4.000	101.6	3.364	85.4	12.49	18.59	16.35	24.33	2	2.375	60.3	2.049	52.0	0.682	1.01	2.11	3.14		
	4	40	4.500	114.3	4.026	102.3	10.78	16.04	16.30	24.26	2 1/2	2.875	73.0	2.445	62.1	1.076	1.60	3.11	4.63	
80		4.500	114.3	3.826	97.2	14.97	22.28	19.95	29.69	3	3.500	88.9	3.042	77.3	1.409	2.10	4.55	6.77		
120		4.500	114.3	3.624	92.0	18.98	28.25	23.45	34.90	4	4.500	114.3	3.995	101.5	2.006	2.99	7.44	11.07		
160		4.500	114.3	3.438	87.3	22.48	33.45	26.51	39.45	6	6.625	168.3	6.031	153.2	3.535	5.26	15.90	23.66		
5	40	5.563	141.3	5.047	128.2	14.60	21.73	23.27	34.63	8	8.625	219.1	7.943	201.8	5.305	7.89	26.75	39.81		
	80	5.563	141.3	4.813	122.2	20.75	30.88	28.64	42.62	10	10.750	273.1	9.976	253.4	7.532	11.21	41.35	61.54		
	120	5.563	141.3	4.563	115.9	27.01	40.20	34.09	50.73											
	160	5.563	141.3	4.313	109.5	32.92	48.99	39.26	58.43											



Electrical Fittings

ELECTRICAL FITTINGS

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Electrical Fittings

Material

Unistrut and Power-Strut fittings, unless noted, are made from hot-rolled, pickled and oiled steel plates, strip, bar or coil, and conform to one or more of the following specifications:

ASTM A575, A576, A635, A1011 SS GR 33, A1011 HSLAS GR 45 or A36. The fitting steel also meets or exceeds the physical requirements of ASTM A1011 SS GR 33.

Special sizes of clamps can be fabricated upon request. Cable saddles are fiberglass-reinforced polyester.

Channel Raceways

The Unistrut and Power-Strut Metal Framing systems includes an exclusive combination of channel, fittings and hardware listed under new UL classification 5B. This classification covers strut-type channel raceways and fittings for use in accordance with Article 384 of the National Electrical Code, NFPA 70.

Included are metal strut-type channel raceways at least .071 inch (1.81mm) thick and metal or non-metal closure strips at least .040 inch (1.02mm) thick.

The Unistrut and Power-Strut systems requires no welding, drilling or other complex fabrication techniques. This means faster, easier solutions for virtually any electrical support problem.

Unistrut and Power-Strut systems channel offers structural and spanning capabilities not available with conventional surface raceway products and is available in continuous lengths of up to 20 feet. Just as important, it is part of an integrated system that can be used for raceways, trapeze hangers, cable-tray supports, lighting grids, fluorescent-fixture supports and countless other electrical applications.

Channel Compatibility

All of the electrical components in this section are intended for use with any of the 1 $\frac{5}{8}$ " wide channel. They are not intended for use with 1 $\frac{1}{4}$ " or 1 $\frac{3}{16}$ " framing systems.

Finishes

Components listed in this section are available in:

- Electro-galvanized (EG), conforming to ASTM B633 Type III SC1;
- Hot-dipped galvanized (HG), conforming to ASTM A123 or A153,
- Green Powder Coat (GR), conforming to commercial standards for Powder Coating
- Plain (PL)

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

Design Load

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

Dimensions

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

Listings

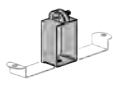
UL File No. - E19459	Channel & Closure Strips
UL File No. - E25629	Fittings
CSA File No. - 013669	All Products

Electrical Fittings Pictorial Index

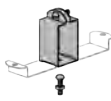
Electrical Fittings



P1787



P2537



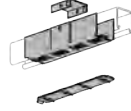
P2539



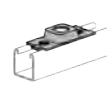
P2755



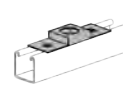
P2855



P3922



P2535



P2536



P2522



P3521



P2521-50



P5521-50



P5021-50



P2521-100



P5021-100



P5521-100



P1180 W



P2541



P2552



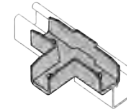
P2540



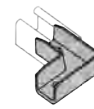
P3116-125



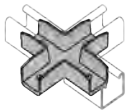
P2602



P2901



P2902



P2903



M2037



M2137



M2250

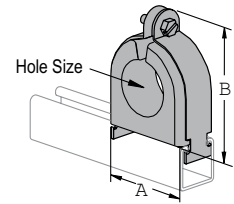


M2350

Electrical Fittings

P1787 thru P1795 Porce-A-Clamp™

- Patents Pending
- Strap Material: Electro-galvanized Steel (EG) or Stainless Steel (SS)
- Use With: All 1½" channel



Porce-A-Clamp™

- Non-Breakable TPE Material
 - U.V. Resistant
 - U.L. Listed
 - Optional Stainless Steel Clamps
 - Tapered Flange to Protect Cable
 - Dielectric Strength 640 Volts Per Mil
 - One Piece Insulator
- Replaces Porcelain & Maple Cable Clamp
 - For use in accordance with National Electrical Code ANSI/NFPA 70
 - Includes Pipe Strap
 - Temperature Rating -50°F to +275°F (-45°C to +135°C)

Part Number	Hole Size		"A"		"B"		Wt/100 pcs	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kg)
P1787A	3/8	9.5						
P1787B	1/2	12.7	1.36	34.5	1.82	46.2	25	11.3
P1787C	5/8	15.9						
P1788	3/4	19.1						
P1788A	7/8	22.2	1.86	47.2	2.34	59.4	37	16.8
P1788B	1	25.4						
P1788C	1 1/8	28.6						
P1789	1 1/4	31.8						
P1789A	1 3/8	34.9	2.36	59.9	2.86	72.6	58	26.3
P1789B	1 1/2	38.1						
P1789C	1 5/8	41.3						
P1790	1 3/4	44.5						
P1790A	1 7/8	47.6	2.86	72.6	3.50	88.9	76	34.5
P1790B	2	50.8						
P1790C	2 1/8	54.0						
P1791	2 1/4	57.2	3.36	83.5	4.05	102.9	90	40.8
P1791A	2 3/8	60.3						

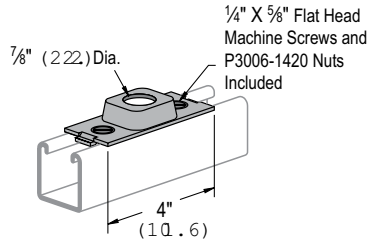
Part Number	Hole Size		"A"		"B"		Wt/100 pcs	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kg)
P1791B	2 1/2	63.5	3.36	85.3	4.05	102.9	90	40.8
P1791C	2 5/8	66.7						
P1792	2 3/4	69.9						
P1792A	2 7/8	73.0	3.86	98.0	4.75	120.7	109	49.4
P1792B	3	76.2						
P1792C	3 1/8	79.4						
P1793	3 1/4	82.6						
P1793A	3 3/8	85.7	4.36	110.7	5.125	130.2	130	59.0
P1793B	3 1/2	88.9						
P1793C	3 5/8	92.1						
P1794	3 3/4	95.3						
P1794A	3 7/8	98.4	4.86	123.4	5.54	140.7	160	72.6
P1794B	4	101.6						
P1794C	4 1/8	104.8						
P1795	4 1/4	108.0						
P1795A	4 3/8	111.1	5.24	133.1	5.92	150.4	160	72.6
P1795B	4 1/2	114.3						

Electrical Fittings

P2535 - Conduit Hanger Connection for 1/2" Conduit

Wt/100 pcs: 28 Lbs (12.7 kg)

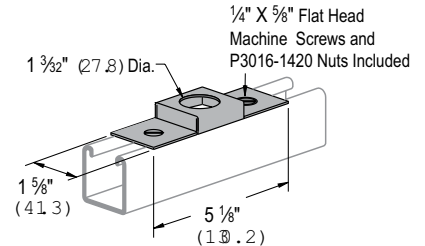
- Material: 12 gauge (2.7)
- Design Load 400 Lbs (1.78 kN)



P2536 - Conduit Hanger Connection for 3/4" Conduit

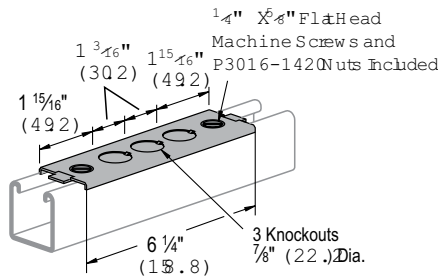
Wt/100 pcs: 28 Lbs (12.7 kg)

- Material: 16 gauge (1.5)
- Design Load 200 Lbs (0.89 kN)



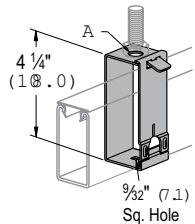
P2522 - Outlet Box Connection

Wt/100 pcs: 35 Lbs (15.9 kg)



P2755 Raceway Hangers

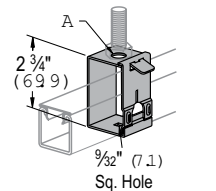
- Use with Channels: P1001, P1101, P2001, P5000, & P5500
- Material: 14 gauge (1.9)
- Design Load 120 Lbs (0.53 kN)



Part Number	"A"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P2755	4 1/4	111.8	44	20.0

P2855, P2856, P2857 Raceway Hangers

- Use with Channels: P1000, P1100, P3000, P3300
- Material: 14 gauge (1.9)
- Design Load 120 Lbs (0.53 kN)

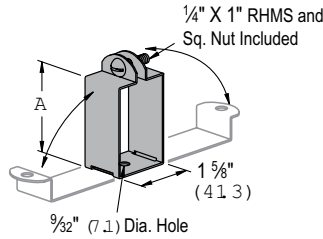


Part Number	"A"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P2855	2 3/4	69.9	32	14.5
P2856	3 1/2	88.9	32	14.5
P2857	4 1/4	111.8	32	14.5

Electrical Fittings

P2537 - Fluorescent Fixture Hangers

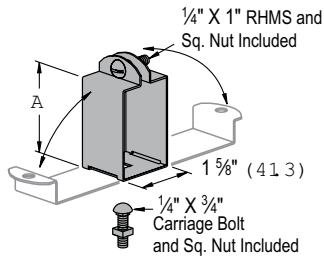
- Hanger provides more than 1/2" (12.7) space between channel and fixtures
- Materials: 18 gauge (1.2)
- Design Load 120 Lbs (0.53 kN)



Part Number	Use w/Channel	"A"		Wt/100 pcs	
		(in)	(mm)	(lb)	(kg)
P2537	P1000 P1100 P3000	2 7/16	61.9	19	8.6

P2539 - Fluorescent Fixture Hangers

- Hanger provides 1/8" (3.2) space between channel and fixtures
- Materials: 18 gauge (1.2)
- Design Load 120 Lbs (0.53 kN)

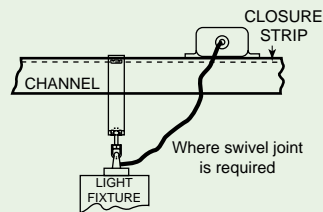
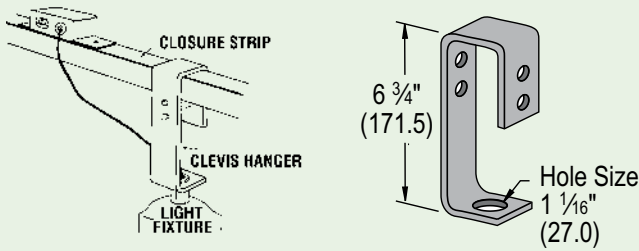


Part Number	Use w/Channel	"A"		Wt/100 pcs	
		(in)	(mm)	(lb)	(kg)
P2539	P1000 P1100	1 3/4	44.5	17	7.7

P2602 - Mercury Vapor Fixture Hanger

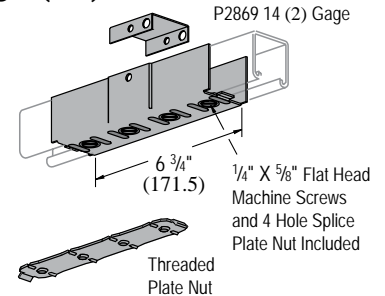
Wt/100 pcs: 154 Lbs (69.9 kg)

- Use with 1 5/8" Channel
- Finish: Electro-galvanized
- Stock Size: 1/4"
- NOTE: Supports fixture in slot up or down system.



P3922 thru P3926 Splice Fittings

- Material: 16 gauge (1.6)



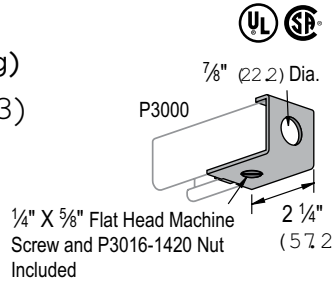
Part Number	Use W/ Channel	"A"		Clevis No.	Back Clevis No.	Plate Nut No.	Wt/100 pcs	
		(in)	(mm)				(lb)	(kg)
P3922	P1000	1 5/8	41.3	P2377	P2517	P2869	100	45.4
P3923	P3000	1 3/8	34.9	P3377	P2517	P2869	97	44.0
P3924		1 3/16	20.6	P5377	P2517	P2869	80	36.3
P3925	P5500	1 5/8	41.3	P2377	P5517	P2869	103	46.7
P3926	P5000	1 5/8	41.3	P2377	P5017	P2869	106	48.1

Electrical Fittings

P3521-50 - End Connectors For 1/2" Conduit

Wt/100 pcs: 27 Lbs (12.2 kg)

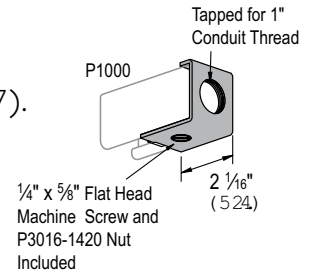
- Material: 12 gauge (3)



P2521-100 - End Connector For 1" Conduit

Wt/100 pcs: 24 Lbs (10.9 kg)

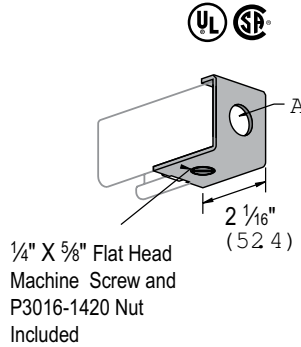
- Material: 12 gauge (2.7).



P2521-50, P2521-75 - End Connectors For 1/2" & 3/4" Conduit

- Use with channels:
- P1000 and P1100
- Material: 12 gauge (3)

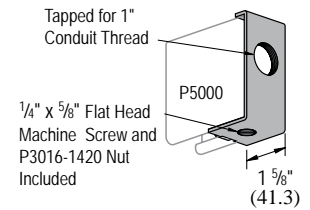
Part Number	Conduit Size A (in)	Wt/100 pcs	
		(lb)	(kg)
P2521-50	1/2	27	12.2
P2521-75	3/4	26	11.8



P5021-100 - End Connector For 1" Conduit

Wt/100 pcs:
28 Lbs (12.7 kg)

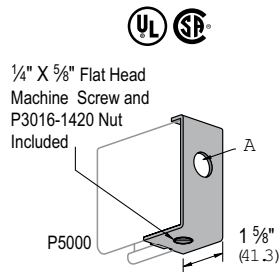
- Material:
12 gauge (2.7)



P5021-50, P5021-75 - End Connectors For 1/2" & 3/4" Conduit

- Material: 12 gauge (2.7)

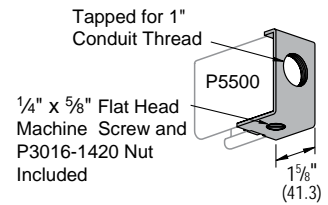
Part Number	Conduit Size A (in)	Wt/100 pcs	
		(lb)	(kg)
P5021-50	1/2	31	14.1
P5021-75	3/4	30	13.6



P5521-100 - End Connector For 1" Conduit

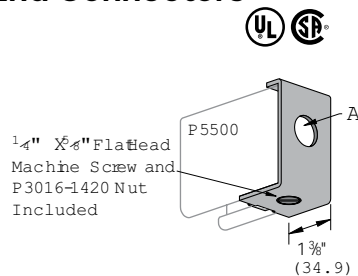
Wt/100 pcs:
24 Lbs (10.9 kg)

- Material:
12 gauge (2.7)



P5521-50, P5521-75 - End Connectors For 1/2" & 3/4" Conduit

Part Number	Conduit Size A (in)	Wt/100 pcs	
		(lb)	(kg)
P5521-50	1/2	27	12.2
P5521-75	3/4	26	11.8

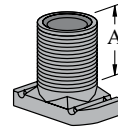


Electrical Accessories

P2540, P2540A - Wiring Stud Nut



- Stamped Ident. No.
 - P2540 - 121961
 - P2540A - 121960
- Material: Sintered metal
- 1/2" American Standard Straight Pipe Thread
- Material: 12 gauge (2.7)
- Design Load 320 Lbs (1.42 kN)



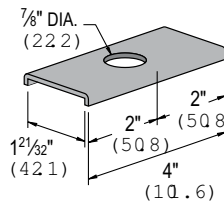
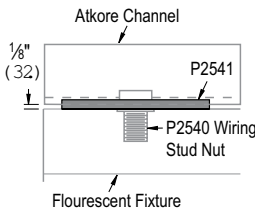
Part No.	"A"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P2540	15/64	27.4	10.0	4.5
P2540A	5/8	15.9	8	3.6

P2541 Spacer Clevis

Wt/100 pcs: 24 Lbs (10.9 kg)



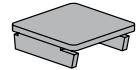
- Material: 12 gauge (2.7)



P1180W thru - P5580W End Caps



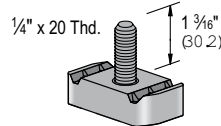
- Material: 14 gauge (1.9)



Part Number	Use With	Wt/100 pcs	
		(lb)	(kg)
P1180W	P1100	12	5.4
P1280W	P1000	11	5.0
P2280W		11	5.0
P3280W	P3000	8	3.6
P4280W		5	2.3
P5280W	P5000	22	10.0
P5580W	P5500	18	8.2

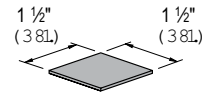
P3116-125 - Fixture Stud Nut

Wt/100 pcs: 11 Lbs (5.0 kg)

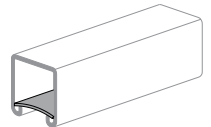


P2552 - Polypropylene Wire Retainer

Wt/100 pcs: .30 Lbs (.1 kg)



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

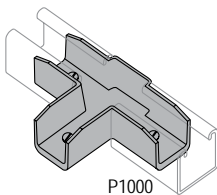


P2901



Wt/100 pcs: 35 Lbs (15.9 kg)

- 3/8"-16 x 1/4" Socket Cup Point
- Set Screws Included
- Material: Cast aluminum.

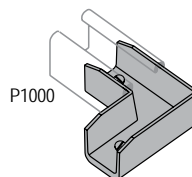


P2902



Wt/100 pcs: 27 Lbs (12.2 kg)

- 3/8"-16 x 1/4" Socket Cup Point
- Set Screws Included
- Material: Cast aluminum

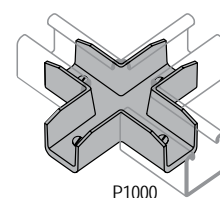


P2903



Wt/100 pcs: 45 Lbs (20.4 kg)

- 3/8"-16 x 1/4" Socket Cup Point
- Set Screws Included
- Material: Cast aluminum

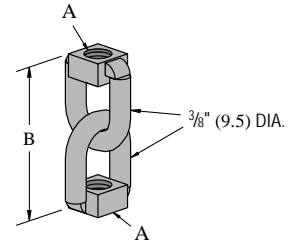


Swivel Hangers

M2037, M2050 - Swivel Hangers

- Design Load
600 Lbs (2.67 kN)

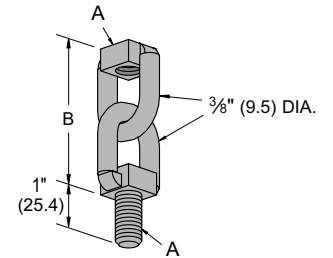
Part No.	"A" (in)	"B"		Wt/100 pcs	
		(in)	(mm)	(lb)	(kg)
M2037	$\frac{3}{8}$ " - 16	$2\frac{31}{32}$	75.4	23	10.4
M2050	$\frac{1}{2}$ " - 13	$2\frac{3}{4}$	69.9	32	14.5



M2137 - Swivel Hangers

- Design Load
600 Lbs (2.67 kN)

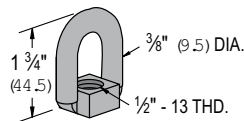
Part No.	"A" (in)	"B"		Wt/100 pcs	
		(in)	(mm)	(lb)	(kg)
M2137	$\frac{3}{8}$ " - 16	$2\frac{29}{32}$	74.0	27	12.2



M2250 - Swivel Hanger

Wt/100 pcs: 18 Lbs (8.2 kg)

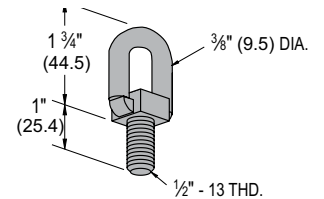
- Design Load
600 Lbs (2.67 kN)



M2350 - Swivel Hanger

Wt/100 pcs: 20 Lbs (9.1 kg)

- Design Load
600 Lbs (2.67 kN)



Electrical Technical Data

U.L. Listed

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

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

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

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

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

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

Channel Size and Inside Area				
Channel Part Number	Size	Area	40% Area	25% Area
P3300 & KO	1 5/8" x 7/8"	0.975	0.390	0.244
		629	252	157
P3000 & KO	1 5/8" x 1 3/8"	1.677	0.671	0.419
		1,082	433	270
P1000 & KO, P1100 & KO	1 5/8" x 1 5/8"	2.028	0.811	0.507
		1,308	523	327
P5500 & KO	1 5/8" x 2 1/16"	3.169	1.268	0.792
		2,045	818	511
P5000 & KO	1 5/8" x 3 1/4"	4.308	1.723	1.077
		2,779	1,112	695

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

Note:

Raceways with external joiners shall use a 40% wire fill calculation to determine the number of conductors permitted.

Raceways with internal joiners shall use a 25% wire fill calculation to determine the number of conductors permitted.

Also UL Listed

P1001, P1101, P3001, P3301, P5001 & P5501

Electrical Technical Data

C.S.A. APPROVED

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

to support electric discharge type lighting fixtures when raceway wiring is suitable for at least 75° C and clearance between fixtures and raceway is at least ⅜" (3.2).

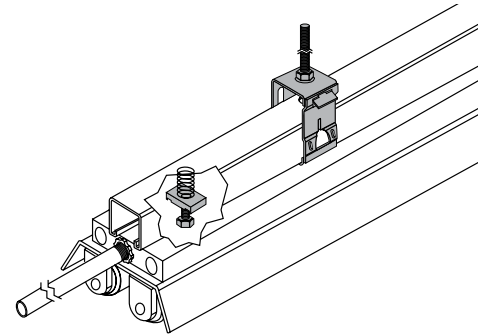
Maximum number of wires for types T, THHN, THW, THWN, TW, R, RH, RHH, RHW or XHHW

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

Fluorescent Fixtures - Support Applications

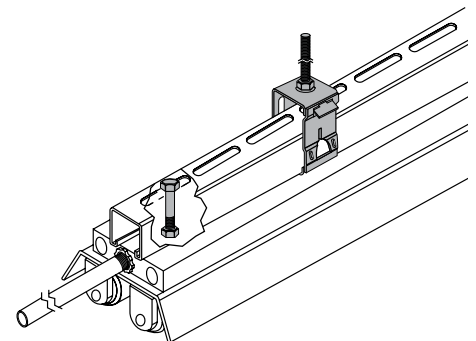
Spring-Nut attachment system

Conduit connects through knockout in fixture. Fixture is supported by P1006-1420 spring nut and 1/4" round head machine screw. Assembly is supported by P2855 hinged hanger.



Slotted channel attachment system

Conduit connects through knockout in fixture. Fixture is supported by HCSS series hex bolt and hex nut. Raceway is supported by P2855 hanger. To splice a continuous run, use P3922.



Recommended Support Spacing for Fixtures

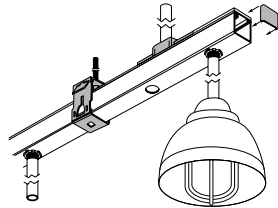
Deflections are based on continuity of span and use of 4 ft. fixtures weighing approximately 30 lbs. each. Do not use joiner fittings between supporting hangers. When using knock-out or slotted channels deflections will be increased approximately 5%. With fixtures spaced 2' - 0" apart, deflection is 60-70% of table. When spaced 4' - 0" apart, deflection is 50-60% of table.

Channel	Distance Between Supports - In (mm)																	
	8'	2.4m	10'	3m	12'	3.7m	14'	4.3m	16'	4.9m	18'	5.5m	20'	6.1m	22'	6.7m	24'	7.3m
P3300	0.187	4.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
P3000	0.100	2.5	—	6.4	0.500	12.7	—	—	—	—	—	—	—	—	—	—	—	—
P1100	0.088	2.2	—	6.4	0.437	11.1	0.875	22.2	—	—	—	—	—	—	—	—	—	—
P1000	—	—	—	4.6	0.312	7.9	0.625	15.9	1.000	25.4	1.625	41.3	—	—	—	—	—	—
P5500	—	—	—	—	—	—	0.250	6.4	0.500	12.7	0.812	20.6	1.620	41.1	—	—	—	—
P5000	—	—	—	—	—	—	—	—	0.310	7.9	0.625	15.9	1.000	25.4	1.800	45.7	2.500	63.5
P1001	—	—	—	—	—	—	—	—	0.310	7.9	0.625	15.9	1.000	25.4	1.800	45.7	2.500	63.5
P5001	—	—	—	—	—	—	—	—	—	—	0.200	5.1	0.250	6.4	0.400	10.2	0.500	12.7

High-Bay Fixture Raceway Applications

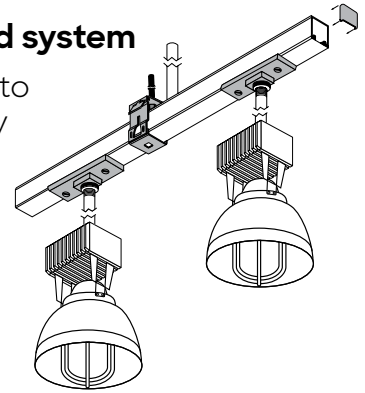
H.I.D. Knockout mounted system

Fixture attached to and wired from raceway by ½" nipple assembly of desired length at channel knockout. P1280W end cap, P3184 closure strip, P2535 conduit connector, and P2855 channel hanger complete assembly. For splicing channels into continuous raceway runs, use joiner fitting P3922.



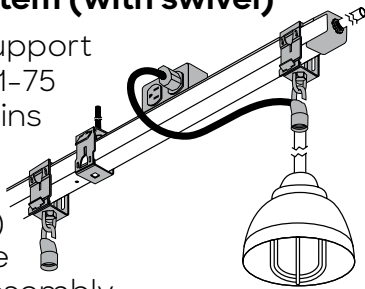
High-Bay dual mounted system

Fixtures are connected to and wired from raceway by conduit connector fitting P2536. Raceway is supported by P2855 hanger. P1280W end caps and P3184 closure strip complete the assembly. Conduit connected to raceway through channel knockout.



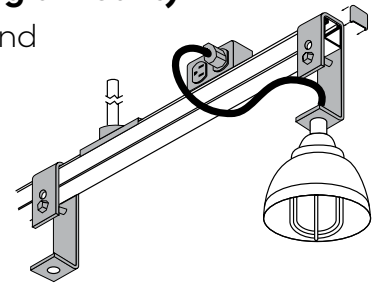
H.I.D. Plug-in system (with swivel)

P2855 hangers support raceway and P251-75 end connector joins conduit raceway. P1280W end caps (not shown) and P3184 closure strip complete assembly.



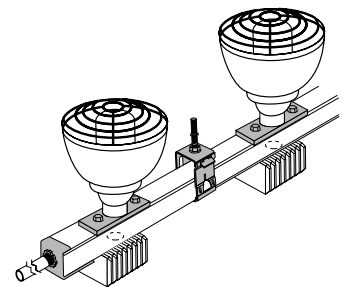
H.I.D. Plug-in system (rigid mount)

Raceway is supported and wired by top mounted P2535 conduit connectors. P1280W end caps and P3184 closure strip complete assembly.



Uplighting with underhung or remote ballast

Fixtures attached to and wired from P2535 conduit fittings mounted to slot side of channel. Raceway can be wired by P2521 as shown or, conduit can enter through available knockout. Ballasts in P2521 are connected at the knockout by fixture adapter. In remote ballast installations, follow manufacturers instructions. P2855 hinged hangers support both types of installations. P3184 closure strip and P1280W end caps complete assembly. For continuous raceways, use joiner fitting P3922. P2521-75 end connector joins conduit to raceway.





Concrete Inserts

Concrete Inserts

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Concrete Inserts

Material

Cold-formed inserts are manufactured from standard 12 gauge (2.7 mm) Unistrut and Power-Strut channel sections conforming to ASTM A1011 SS GR 33 or ASTM A653 GR 33, unless otherwise noted.

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

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

Application

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

Finishes

Cold-formed, standard-duty, light-duty and spot concrete inserts are available in:

- Hot dipped galvanized (HG), conforming to ASTM A123 or A153
- Pre-galvanized (PG), conforming to ASTM A653 GR 33
- Plain (PL)

Design Load

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

Standard Lengths

Insert lengths range from 3 inches (76.2 mm) to 20 feet (6.10m) with a tolerance of $\pm\frac{1}{4}$ -inch (6.4mm).

Dimensions

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parentheses or as noted.

Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

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

Concrete Inserts Pictorial Index

Heavy Duty

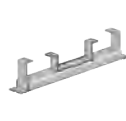


P3754

Light Duty



P3349



P3352



P3354

Standard Duty



P3249



P3253



P3254

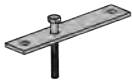


P3165

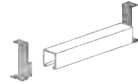


P2865

Spot Inserts and Components



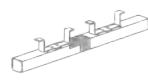
P3700



P1703

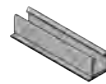


P2407



P3663

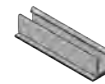
Fiberglass Concrete Inserts



Heavy Duty



Light Duty



Heavy Duty - Standard Profile-Pg 195

Closure Strips



P1184P



P3184



P3184P



P3712P

Channel Nuts



Heavy Duty



Heavy Duty



Standard Duty



Standard Duty



Light Duty

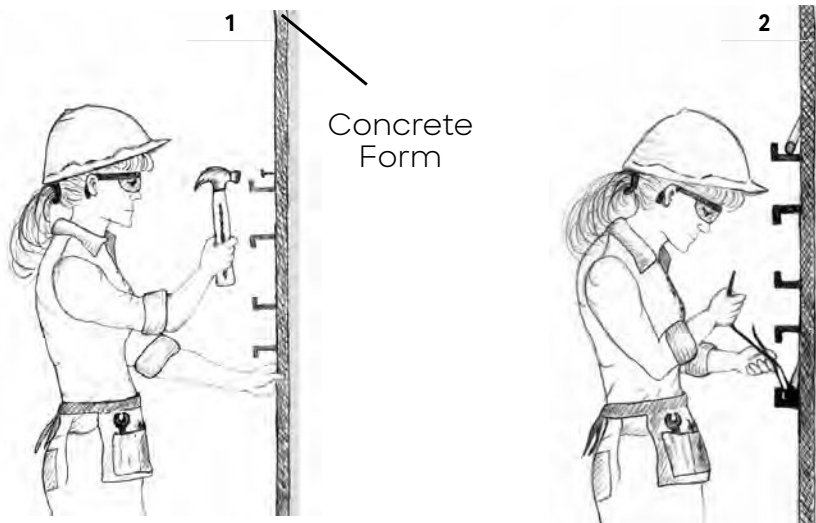


Light Duty

INSTALLATION

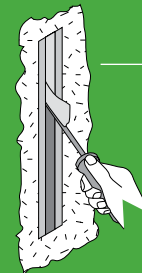
Installing Concrete Inserts

- Nail insert to concrete form using prepunched nail holes
- Attach rebars to flanges on insert

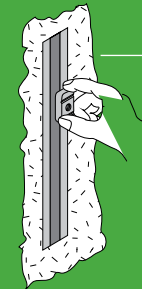


The Unistrut and Power-Strut concrete insert is firmly fixed to the concrete side of the form before pouring. When the forms are removed, the insert is ready for use. Brackets and other components can be attached at any point of the continuous entry channel.

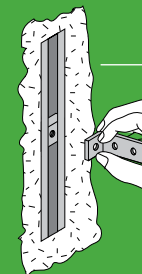
Using Installed Concrete Insert



1. Scrape out filler



2. Insert Channel Nut

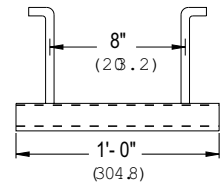
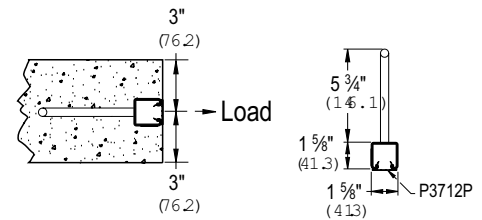
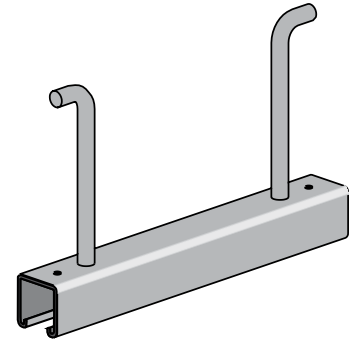


3. Attach fitting

Heavy Duty Inserts

P3754 - 1 5/8" x 1 5/8" Channel

- Closure strip P3712 P and a styrene bead end cap that fits inside the channel to inhibit concrete seepage are included.
- The recommended design load when used for curtain wall anchorage is 5,000 pounds and is based on use in average, good concrete. The design load includes 1/3 increase in load as permitted by AISI Specifications and Uniform Building Code when stresses are produced by wind or earthquake and other loads.
- The recommended design load is based on using two P1010 nuts at no less than 3" O.C. and no closer than 2" to either end of the insert. The distance between the insert centerline and the concrete edge must be a minimum of 3".
- All nuts and fittings for P3200 series concrete inserts will fit.
- Material: Cold formed from 12 Ga. (2.7mm) steel conforming to ASTM A1011 SS GR 33 or ASTM A653 GR 33 A.
- Finish: Choice of hot-dipped galvanized (HG) conforming to ASTM A123 or A153, or pre-galvanized (PG) conforming to ASTM A653-G90.



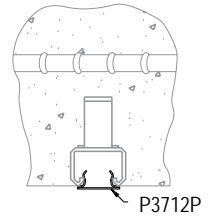
Part Number	Insert Length ±1/4" (6.4mm)		Wt/100 pcs		Max. Anchor Spacing		Max. Allowable Point Load		Spacing of Point Loads		Max. Allowable Uniform Load	
	(in)	(mm)	(lb)	(kg)	(in)	(mm)	(lb)	(kN)	(in)	(mm)	(lb)	(kN)
P3754	12	304.8	210	95.3	8	203.2	2,500	11.12	3	76.2	5,000	22.24

Standard Duty

P3200 Series - 1 5/8" x 1 3/8" Channel

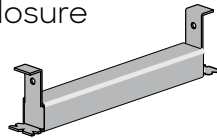
PG, HG

- Includes closure and end caps unless otherwise requested
- P3280 end cap used when distance to first anchor is up to 2" (51 mm)
- P3704 end cap is used when end distance to first anchor is over 2" (51 mm)
- Nail or anchor inserts to forms every 16" (406.4 mm) to 24" (609.6 mm)
- Anchors are 8" (203.2 mm) on center
- Material: Cold formed from 12 Ga. (3) steel conforming to ASTM A1011 SS GR 33 or ASTM A653 GR 33. A. Stainless steel available on special order
- Finish: Choice of hot-dipped galvanized (HG) conforming to ASTM A123 or A153, or pre-galvanized (PG) conforming to ASTM A653-G90



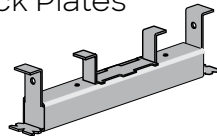
P3249 thru P3252

- "NC" Suffix - No Closure Strip, With End Caps
- "WC" Suffix - With Closure Strip & End Caps



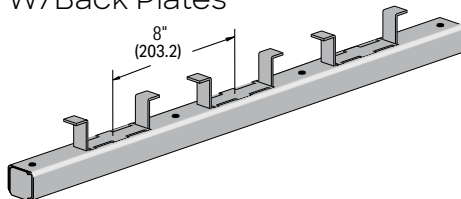
P3253

- "NC" Suffix - No Closure Strip, With End Caps & Back Plates
- "WC" Suffix - With Closure Strip, End Caps & Back Plates



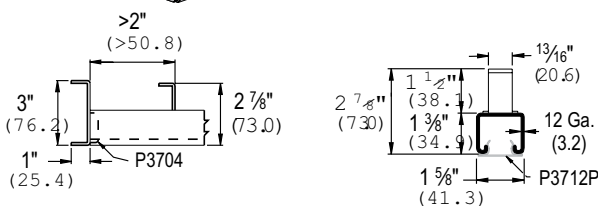
P3254 thru P3270

- "NC" Suffix - No Closure Strip, W/End Caps & Back Plates
- "WC" Suffix - W/Closure Strip, End Caps & Back Plates
- "X" - No Closure Strip, No End Caps, W/Back Plates



Part Number	Insert Length		Wt/100 pcs		Max. Allowable Point Load		Min. Spacing of Pt. Loads		Max. Allowable Uniform Load	
	(in)	(mm)	(lb)	(kg)	(lb)	(kN)	(in)	(mm)	(lb)	(kN)
P3249	3"	76.2	85	39	500	2.22	—	—	500	2.22
P3250	4"	101.6	100	45	800	3.56	—	—	800	3.56
P3251	6"	152.4	130	59	1,000	4.45	—	—	1,000	4.45
P3252	8"	203.2	159	72	1,200	5.34	—	—	1,200	5.34
P3253	12"	304.8	227	103	2,000	8.90	—	—	2,000	8.90
P3254	16"	406.4	270	122	2,000	8.90	12	12	4,000	17.79
P3255	20"	508.0	357	162	2,000	8.90	12	12	4,000	17.79
P3256	24"	609.6	399	181	2,000	8.90	12	12	4,000	17.79
P3257	32"	812.8	527	239	2,000	8.90	12	12	2,000	2,976.3
P3257A	36"	914.4	616	279	2,000	8.90	12	12	2,000	2,976.3
P3258	40"	1,016.0	661	300	2,000	8.90	12	12	2,000	2,976.3
P3259	4'	1,219.2	786	357	2,000	8.90	12	12	2,000	2,976.3
P3260	5'	1,524.0	1,003	455	2,000	8.90	12	12	2,000	2,976.3
P3262	7'	2,133.6	1,390	630	2,000	8.90	12	12	2,000	2,976.3
P3263	8'	2,438.4	1,560	708	2,000	8.90	12	12	2,000	2,976.3
P3264	9'	2,743.2	1,741	790	2,000	8.90	12	12	2,000	2,976.3
P3265	10'	3,048.0	1,947	883	2,000	8.90	12	12	2,000	2,976.3
P3266	12'	3,657.6	2,334	1,059	2,000	8.90	12	12	2,000	2,976.3
P3267	14'	4,267.2	2,717	1,232	2,000	8.90	12	12	2,000	2,976.3
P3268	16'	4,876.8	3,116	1,413	2,000	8.90	12	12	2,000	2,976.3
P3269	18'	5,486.4	3,530	1,601	2,000	8.90	12	12	2,000	2,976.3
P3270	20'	6,096.0	3,882	1,761	2,000	8.90	12	12	2,000	2,976.3

Safety factor 3

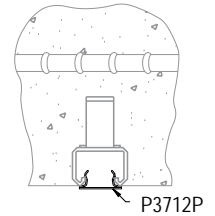


Light Duty

P3300 Series – 1 5/8" x 7/8" Channel

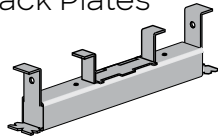
PG, HG

- Includes closure and end caps unless otherwise requested
- P3380 end cap used when distance to first anchor is up to 2" (51 mm).
- P3703 end cap is used when end distance to first anchor is over 2" (51 mm)
- Nail or anchor inserts to forms every 16" (406.4 mm) to 24" (609.6 mm)
- Anchors are 8" (203.2 mm) on center
- Material: Cold formed from 12 Ga. (3 mm) steel conforming to ASTM A1011 SS GR. 33 or A653 GR 33. A. Stainless steel available on special order
- Finish: Choice of hot-dipped galvanized (HG) conforming to ASTM A123 or A153, or pre-galvanized (PG) conforming to ASTM A653-G90



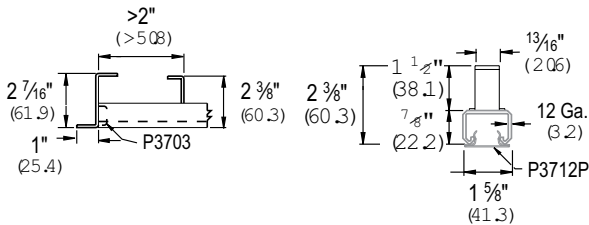
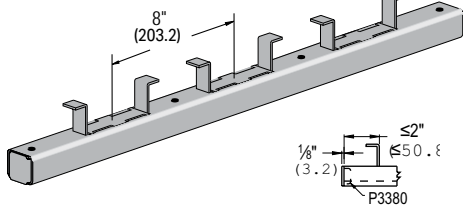
P3352 thru P3353

- "NC" Suffix – No Closure Strip, With End Caps & Back Plates
- "WC" Suffix – With Closure Strip, End Caps & Back Plates



P3354 thru P3370

- "NC" Suffix – No Closure Strip, W/End Caps & Back Plates
- "WC" Suffix – W/Closure Strip, End Caps & Back Plates
- "X" – No Closure Strip, No End Caps, W/Back Plates



Part Number	Insert Length		Wt/100 pcs		Max. Allowable Point Load		Min. Spacing of Pt. Loads		Max. Allowable Uniform Load	
	(in)	(mm)	(lb)	(kg)	(lb)	(kN)	(in)	(mm)	(lb)	(kN)
P3349	3"	76.2	68	31	400	1.78	—	—	400	1.78
P3350	4"	101.6	81	37	500	2.22	—	—	500	2.22
P3351	6"	152.4	102	46	750	3.34	—	—	750	3.34
P3352	8"	203.2	122	55	1,000	4.45	—	—	1,000	4.45
P3353	12"	304.8	174	79	1,500	6.67	—	—	1,500	6.67
P3354	16"	406.4	185.0	84	1,500	6.67	12	304.8	3,000	13.34
P3355	20"	508.0	231	105	1,500	6.67	12	304.8	3,000	13.34
P3356	24"	609.6	277	126	1,500	6.67	12	304.8	3,000	13.34
P3357	32"	812.8	370	168	1,500	6.67	12	304.8	1,500	2,232.2
P3357A	36"	914.4	416	189	1,500	6.67	12	304.8	1,500	2,232.2
P3358	40"	1,016.0	463	210	1,500	6.67	12	304.8	1,500	2,232.2
P3359	4'	1,219.2	555	252	1,500	6.67	12	304.8	1,500	2,232.2
P3360	5'	1,524.0	694	315	1,500	6.67	12	304.8	1,500	2,232.2
P3361	6'	1,828.8	832	377	1,500	6.67	12	304.8	1,500	2,232.2
P3362	7'	2,133.6	971	440	1,500	6.67	12	304.8	1,500	2,232.2
P3363	8'	2,438.4	1,110	503	1,500	6.67	12	304.8	1,500	2,232.2
P3364	9'	2,743.2	1,249	567	1,500	6.67	12	304.8	1,500	2,232.2
P3365	10'	3,048.0	1,387	629	1,500	6.67	12	304.8	1,500	2,232.2
P3366	12'	3,657.6	1,665.0	755	1,500	6.67	12	304.8	1,500	2,232.2
P3367	14'	4,267.2	1,942	881	1,500	6.67	12	304.8	1,500	2,232.2
P3368	16'	4,876.8	2,220	1,007	1,500	6.67	12	304.8	1,500	2,232.2
P3369	18'	5,486.4	2,497	1,133	1,500	6.67	12	304.8	1,500	2,232.2
P3370	20'	6,096.0	2,775	1,259	1,500	6.67	12	304.8	1,500	2,232.2

Safety factor 3.

Standard Duty and Accessories

P3165 Series – 1 5/8" x 7/8" Channel

- "X" Suffix – No Closure Strip, No End Caps
- "WC" Suffix – With Closure Strip & End Caps
- Designed for use in prestressed concrete
- Anchors 8" (203.2 mm) on center; first anchor 4" (101.6 mm) from end
- Includes closure and end caps unless otherwise requested
- Material: Cold formed from 12 Ga. (2.7 mm) steel conforming to ASTM A1011 SS GR 33 or ASTM A653 GR 33. A
Stainless steel available on special order
- Finish: Choice of pre-galvanized (PG) conforming to ASTM A653-G90, or plain (PL)

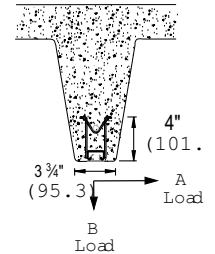
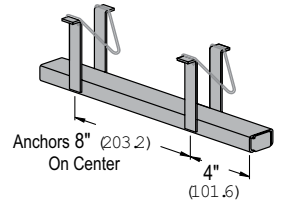
Part Number	Length		Wt/100 pcs	
	(ft)	(M)	(lb)	(kg)
P3165	10	3.05	1,650	748.4
P3170	20	6.10	3,280	1,487.8

Safety factor 3.

Maximum allowable load/ft.

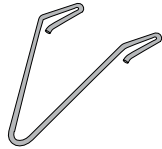
Concrete	A		B	
	(lb)	(kN)	(lb)	(kN)
Light Wt	425	1.89	800	3.56
Normal Wt	500	2.22	1,000	4.45

Safety factor 3.

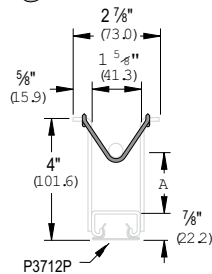


P2865-10, -15, -20 Hold-Down Springs

- Finish: Plain



Part Number	A		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)
P2865-10	1	25.4	2	0.9
P2865-15	1 1/2	38.1	2	0.9
P2865-20	2	50.8	2	0.9

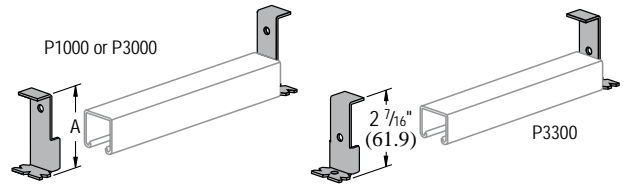


P1703, P1704, P3703, P3704 – End Cap Anchors

PG, HG

- Note: End cap anchor for use with 1 5/8" wide standard Unistrut inserts only

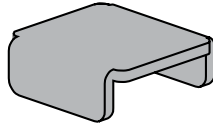
Part Number	Channel	"A"		Wt/100 pcs	
		(in)	(mm)	(lb)	(kg)
P1703	P1000	2 13/32	61.1	30	13.6
P1704	P1000	3 17/32	89.7	37	16.8
P3703	P3300	2 7/16	61.9	17	7.7
P3704	P3000	3	76.2	20	9.1



P2407, P3280, P3380 – End Caps

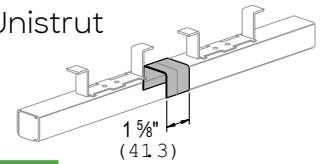
EG

Part Number	Fits Channel	Wt/100 pcs	
		(lb)	(kg)
P2407	P1000	10	4.5
P3280	P3000	8	3.6
P3380	P3300	5	2.3



P3663, P4663 – Joint Covers

- Note: Joint cover for use with 1 5/8" wide standard Unistrut and Power-Strut inserts only



Part Number	Use with Insert Series	Wt/100 pcs	
		(lb)	(kg)
P3663	P3270	10	4.5
P4663	P3370	6	2.7

Concrete Inserts Technical Data

Load Chart by Length

Part Number	Insert Length		Wt/100 ft		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Pt. Loads		Max. Allowable Uniform Load	
	(in)	(mm)	(lb)	(kg)	(in)	(mm)	(lb)	(kN)	(in)	(mm)	(lb)	(kN)
P3249	3	76.2	85	38.6	3	76.2	500	2.22	-	-	500	2.22
P3349			68	30.8	3	76.2	400	1.78	-	-	400	1.78
P3250	4	101.6	100	45.4	4	101.6	800	3.56	-	-	800	3.56
P3350			81	36.7	4	101.6	500	2.22	-	-	500	2.22
P3251	6	152.4	130	59.0	6	152.4	1,000	4.45	-	-	1,000	4.45
P3351			102	46.3	6	152.4	750	3.34	-	-	750	3.34
P3252	8	203.2	159	72.1	8	203.2	1,200	5.34	-	-	1,200	5.34
P3352			122	55.3	8	203.2	1,000	4.45	-	-	1,000	4.45
P3754	12	304.8	210	95.3	8	203.2	2,500	11.12	3	76.2	5,000	22.24
P3253			227	103.0	4	101.6	2,000	8.90	-	-	2,000	8.90
P3353	16	406.4	174	78.9	4	101.6	1,500	6.67	-	-	1,500	6.67
P3254			270	122.5	4	101.6	2,000	8.90	12	304.8	4,000	17.79
P3354	20	508.0	185	83.9	4	101.6	1,500	6.67	12	304.8	3,000	13.34
P3255			357	161.9	4	101.6	2,000	8.90	12	304.8	4,000	17.79
P3355	24	609.6	231	104.8	4	101.6	1,500	6.67	12	304.8	3,000	13.34
P3256			399	181.0	4	101.6	2,000	8.90	12	304.8	4,000	17.79
P3356			277	125.6	4	101.6	1,500	6.67	12	304.8	3,000	13.34

Continuous Concrete Insert Load Chart Up to 20 Ft. (6.10m)

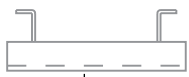
Part Number	Wt/100 ft		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Pt. Loads		Max. Allowable Uniform Load	
	(lb)	(kg)	(in)	(mm)	(lb)	(kN)	(in)	(mm)	(lb/ft)	(kg/m)
P3270	194	88.0	4	101.6	2,000	8.90	12	304.8	2,000	2,976.3
P3370	139	63.0	4	101.6	1,500	6.67	12	304.8	1,500	2,232.2
P3170*	165	74.8	8	203.2	1,000	4.45	12	304.8	1,000	1,488.2

*When used in prestressed concrete "T" Beam. Load data is based on use of 3000 PSI concrete.

Spot Insert Load Chart

Part Number	Wt/100 pcs		Anchor Spacing		Max. Allowable Point Load	
	(lb)	(kg)	(in)	(mm)	(lb)	(kN)
P3246	414	187.8	-	-	5,700	25.35
M26/M2812	54	24.5	-	-	1,500	6.67
M3245	52	23.6	-	-	1,000	4.45
M2512	52	23.6	-	-	800	3.56

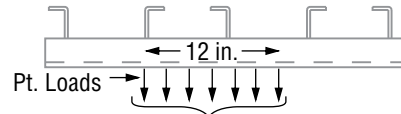
Maximum Allowable Point Load



Max. Allowable Point Load

The maximum allowable point load may be placed anywhere along the insert. All loads placed less than 2" from the end of an insert must be reduced by 50%.

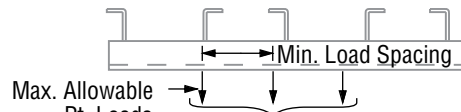
Maximum Allowable Uniform Load



Max. Allowable Uniform Load

The maximum allowable uniform load must be placed as a series of point loads.

Spacing of Multiple Point Loads

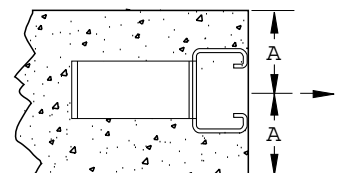
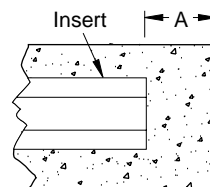


Max. Allowable Uniform Load

Pull-Out Load

Minimum Edge Distance to Achieve Rated Pull-Out Capacity

1 7/8" (47.6mm); P3170
A = 3" (76.2mm); all others





Solar Components

Solar Components

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Solar Components

Material

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

- **Steel: Plain**
- 12 Ga. (2.7 mm), 14 Ga.(1.9 mm) and 16 Ga. (1.5 mm) ASTM A1011 SS GR 33
- **Steel: Pre-Galvanized**
- 12 Ga. (2.7 mm), 14 Ga. (1.9 mm) and 16 Ga. (1.5mm) ASTM A653 GR 33

Finishes

Fittings are available in:

- Green Powder Coat (GR), conforming to commercial standards for Powder Coating,
- Electro-galvanized (EG), conforming to ASTM B633 Type III SC1
- Hot-dipped Galvanized (HG), conforming to ASTM A123 or A153
- Plain (PL)

Dimensions

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

Design Bolt Torque

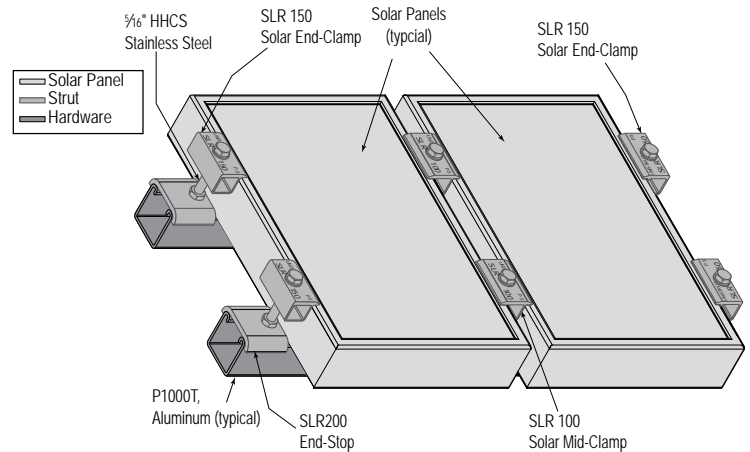
Bolt Size	Rec. Torque		Max. Torque	
	(ft/lb)	(N•m)	(ft/lb)	(N•m)
1/4"-20	6	8	7	9
5/16"-18	11	15	15	20
3/8"-16	19	26	25	34
1/2"-13	50	68	70	95
5/8"-11	100	136	125	170
3/4"-10	125	170	135	183

Listings

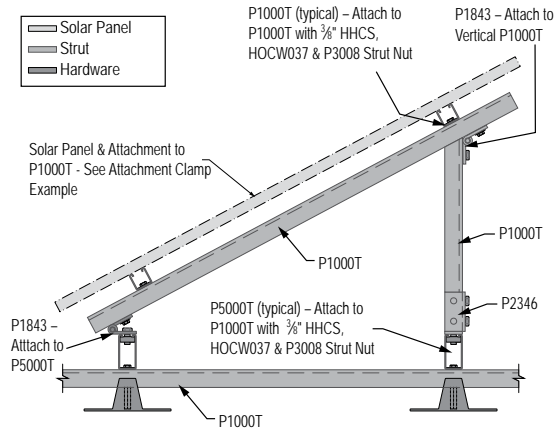
UL File No. - E361025	PV Mounting Systems
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Solar Application Example

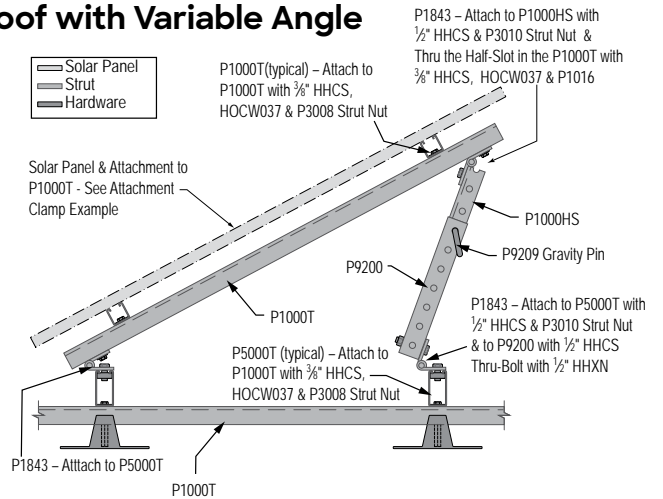
Typical Solar Installation



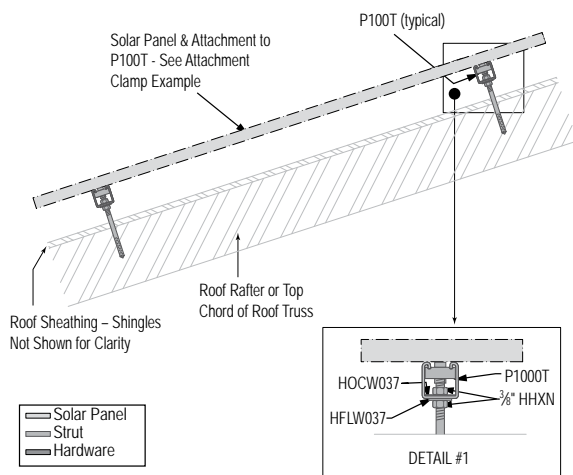
Solar Panel Support Frame Flat Roof with Fixed Angle



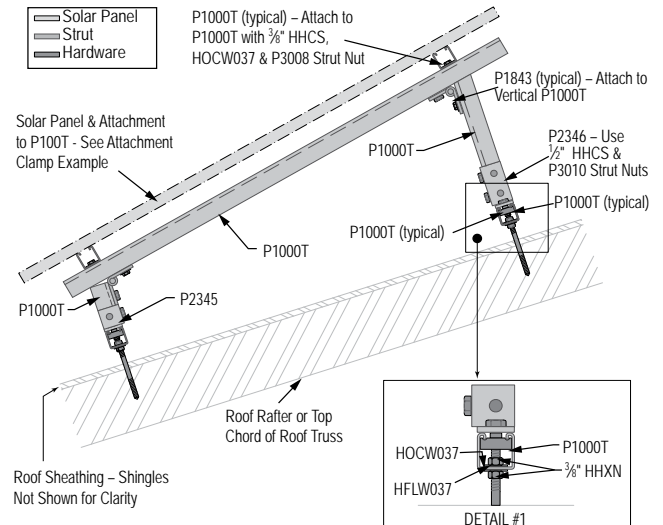
Solar Panel Support Frame Flat Roof with Variable Angle



Solar Panel Support Frame Residential Roof, Parallel to Roof Slop



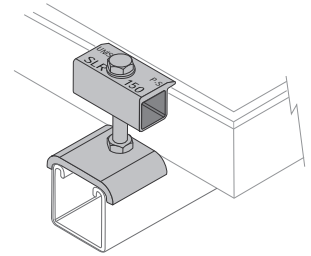
Solar Panel Support Frame Residential Roof, Angled from Roof Slop



Solar Connectors

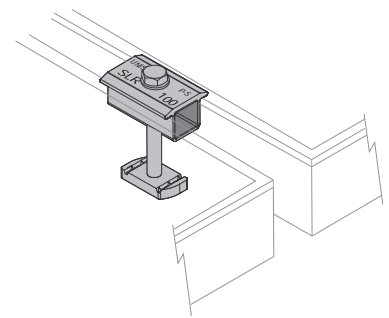
SLR200 - Solar End Clamp

- $\frac{5}{16}$ " x $2\frac{3}{4}$ " hex head cap screw; stainless steel nut; lock washer included
- End-clamp design for use with strut based racking system
- Patent-pending end-stop feature allows use with vertical strut
- Meets uplift loads of 350 lbs.
- *Patent-pending



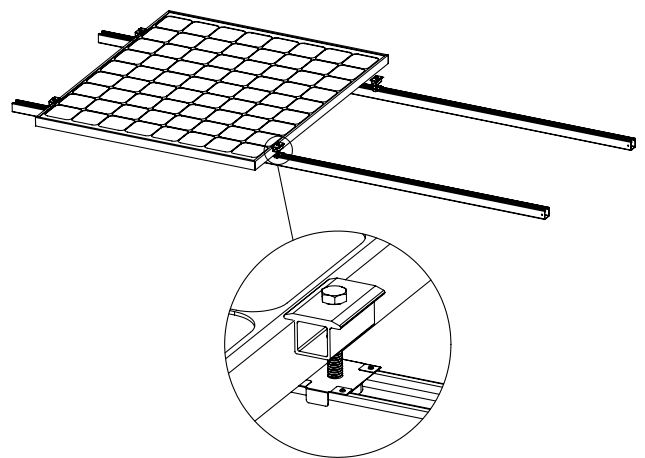
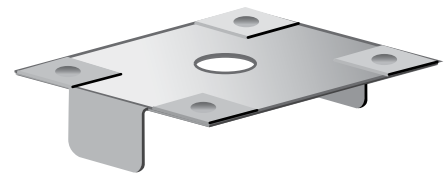
SLR100 - Solar Mid-Clamp

- $\frac{5}{16}$ " x $2\frac{3}{4}$ " hex head cap screw; stainless steel nut; lock washer included
- Mid-clamp design for use with strut based racking system
- Provides .8" (21 mm) panel spacing
- Meets spacing requirements of WEEB-WMC
- Meets uplift loads of 350 lbs



WEEB - WMC - Electrical Equipment Bonding Washer

- Patented design features stainless steel teeth that pierce into anodized aluminum, providing a gas tight connection which prevents oxidation
- Meets ANSI/UL467 requirements for bonding/grounding systems
- Quick installation that is safe, reliable and consistent



Solar Panel Installation



Key Advantages

- The market's only specific panel mounting components made exclusively for use with Unistrut and Power-Strut
- Simple design used by the industry for a variety of installation methods and applications
- Stainless steel hardware included with all solar clamps
- Available in Black or Silver Anodized (Material AA-6063-T6) for corrosion protection and sleek appearance
- Best fit with Unistrut and Power-Strut channel to create less penetration, and superior slip resistance



1¼" Light Duty Framing System

1¼" Light Duty Framing System

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- Load Data, Channel Nuts, End Caps, Flat Fittings..... 185
- Flat, 90°, Angle, "U" Shape Fittings 186

1¼" Framing System

Material

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

Steel: Plain

- 14 Gauge (1.9 mm), ASTM A1011 SS GR 33

STEEL: PRE-GALVANIZED

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

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

Fittings are made from hot rolled, pickled and oiled steel plate or strip and conform to ASTM A1011 SS GR 33.

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

Finishes

All channels and fittings are available in: Perma-Green III (GR), Pre-galvanized (PG), conforming to ASTM A653 GR 33 and plain (PL).

Nuts are available in plain or electro-galvanized (EG) finish.

Fittings are available in Perma-Green III (GR) or plain (PL).

Standard Lengths

Standard lengths are 10 feet (3.05M) and 20 feet (6.10M). Tolerances are: +1/8" (3.2 mm) to +1/2" (12.7 mm) to allow for cutting. Special lengths are available for a small cutting charge with a tolerance of ±1/8" (3.2mm).

Application

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

Threads

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

Design Bolt Torque

Bolt Size	Rec. Torque		Max. Torque	
	(ft/lb)	(N•m)	(ft/lb)	(N•m)
¼"-20	6	8	7	9
⅜"-18	11	15	15	20
⅝"-16	19	26	25	34
½"-13	50	68	70	95
⅝"-11	100	136	125	170
¾"-10	125	170	135	183

Dimensions

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

Load Data

All beam and column load data pertains to carbon steel and stainless steel channels. Load tables and charts are constructed to be in accordance with the SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2024 EDITION published by the AMERICAN IRON AND STEEL INSTITUTE USING ASD METHOD. Loads are based on 33 ksi steel cold formed to 42 ksi.

Type of Load	Safety Factor to Yield Strength	Safety Factor to Ultimate Strength
Beam Loads	1.67	2.0
Column Load	1.80	2.2

1¼" Framing System Pictorial Index

A1000 Series

1¼" x 1¼"
14 Ga.



A1000

A3300 Series

1¼" x ¾"
14 Ga.



A3300

Channel Nuts & Closures



A1006-1420



A4006-1420



A3006-1420

A Series Fittings



A3016-0832



A1280



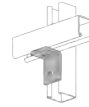
A1063



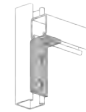
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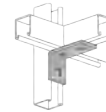
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A1068



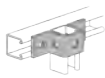
A1326



A1458



A1325



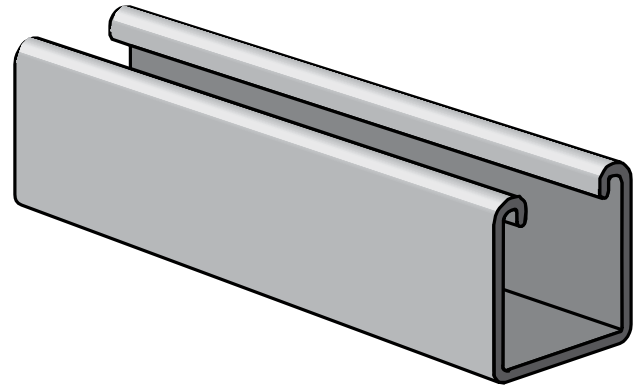
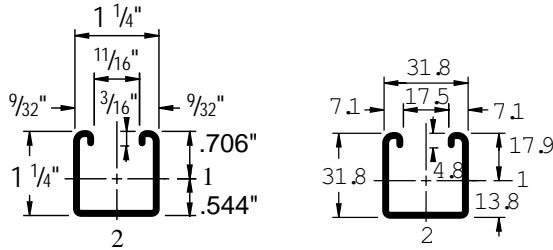
A1047

1¼" Framing System

A1000 - 1¼" x 1¼"

Wt/100 Ft: 104 Lbs (154 kg/100m)

- Allowable Moment 2,170 In-Lbs (240 N·m)
- 14 Gauge Nominal Thickness .075" (1.9mm)



Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
18	960	0.04	960	960	960
24	720	0.07	720	720	660
36	480	0.16	480	440	300
48	360	0.29	330	250	170
60	290	0.45	210	160	110
72	240	0.65	150	110	70
84	210	0.90	110	80	50
96	180	1.16	80	60	40
108	160	1.46	70	50	30
120	140	1.16	80	60	40

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
18	1,960	5,900	5,430	4,800	4,210
24	1,840	5,210	4,590	3,850	3,220
36	1,500	3,940	3,220	2,480	2,010
48	1,220	2,950	2,300	1,790	1,460
60	1,020	2,260	1,790	1,400	1,130
72	880	1,840	1,460	1,130	910
84	780	1,550	1,230	940	**
96	690	1,340	1,050	**	**
108	620	1,170	910	**	**

A1000 - Elements of Section

- Finishes: PL, GR, HG, PG; Standard Lengths: 10' & 20'
- Notes:

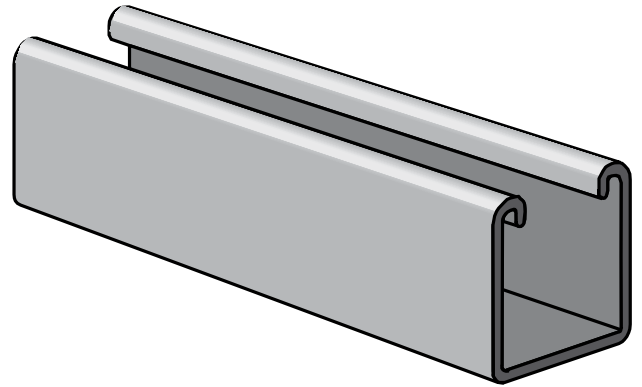
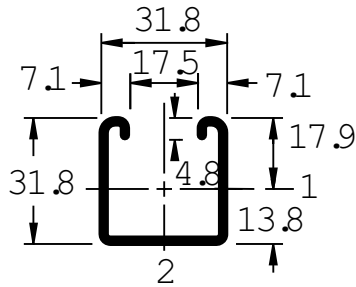
* Load limited by spot weld shear

** $KL/r > 200$

- NR = Not Recommended
1. Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
 2. Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
 3. Deduct channel weight from the beam loads.
 4. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
 5. All beam loads are for bending about Axis 1-1.

1¼" Framing System

A1000 - 1¼" x 1¼"



Span (mm)	Max Allowable Uniform Load (kN)	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 (kN)	Span/240 (kN)	Span/360 (kN)
600	3.2	2	3.2	3.2	3.1
750	2.6	3	2.6	2.6	2.0
1,000	2.0	5	2.0	1.6	1.1
1,250	1.6	8	1.4	1.1	0.7
1,500	1.3	11	1.0	0.7	0.5
1,750	1.1	15	0.7	0.5	0.4
2,000	1.0	20	0.5	0.4	0.3
2,500	0.8	32	0.4	0.3	0.2
3,000	0.7	46	0.2	0.2	0.1

Unbraced Height (mm)	Maximum Allowable Load at Slot Face (kN)	Maximum Column Load Applied at C.G.			
		K = 0.65 (kN)	K = 0.80 (kN)	K = 1.0 (kN)	K = 1.2 (kN)
600	8.2	23.4	20.7	17.3	14.6
750	7.5	20.5	17.3	14.0	11.3
1,000	6.3	16.2	13.0	9.9	8.1
1,250	5.3	12.8	9.9	7.7	6.3
1,500	4.6	10.2	8.1	6.3	5.2
1,750	4.1	8.6	6.8	5.3	4.3
2,000	3.6	7.4	5.9	4.5	**
2,250	3.3	6.5	5.2	3.9	**
2,500	3.0	5.8	4.5	**	**
2,750	2.7	5.2	4.0	**	**

A1000 - Elements of Section

Standard

Parameter	A1000	
Area of Section	0.305	in ²
Axis 1-1		
Moment of Inertia (I)	0.061	in ⁴
Section Modulus (S)	0.086	in ³
Radius of Gyration (r)	0.447	in
Axis 2-2		
Moment of Inertia (I)	0.078	in ⁴
Section Modulus (S)	0.125	in ³
Radius of Gyration (r)	0.506	in

Metric

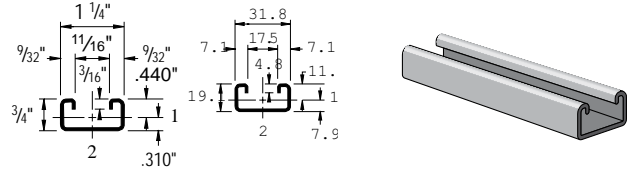
Parameter	A1000	
Area of Section	1.96	cm ²
Axis 1-1		
Moment of Inertia (I)	2.53	cm ⁴
Section Modulus (S)	1.41	cm ³
Radius of Gyration (r)	1.14	cm
Axis 2-2		
Moment of Inertia (I)	3.25	cm ⁴
Section Modulus (S)	2.05	cm ³
Radius of Gyration (r)	1.29	cm

1¼" Framing System

A3300 - 1¼" x ¾"

Wt/100 Ft: 78 Lbs (116 kg/100m)

- Allowable Moment 950 In-Lbs (110 N·m)
- 14 Gauge Nominal Thickness .075" (1.9mm)



Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
18	420	0.07	420	420	320
24	320	0.12	320	270	180
36	210	0.26	160	120	80
48	160	0.47	90	70	50
60	130	0.75	60	40	30
72	110	1.09	40	30	20
84	90	1.42	30	20	10
96	80	1.88	20	20	10

Span (mm)	Max Allowable Uniform Load (kN)	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 (kN)	Span/240 (kN)	Span/360 (kN)
600	1.4	3	1.4	1.2	0.8
750	1.2	5	1.1	0.8	0.5
1000	0.8	8	0.6	0.4	0.3
1250	0.7	12	0.4	0.3	0.2
1500	0.6	18	0.3	0.2	0.1
1750	0.5	24	0.2	0.1	0.1
2000	0.4	33	0.1	0.1	0.1

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
18	1430	4490	4210	3860	3550
24	1370	4090	3750	3310	2680
36	1190	3390	2680	1820	1260
48	900	2380	1600	1020	**
60	680	1550	1020	**	**

Unbraced Height (mm)	Maximum Allowable Load at Slot Face (kN)	Maximum Column Load Applied at C.G.			
		K = 0.65 (kN)	K = 0.80 (kN)	K = 1.0 (kN)	K = 1.2 (kN)
600	6.1	18.3	16.8	14.9	12.2
750	5.8	16.7	14.9	11.5	8.4
1000	4.9	13.8	10.4	6.8	4.7
1250	3.9	10.1	6.8	4.3	**
1500	3.1	7.1	4.7	**	**

A1000/A1001 - Elements of Section

- Notes:
- * Load limited by spot weld shear
- ** $KL/r > 200$
- NR = Not Recommended
1. Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
 2. Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
 3. Deduct channel weight from the beam loads.
 4. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
 5. All beam loads are for bending about Axis 1-1.

1¼" Framing System

Span	Max Allowable Uniform Load	Defl. at Uniform Load	Uniform Loading at Deflection		
			Span/180	Span/240	Span/360
(in)	(lb)	(in)	(lb)	(lb)	(lb)
18	990*	0.03	990*	990*	990*
24	860	0.07	860	860	850
36	580	0.15	850	560	380
48	430	0.27	420	320	210
60	350	0.43	270	200	140
72	290	0.62	190	140	90
84	250	0.85	140	100	70
96	220	1.11	110	80	50

Span	Max Allowable Uniform Load	Defl. at Uniform Load	Uniform Loading at Deflection		
			Span/180	Span/240	Span/360
(mm)	(kN)	(mm)	(kN)	(kN)	(kN)
600	7.3*	1	7.3*	7.3*	7.3
750	7.3*	2	7.3*	7.3*	7.3
1,000	5.5	3	5.5	5.5	5.5
1,250	4.4	4	4.4	4.4	3.5
1,500	3.6	6	3.6	3.6	2.4
1,750	3.2	9	3.2	2.7	1.8
2,000	2.8	11	2.7	2.0	1.4
2,500	2.2	17	1.7	1.3	0.9
3,000	1.8	25	1.2	0.9	0.6
3,500	1.6	34	0.9	0.7	0.4

Unbraced Height	Maximum Allowable Load at Slot Face	Maximum Column Load Applied at C.G.			
		K = 0.65	K = 0.80	K = 1.0	K = 1.2
(in)	(lb)	(lb)	(lb)	(lb)	(lb)
18	2540	9890	9620	9300	9020
24	2510	9510	9200	8710	7960
36	2410	8800	7960	6730	5490
48	2230	7560	6320	4690	3310
60	1970	6210	4690	3050	2120
72	1650	4890	3310	2120	**
84	1380	3680	2430	**	**
96	1160	2820	1860	**	**

Unbraced Height	Maximum Allowable Load at Slot Face	Maximum Column Load Applied at C.G.			
		K = 0.65	K = 0.80	K = 1.0	K = 1.2
(mm)	(kN)	(kN)	(kN)	(kN)	(kN)
600	15.5	56.9	54.5	51.6	48.9
750	15.2	54.4	51.6	48.4	45.7
1,000	14.9	50.4	47.4	43.9	37.4
1,250	14.4	47.2	43.9	35.7	27.8
1,500	13.3	44.6	37.4	27.8	19.6
1,750	12.1	39.4	30.9	20.7	14.4
2,000	10.8	34.1	24.8	15.9	11.0
2,250	9.5	29.0	19.6	12.5	**
2,500	8.4	24.1	15.9	10.2	**
2,750	7.4	19.9	13.1	**	**

A1000 - Elements of Section

- Finishes: PL, GR, HG, PG; Standard Lengths: 10' & 20'

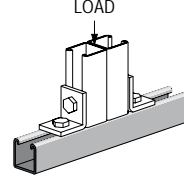
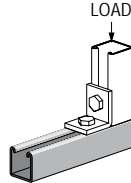
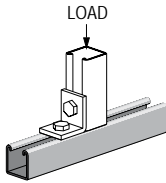
Parameter	A1000	
Area of Section	0.305	in ²
Axis 1-1		
Moment of Inertia (I)	0.061	in ⁴
Section Modulus (S)	0.086	in ³
Radius of Gyration (r)	0.447	in
Axis 2-2		
Moment of Inertia (I)	0.078	in ⁴
Section Modulus (S)	0.125	in ³
Radius of Gyration (r)	0.506	in

Parameter	A1000	
Area of Section	1.96	cm ²
Axis 1-1		
Moment of Inertia (I)	2.53	cm ⁴
Section Modulus (S)	1.41	cm ³
Radius of Gyration (r)	1.14	cm
Axis 2-2		
Moment of Inertia (I)	3.25	cm ⁴
Section Modulus (S)	2.05	cm ³
Radius of Gyration (r)	1.29	cm

Load Data, Channel Nuts, End Caps, Flat Fittings

Bearing Loads on Channel

Loads are calculated based on 2001 Specification For The Design Of Cold Formed Steel Structural Members published by AISI

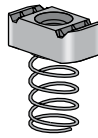


Channel	Bearing Length 1 1/4" (31.8 mm) Maximum Allowable Loads		Bearing Length 1 1/4" (31.8 mm) Maximum Allowable Loads		Bearing Length 2 1/2" (63.5 mm) Maximum Allowable Loads	
	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
A1000	3,700	16.46	1,700	7.56	4,300	19.13
A3300	3,800	16.90	1,700	7.56	4,300	19.13

Channel Nut With Spring



Part Number	Nut Size Thread	Wt/100 pcs		Use With
		(lb)	(kg)	
A1006-1420	1/4" -20	6	2.7	A1000
A1007	5/16" -18	6	2.7	
A1008	3/8" -16	6	2.7	



Part Number	Nut Size Thread	Wt/100 pcs		Use With
		(lb)	(kg)	
A4006-1420	1/4" -20	5	2.3	A3300
A4007	5/16" -18	5	2.3	
A4008	3/8" -16	5	2.3	

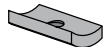


Channel Nut Without Springs

Part Number	Nut Size Thread	Wt/100 pcs		Use With
		(lb)	(kg)	
A3006-1420	1/4" -20	5	2.3	A1000 or A3300
A3007	5/16" -18	5	2.3	
A3008	3/8" -16	5	2.3	



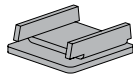
Part Number	Nut Size Thread	Wt/100 pcs		Use With
		(lb)	(kg)	
A3016-0832	#8-20	1	0.5	A1000 or A3300
A3016-1024	#10-24	1	0.5	
A3016-1032	#10-32	1	0.5	
A3016-1420	1/4" -20	1	0.5	



A1280 – End Cap

Wt/100 pcs: 7 Lbs (3.2 kg)

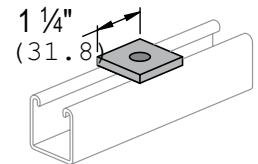
- Material: .075" (1.9)
- Note: Use with A1000 channel



A1063



Wt/100 pcs: 8 Lbs (3.6 kg)

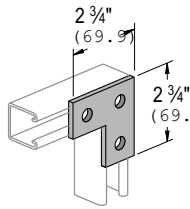


Standard Dimensions for 1 1/4" (31.8 mm) width series channel fittings (Unless Otherwise Shown on Drawing)
 Hole Diameter: 1 9/32" (10.3mm); Hole Spacing - From End: 5/8" (15.9 mm); Hole Spacing - On Center: 1 1/2" (38.1mm); Width: 1 1/4" (31.8mm); Thickness: 3/16" (4.8mm)

Flat, 90°, Angle, "U" Shape Fittings

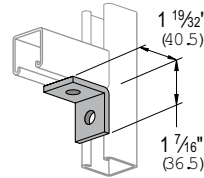
A1036

Wt/100 pcs:
27 Lbs (12.2 kg)



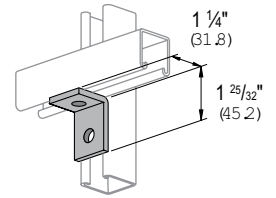
A1026

Wt/100 pcs:
17 Lbs (7.7 kg)



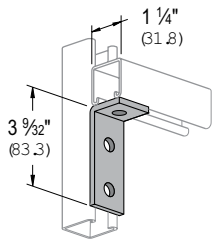
A1068

GR
Wt/100 pcs:
17 Lbs (7.7 kg)



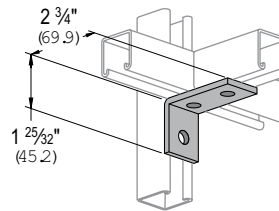
A1326

Wt/100 pcs:
27 Lbs (12.2 kg)



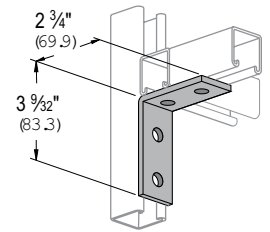
A1458

Wt/100 pcs:
27 Lbs (12.2 kg)



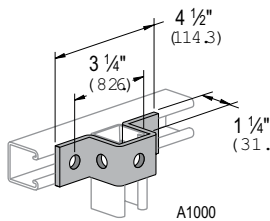
A1325

Wt/100 pcs:
38 Lbs (17.2 kg)



A1047

Wt/100 pcs:
43 Lbs (19.5 kg)



Standard Dimensions for 1 1/4" (31.8 mm) width series channel fittings (*Unless Otherwise Shown on Drawing*)
Hole Diameter: 13/32" (10.3mm); Hole Spacing - From End: 5/8" (15.9 mm); Hole Spacing - On Center: 1 1/2" (38.1mm); Width: 1 1/4" (31.8mm); Thickness: 3/16" (4.8mm)



13/16" Junior Framing System

13/16" Junior Framing System

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13/16" Framing System

Material

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

- **Steel: Plain**
 - 19 Gauge (1.0 mm) ASTM A1008
- **Steel: Pre-Galvanized**
 - 19 Gauge (1.0 mm) ASTM A653 GR 33

All nuts are manufactured from mild steel bars conforming to ASTM A1011 SS Grade 33.

Fittings are made from hot rolled, pickled and oiled steel plate or strip and conform to ASTM A1011 SS GR 33.

Finishes

Channels are available in: Perma-Green III (GR), electro-galvanized (EG), Pre-galvanized (PG), conforming to ASTM A653 GR 33 and plain (PL).

Nuts are available in plain or electro-galvanized (EG) finish.

Fittings are available in Perma-Green III, electrogalvanized (EG) with zinc electrolytically to commercial standards ASTM B653-G90 Type III SC1; or plain (PL).

Standard Lengths

- P-6000 - 16 Feet (4.88m)
- P-7000 - 10 Feet (3.05m)

Tolerances are +1/8" (3.2 mm) to +1/2" (12.7 mm) to allow for cutting. Special lengths are available for a small cutting charge with a tolerance of ±1/8" (3.2mm).

Application

A unique half-size reduction of the 15/8" channel width series, this smaller channel size can be used to carry light loads economically in applications such as instrumentation, retail displays and light-duty laboratory supports. It also provides the flexibility found in all Unistrut and Power-Strut framing systems.

Design Bolt Torque

BOLT SIZE	Rec. Torque		Max Torque	
	(Ft/lb)	(N·m)	(Ft/lb)	(N·m)
1/4"-20	6	8	7	9

Dimensions

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

Load Data

All beam and column load data pertains to carbon steel and stainless steel channels. Load tables and charts are constructed to be in accordance with the SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2007 EDITION published by the AMERICAN IRON AND STEEL INSTITUTE USING ASD METHOD. Loads are based on 33 ksi steel cold formed to 42 ksi.

Type of Load	Safety Factor to Yield Strength	Safety Factor to Ultimate Strength
Beam Loads	1.67	2.0
Column Load	1.80	2.2

1 3/16" Framing System Pictorial Index

P6000 Series

P7000 Series

1 3/16" x 1 3/16"
19 Ga.



P6000

1 3/16" x 1 3/32"
19 Ga.



P7000

Channel Nuts & Closures

1 3/16" Series Fittings



P6006-0832



P7006-0832



P6280



P6184P



P6062



P6065



P7325



P6925



P6066



P6067



P6962



P6356 A



P6726 A



P6334



P6380



P6036



P6380 A



P6031



P6028



P6026



P6068



P6069



P6326



P6346



P6458



P6325



P6359



P7235



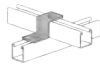
P6331



P6332



P6546



P6045



P6186



P6454



P7045



P6047



P6737



P6377



P7377



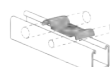
P6455



P6973



P6379 S



P6805



P7008

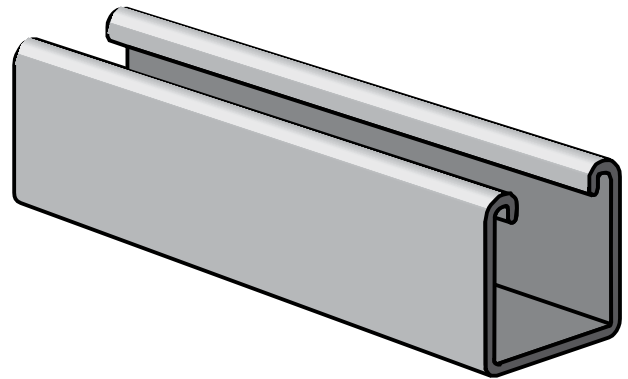
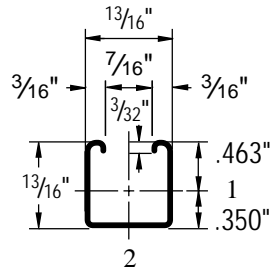
1 3/16" Framing System

P6000



Wt/100 Ft: 36 Lbs (54 kg/100 m)

- Allowable Moment 510 In-Lbs (60 N·m)
- 19 Gauge Nominal Thickness .040" (1.0 mm)



Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
18	230	0.06	230	230	180
24	170	0.11	170	150	100
30	140	0.18	130	100	70
36	110	0.24	90	70	50
42	100	0.35	70	50	30
48	80	0.42	50	40	30
54	80	0.60	40	30	20
60	70	0.72	30	20	20
66	60	0.82	30	20	10
72	60	1.06	20	20	10

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
18	600	1,660	1,400	1,100	860
24	490	1,300	1,010	740	590
30	420	990	740	560	450
36	340	770	590	450	370
42	300	630	490	380	310
48	260	540	420	330	270
54	240	470	370	290	**
60	210	410	330	**	**
66	210	370	300	**	**
72	180	340	270	**	**

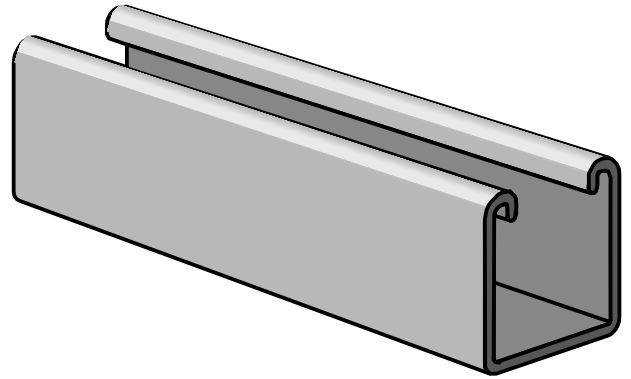
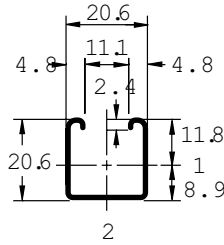
P6000 - Elements of Section

- Notes:
 - * Load limited by spot weld shear
 - ** $KL/r > 200$
- NR = Not Recommended
- 1. Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- 2. Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- 3. Deduct channel weight from the beam loads.
- 4. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- 5. All beam loads are for bending about Axis 1-1.

1 3/16" Framing System

P6000 (metric)

PG



Span (mm)	Max Allowable Uniform Load (kN)	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 (kN)	Span/240 (kN)	Span/360 (kN)
300	1.5	1	1.5	1.5	1.5
450	1.0	2	1.0	1.0	0.8
600	0.8	3	0.8	0.7	0.5
750	0.6	4	0.6	0.4	0.3
1,000	0.4	7	0.4	0.3	0.2
1,250	0.4	11	0.2	0.2	0.1
1,500	0.3	17	0.1	0.1	0.1
1,750	0.3	24	0.1	0.1	0.0

Unbraced Height (mm)	Maximum Allowable Load at Slot Face (kN)	Maximum Column Load Applied at C.G.			
		K = 0.65 (kN)	K = 0.80 (kN)	K = 1.0 (kN)	K = 1.2 (kN)
300	3.1	9.2	8.4	7.3	6.3
450	2.7	7.5	6.3	5.0	3.9
600	2.2	5.9	4.6	3.4	2.7
750	1.8	4.5	3.4	2.5	2.0
1,000	1.4	3.0	2.4	2.5	2.0
1,250	1.1	2.3	1.8	1.4	1.2
1,500	0.9	1.9	1.5	1.2	**
1,750	0.8	1.6	1.2	**	**

P6000 - Elements of Section

Parameter		A1000	
Area of Section Axis 1-1		0.107	in ²
	Moment of Inertia (I)	0.009	in ⁴
	Section Modulus (S)	0.020	in ³
Axis 2-2	Radius of Gyration (r)	0.295	in
	Moment of Inertia (I)	0.012	in ⁴
	Section Modulus (S)	0.029	in ³
	Radius of Gyration (r)	0.333	in

Parameter		A1000	
Area of Section Axis 1-1		0.69	cm ²
	Moment of Inertia (I)	0.39	cm ⁴
	Section Modulus (S)	0.33	cm ³
Axis 2-2	Radius of Gyration (r)	0.75	cm
	Moment of Inertia (I)	0.49	cm ⁴
	Section Modulus (S)	0.48	cm ³
	Radius of Gyration (r)	0.85	cm

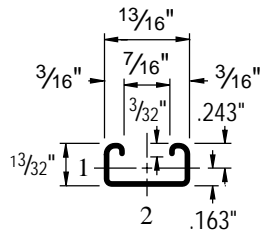
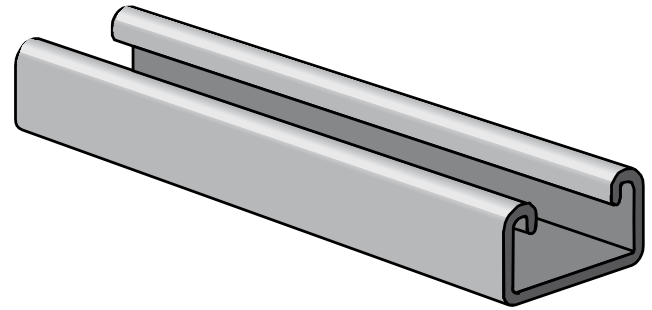
1 3/16" Framing System

P7000



Wt/100 Ft: 36 Lbs (54 kg/100 m)

- Allowable Moment 510 In-Lbs (60 N·m)
- 19 Gauge Nominal Thickness .040" (1.0 mm)



Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lb)	Span/240 (lb)	Span/360 (lb)
18	230	0.06	230	230	180
24	170	0.11	170	150	100
30	140	0.18	130	100	70
36	110	0.24	90	70	50
42	100	0.35	70	50	30
48	80	0.42	50	40	30
54	80	0.60	40	30	20
60	70	0.72	30	20	20
66	60	0.82	30	20	10
72	60	1.06	20	20	10

Unbraced Height (in)	Maximum Allowable Load at Slot Face (lb)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lb)	K = 0.80 (lb)	K = 1.0 (lb)	K = 1.2 (lb)
18	600	1,660	1,400	1,100	860
24	490	1,300	1,010	740	590
30	420	990	740	560	450
36	340	770	590	450	370
42	300	630	490	380	310
48	260	540	420	330	270
54	240	470	370	290	**
60	210	410	330	**	**
66	210	370	300	**	**
72	180	340	270	**	**

P6000 - Elements of Section

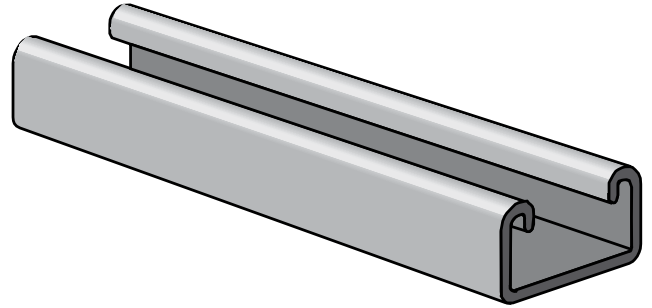
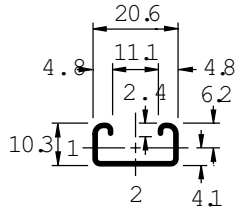
- Notes:
 - * Load limited by spot weld shear
 - ** $KL/r > 200$
- NR = Not Recommended
- 1. Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
- 2. Beam loads are based on a simple span and assumed to be adequately laterally braced. Unbraced spans can reduce beam load carrying capacity.
- 3. Deduct channel weight from the beam loads.
- 4. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%.
- 5. All beam loads are for bending about Axis 1-1.

13/16" Framing System

P7000 (metric)

Wt/100 Ft: 25 Lbs (38 kg/100m)

- Allowable Moment 170 In-Lbs (20 N·m)
- 19 Gauge Nominal Thickness .040" (1.0 mm)



Span (mm)	Max Allowable Uniform Load (kN)	Defl. at Uniform Load (mm)	Uniform Loading at Deflection		
			Span/180 (kN)	Span/240 (kN)	Span/360 (kN)
300	0.5	1	0.5	0.5	0.4
450	0.4	3	0.3	0.2	0.1
600	0.3	5	0.2	0.1	0.1
750	0.2	9	0.1	0.1	0.0
1,000	0.2	16	0.0	0.0	0.0
1,250	0.1	24	0.0	0.0	NR
1,500	0.1	28	0.0	NR	NR

Unbraced Height (mm)	Maximum Allowable Load at Slot Face (kN)	Maximum Column Load Applied at C.G.			
		K = 0.65 (kN)	K = 0.80 (kN)	K = 1.0 (kN)	K = 1.2 (kN)
300	2.1	6.4	6.0	5.3	4.5
450	1.9	5.4	4.5	3.3	2.3
600	1.5	4.1	2.9	1.9	1.3
750	1.2	2.8	1.9	1.2	**

P7000 - Elements of Section

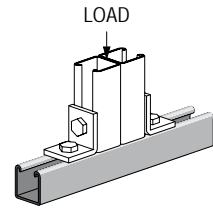
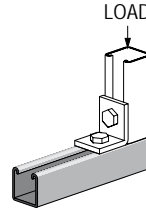
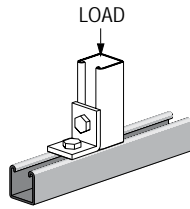
Parameter		A1000	
Area of Section Axis 1-1		0.074	in ²
	Moment of Inertia (I)	0.002	in ⁴
Axis 2-2	Section Modulus (S)	0.007	in ³
	Radius of Gyration (r)	0.150	in
	Moment of Inertia (I)	0.007	in ⁴
	Section Modulus (S)	0.017	in ³
	Radius of Gyration (r)	0.307	in

Parameter		A1000	
Area of Section Axis 1-1		0.48	cm ²
	Moment of Inertia (I)	0.07	cm ⁴
Axis 2-2	Section Modulus (S)	0.11	cm ³
	Radius of Gyration (r)	0.38	cm
	Moment of Inertia (I)	0.29	cm ⁴
	Section Modulus (S)	0.28	cm ³
	Radius of Gyration (r)	0.78	cm

13/16" Framing System

Bearing Loads on Channel

Loads are calculated based on 2001 Specification For The Design Of Cold Formed Steel Structural Members published by AISI



Channel	Bearing Length 1 3/16" (20.6 mm)		Bearing Length 1 3/16" (20.6 mm)		Bearing Length 1 5/8" (41.3 mm)	
	Maximum Allowable Loads		Maximum Allowable Loads		Maximum Allowable Loads	
	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
P6000	1,000	4.45	500	2.22	1,200	5.34
P7000	1,000	4.45	500	2.22	1,200	5.34

Maximum Allowable Pull-Out and Slip Loads

Nut Size / Thread	Max. Allowable Pull-Out		Resistance to Slip		Torque	
	(lb)	(kN)	(lb)	(kN)	(ft-lb)	(N·m)
1/4"-20	250	1.11	150	0.67	6	8

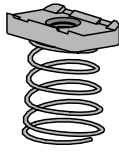
Lateral Bracing Load Reduction Charts

Span		Single Channel	
(in)	(cm)	P6000	P7000
24	61	0.80	0.95
36	91	0.63	0.90
48	122	0.52	0.87
60	152	0.45	0.83
72	183	0.40	0.80
84	213	0.37	0.76
96	244	0.34	0.73

Channel Nuts, Caps & Closures

P6006-0832 thru P6006-1420 Channel Nut w/Spring

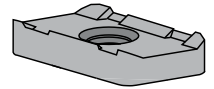
EG



Part Number	Thread Size	Wt/100 pcs	
	(in)	(lb)	(kg)
P6006-0836	#8 - 36	1	0.5
P6006-0832	#8 - 32	1	0.5
P6006-1032	#10 - 32	1	0.5
P6006-1024	#10 - 24	1	0.5
P6006-1420	1/4" - 20	1	0.5

P6013-0832 thru P6006-1420 Channel Nut

EG



Part Number	Thread Size	Wt/100 pcs	
	(in)	(lb)	(kg)
P6013-0836	#8 - 36	1	0.5
P6013-0832	#8 - 32	1	0.5
P6013-1032	#10 - 32	1	0.5
P6013-1024	#10 - 24	1	0.5
P6013-1420	1/4" - 20	1	0.5

P7006-0832 thru P7006-1420 Channel Nut w/Spring

EG

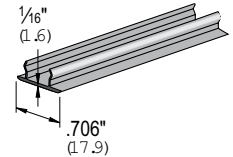


Part Number	Thread Size	Wt/100 pcs	
	(in)	(lb)	(kg)
P7006-0836	#8 - 36	1	0.5
P7006-0832	#8 - 32	1	0.5
P7006-1032	#10 - 32	1	0.5
P7006-1024	#10 - 24	1	0.5
P7006-1420	1/4" - 20	1	0.5

P6184 P - Closure Strip

Wt/100 Ft:
4 Lbs (6.0 kg/100m)

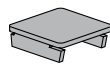
- Material: PVC, Plastic
- Standard Length: 10 Feet (3.05 m)



P6280 - End Cap for P6000

Wt/100 pcs: 3 Lbs (1.4 kg)

- Material: .060" (1.5)

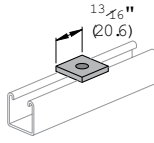


Standard Dimensions for $\frac{13}{16}$ " (20.6mm) width series channel fittings (Unless Otherwise Shown on Drawing)
Hole Diameter: $\frac{9}{32}$ " (7.1mm); Hole Spacing - From End: $\frac{13}{32}$ " (10.3mm); Hole Spacing - On Center: $1\frac{1}{16}$ " (27.0mm); Width: $\frac{13}{16}$ " (20.6mm); Thickness: $\frac{1}{8}$ " (3.2mm)

Flat Plate Fittings

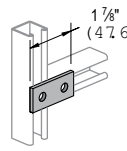
P6062

Wt/100 pcs:
2 Lbs (0.9 kg)



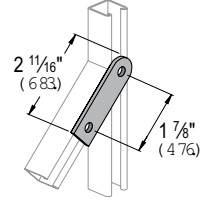
P6065

Wt/100 pcs:
5 Lbs (2.3 kg)



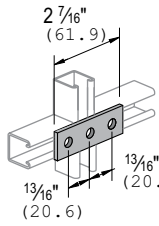
P7325

Wt/100 pcs:
7 Lbs (3.2 kg)



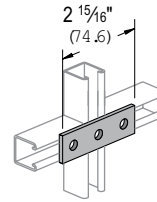
P6925

Wt/100 pcs:
7 Lbs (3.2 kg)



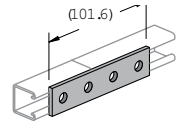
P6066

Wt/100 pcs:
8 Lbs (3.6 kg)



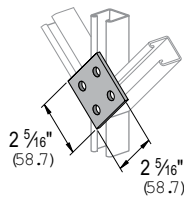
P6067

Wt/100 pcs:
11 Lbs (5.0 kg)



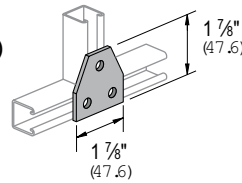
P6962

Wt/100 pcs:
19 Lbs (8.6 kg)



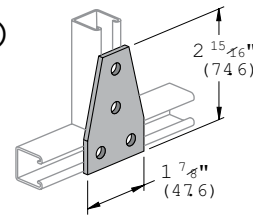
P6356A

Wt/100 pcs:
10 Lbs (4.5 kg)



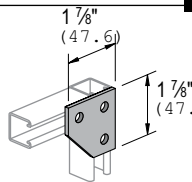
P6358A

Wt/100 pcs:
15 Lbs (6.8 kg)



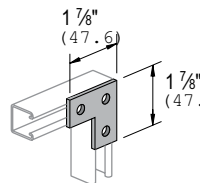
P6334

Wt/100 pcs:
11 Lbs (5.0 kg)



P6036

Wt/100 pcs:
8 Lbs (3.6 kg)

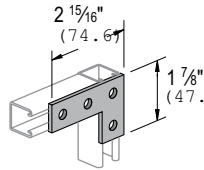


Standard Dimensions for $1\frac{3}{16}$ " (20.6mm) width series channel fittings (Unless Otherwise Shown on Drawing)
Hole Diameter: $\frac{9}{32}$ " (7.1mm); Hole Spacing - From End: $1\frac{3}{32}$ " (10.3mm); Hole Spacing - On Center: $1\frac{1}{16}$ " (27.0mm); Width: $1\frac{3}{16}$ " (20.6mm); Thickness: $\frac{1}{8}$ " (3.2mm)

Flat Plate & 90 Degree Fittings

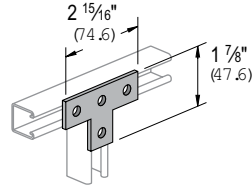
P6380A

Wt/100 pcs:
11 Lbs (5.0 kg)



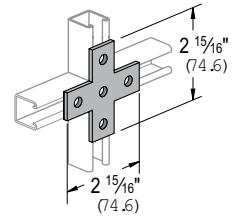
P6031

Wt/100 pcs:
11 Lbs (5.0 kg)



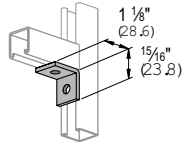
P6028

Wt/100 pcs:
14 Lbs (6.4 kg)



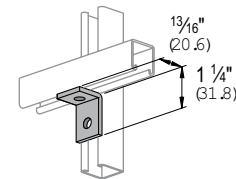
P6026

Wt/100 pcs:
5 Lbs (2.3 kg)



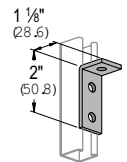
P6068

Wt/100 pcs:
5 Lbs (2.3 kg)



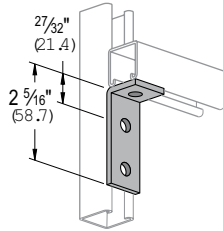
P6069

Wt/100 pcs:
8 Lbs (3.6 kg)



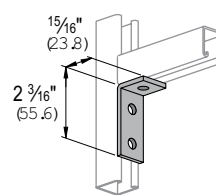
P6326

Wt/100 pcs:
8 Lbs (3.6 kg)



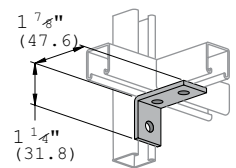
P6346

Wt/100 pcs:
8 Lbs (3.6 kg)



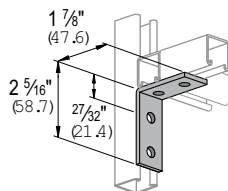
P6458

Wt/100 pcs:
8 Lbs (3.6 kg)



P6325

Wt/100 pcs:
11 Lbs (5.0 kg)

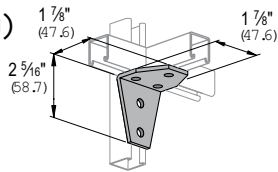


Standard Dimensions for $1\frac{3}{16}$ " (20.6mm) width series channel fittings (Unless Otherwise Shown on Drawing)
Hole Diameter: $\frac{9}{32}$ " (7.1mm); Hole Spacing - From End: $1\frac{3}{32}$ " (10.3mm); Hole Spacing - On Center: $1\frac{1}{16}$ " (27.0mm); Width: $1\frac{3}{16}$ " (20.6mm); Thickness: $\frac{1}{8}$ " (3.2mm)

90 Degree and "U" Shape Fittings

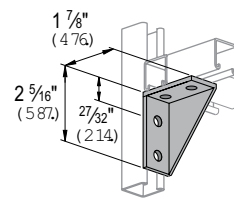
P7235

Wt/100 pcs:
18 Lbs (8.2 kg)



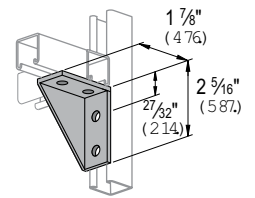
P6331

Wt/100 pcs:
19 Lbs (8.6 kg)



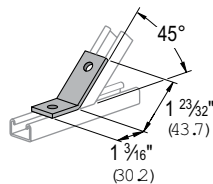
P6332

Wt/100 pcs:
19 Lbs (8.6 kg)



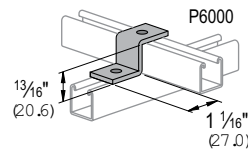
P6546

Wt/100 pcs:
8 Lbs (3.6 kg)



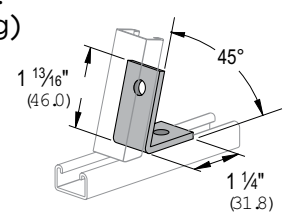
P6045

Wt/100 pcs:
7 Lbs (3.2 kg)



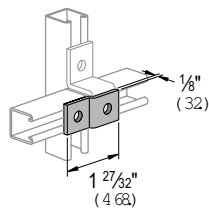
P6186

Wt/100 pcs:
8 Lbs (3.6 kg)



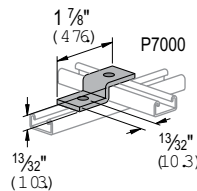
P6454

Wt/100 pcs:
5 Lbs (2.3 kg)



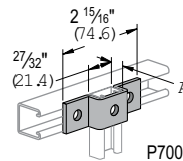
P7045

Wt/100 pcs:
6 Lbs (2.7 kg)



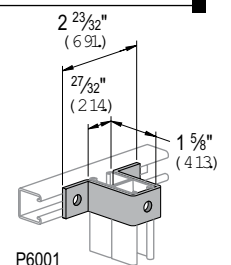
P6047

Part Number	"A"		Wt/100 pcs		Use with Channel
	(in)	(mm)	(lb)	(kg)	
P6047	1 3/16	20.6	12	5.4	P6000



P6737

Wt/100 pcs:
16 Lbs (7.3 kg)

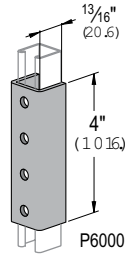


Standard Dimensions for 1 3/16" (20.6mm) width series channel fittings (Unless Otherwise Shown on Drawing)
Hole Diameter: 9/32" (7.1mm); Hole Spacing - From End: 1 3/32" (10.3mm); Hole Spacing - On Center: 1 1/16" (27.0mm); Width: 1 3/16" (20.6mm); Thickness: 1/8" (3.2mm)

"U" Shape Fittings, Brackets & Beam Clamps

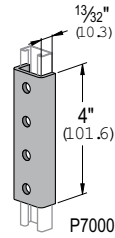
P6377

Wt/100 pcs:
36 Lbs (16.3 kg)



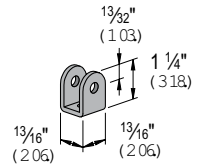
P7377

Wt/100 pcs:
24 Lbs (10.9 kg)



P6973

Wt/100 pcs:
8 Lbs (3.6 kg)

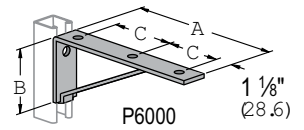


Bracket

Wt/100 pcs:
4 Lbs (1.8 kg)

Part Number	Uniform Design Load		"A"		"B"		"C"		Wt/100 pcs	
	(lb)	(kg)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kg)
P6128	150	0.67	8 1/2	215.9	3 1/4	82.6	3 1/2	88.9	40	18.1

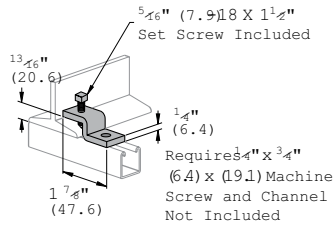
Safety Factor 2 1/2



P6379 S - Beam Clamp

Wt/100 pcs:
13 Lbs (5.9 kg)

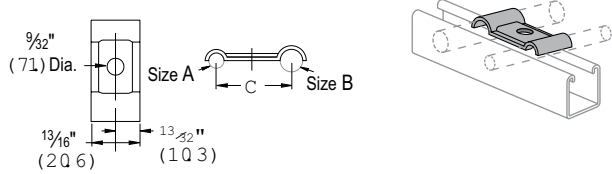
- Use in pairs



Standard Dimensions for 13/16" (20.6mm) width series channel fittings (Unless Otherwise Shown on Drawing)
Hole Diameter: 9/32" (7.1mm); Hole Spacing - From End: 13/32" (10.3mm); Hole Spacing - On Center: 1 1/16" (27.0mm); Width: 13/16" (20.6mm); Thickness: 1/8" (3.2mm)

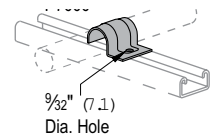
Tubing Clips

P6805 thru P6810 – Tubing Clips



P7008 thru P7020 – Tubing Clips

- Material: 16 Gauge (1.5)



Part Number	O.D. Tube Size "A"		Wt/100 pcs		Part Number	O.D. Tube Size "A"		O.D. Tube Size "B"		"C"		Wt/100 pcs	
	(in)	(mm)	(lb)	(kg)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kg)
P7008	1/4	6.4	1	0.45	P6805	1/4	6.4	1/4	6.4	3/4	19.1	1	0.5
P7009	5/16	7.9	1	0.45	P6806	3/8	9.5	3/8	9.5	1	25.4	2	0.9
P7010	3/8	9.5	2	0.91	P6807	1/2	12.7	1/2	12.7	1 1/4	31.8	3	1.4
P7012	1/2	12.7	2	0.91	P6808	1/4	6.4	3/8	9.5	7/8	22.2	2	0.9
P7016	3/4	19.1	4	1.8	P6810	3/8	9.5	1/2	12.7	1 1/8	28.6	3	1.4
P7020	1	25.4	5	2.3									

Standard Dimensions for 13/16" (20.6mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 9/32" (7.1mm); Hole Spacing - From End: 13/32" (10.3mm); Hole Spacing - On Center: 1 1/16" (27.0mm); Width: 13/16" (20.6mm); Thickness: 1/8" (3.2mm)



Fiberglass System

Fiberglass System

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Fiberglass System

Polyester and Vinyl ester Materials

Polyester and vinyl ester channels are manufactured from the pultrusion process and are color coded gray and beige respectively. Components are made by reinforcing a polymer resin (polyester or vinyl ester) with multiple strands of glass filament, alternating layers of glass mat and U.V. resistant surfacing veils. The glass is drawn through the liquid resin, which coats and saturates the fibers. The combination of resin, glass and veil is then continuously guided and pulled (pultruded) through a heated die that determines the shape of the component.

In the die, the resin is cured to form a reinforced part which can be cut to length. The hardened fiberglass pultrusion is reinforced with an internal arrangement of permanently bonded continuous glass fibers to increase its strength.

Installation

Fabrication requires just three simple operations: cutting, drilling and sealing as described below.

Cutting – Hand held saws, such as hack saws (24 to 32 teeth per inch) are suitable when a few cuts are required. For frequent cutting, a circular power saw with a carbide-tipped masonry blade yields the best results. When using a power saw, dust filter masks, gloves and long sleeve clothing should be worn.

Drilling – Any standard twist bit, even when used with battery-powered drills will work well. Carbide-tipped drill bits are recommended.

Sealing – To protect against future migration of corrosive elements into the cut sections, all cuts and holes should be properly sealed with clear urethane sealer.

Operating Environment

Temperature Ranges – Fiberglass parts are supplied in five different materials covering distinct temperature ranges. The temperature ranges indicated are meant to be used only as a general guideline. Continual exposure to elevated temperatures reduces the strength properties of plastics and glass-reinforced fiberglass. Actual resin test data confirms that a 50% reduction in strength occurs at the extreme high temperature levels.

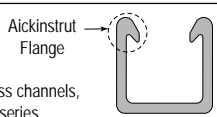
Chemical Resistance – The results are based upon immersion for a 24 hour period. This is typically the “worst case” exposure to corrosion. Less severe contact such as spills, splashes and vapor condensate will exceed the performance results listed in the table.

Loading – Channel loading is defined with description of each type of channel. Additional loading and design limitations for fittings and accessories are described in the appropriate section for that part.

Material Code	Material Temperature Ratings			
	Low Temp.		High Temp.	
	°F	°C	°F	°C
E - (Rigid PVC)	-25	-31	130	54
P - (Poly/Glass)	-35	-37	200	93
V - (Vinyl/Glass)	-35	-37	200	93
PU - (Poly)	-40	-40	140	60
N - (Nylon)	-20	-29	150	66

Fiberglass Pictorial Index

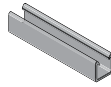
Channel - Aickinstrut Flange Profile



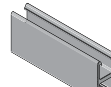
Aickinstrut Flange

Unistrut fiberglass channels, except the SST series, incorporate the Aickinstrut flange design which provides reliable fastening and interlocking of components and accessories. It is important to note that standard metal framing components such as pipe clamps and strut nuts will not work with the flange design.

Heavy Duty Aickinstrut Flange Profile
1⁵/₈" x 1⁵/₈"



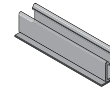
20P/V-2000



20P/V-2100

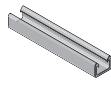


20P/V-2200

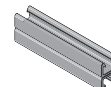


20P/V-2300

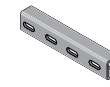
Light Duty Aickinstrut Flange Profile
1¹/₂" x 1¹/₈"



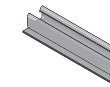
20P/V-1000



20P/V-1100

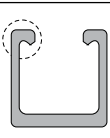


20P/V-1200



20P/V-1300

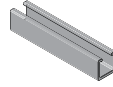
Channel - SST Profile



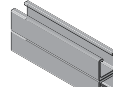
SST Flange

The Unistrut SST profile is similar to the profile of standard metal channel. The Unistrut SST profile will accommodate standard 1⁵/₈" metal channel fittings and components. This profile is available in polyester or vinyl ester resin. The Unistrut SST profile is not compatible with the fiberglass pipe clamps and channel nuts shown in this section. Typically, stainless steel clamps and strut nuts (listed elsewhere in this catalog) are used with this profile.

Heavy Duty SST Profile
1⁵/₈" x 1⁵/₈"



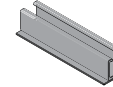
20P/V-2000 SST



20P/V-2100 SST



20P/V-2200 SST



20P/V-2300 SST

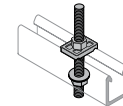
Hardware & Accessories



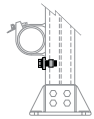
Heavy Duty



Standard Duty



Saddle Clip



Stop Lock



Hex Flange Bolt



Hex Bolt



Hex Flange Nut



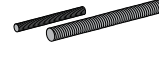
Hex Nut



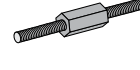
Flat Washer



Spacer



Threaded Rod

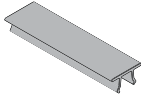


Rod Coupler

Fittings



End Cap



Capping Strip



U-Bolt



20P/V-2500



20P/V-2502



20P/V-2504



20P/V-2506



20P/V-2508



20P/V-2510



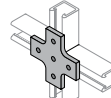
20P/V-2512



20P/V-2514



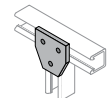
20P/V-2516



20P/V-2518



20P/V-2520



20P/V-2522



20P/V-2524



20P/V-2526



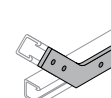
20P/V-2528



20P/V-2530



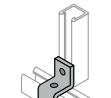
20P/V-2534



20P/V-2540



20PU-2538



20PU-2611

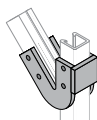


20PU-2613

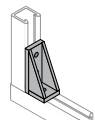


50PU-1508
50PU-2008

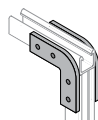
Pipe Clamps, Beam Clamps and Stanchions



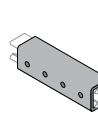
50PU-2045



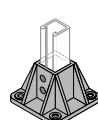
50PU-2636



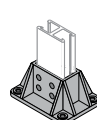
50PU-2090



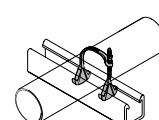
50PU-2616



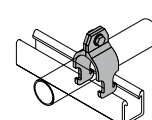
20PU-5853
20PU-5855



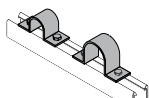
20PU-5903
20PU-5095



Adj. Pipe Clamp



Rigid Pipe Clamp



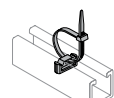
Pipe Strap



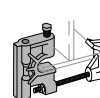
Fabricated Clevis Hanger



Molded Clevis Hanger



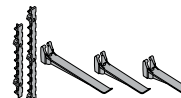
Channel Insert



Molded Beam Clamp Assembly



Molded Beam Clamp



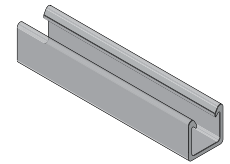
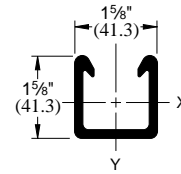
Rack Stanchion

Heavy Duty Channel Aickinstruct Flange Profile

20P-2000, 20V-2000

Heavy Duty Single Channel - Aickinstruct flange profile

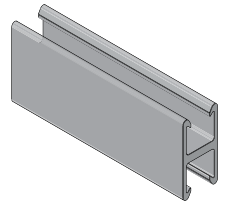
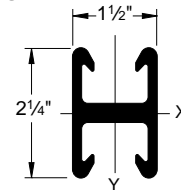
Wt/100 Ft: 82 Lbs(122 kg/100 m)



20P-2100, 20V-2100

Heavy Duty Back-to-Back Channel - Aickinstruct flange profile

Wt/100 Ft: 164 Lbs (244 kg/100 m)



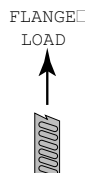
Section Properties

Part Number	Weight lb/ft		Area		X - X Axis								Y - Y Axis					
	(kg)	(m)	(in ²)	(mm ²)	"I"		"R"		"C1"		"C2"		"I"		"R"		"C"	
					(in ⁴)	(mm ⁴)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in ⁴)	(mm ⁴)	(in)	(mm)	(in)	(mm)
20P-2000	0.82	1.2	1.06	6.8	0.31	12.9	0.54	13.7	0.7	17.8	0.93	23.6	0.42	17.5	0.63	16.0	0.82	20.8
20V-2000	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	1	0.5
20P-2100	1.64	2.4	2.12	13.7	1.77	73.7	0.91	23.1	1.63	41.4	1.63	41.4	0.85	35.4	0.63	16.0	0.82	20.8
20V-2100	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	1	0.5

Flange Loading

- *Values shown represent a 3:1 safety factor

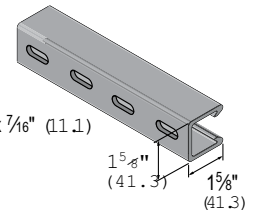
Part Number	Pull-Out Strength*	
	(lb)	(kN)
20P-2000	360	1.6
20V-2000	449	2.0
20P-2100	360	1.6
20V-2100	449	2.0



20P-2200, 20V-2200 Slotted Channel

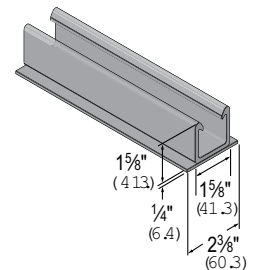
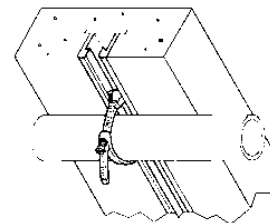
Wt/100 Ft:
82 Lbs (122 kg/100 m)

Slots are 1" (25.4) x 7/16" (11.1)
2" (50.8) on Center



20P-2300, 20V-2300 w/Concrete Insert

Wt/100 Ft:
88 Lbs (131 kg/100 m)



Heavy Duty Channel Aickinstrut Flange Profile

20P-2000, 20V-2000

Channel Beam/Column Loading

Span		Max. Uniform Beam Load (Safety Factor - 3:1)				Uniform Load at Deflection of 1/360 Span				Maximum Column Load	
		Load		Deflection		Load		Deflection			
(in)	(mm)	(lb)	(kN)	(in)	(mm)	(lb)	(kN)	(in)	(mm)	(lb)	(kN)
12	304.8	3561	15.8	0.102	2.6	1159	5.2	0.033	0.8	5160	23.0
18	457.2	2374	10.6	0.23	5.8	515	2.3	0.05	1.3	4704	20.9
24	609.6	1781	7.9	0.41	10.4	290	1.3	0.067	1.7	4168	18.5
30	762.0	1424	6.3	0.64	16.3	185	0.8	0.083	2.1	3553	15.8
36	914.4	1187	5.3	0.922	23.4	129	0.6	0.1	2.5	2859	12.7
48	1219.2	890	4.0	1.638	41.6	72	0.3	0.133	3.4	1636	7.3
60	1524.0	712	3.2	2.56	65	46	0.2	0.167	4.2	1047	4.7
72	1828.8	594	2.6	3.686	93.6	32	0.1	0.2	5.1	727	3.2

20P-2100, 20V-21000

Channel Beam/Column Loading

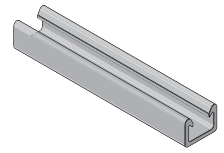
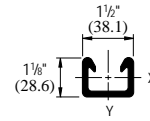
Span		Max. Uniform Beam Load (Safety Factor - 3:1)				Uniform Load at Deflection of 1/360 Span				Maximum Column Load	
		Load		Deflection		Load		Deflection			
(in)	(mm)	(lb)	(kN)	(in)	(mm)	(lb)	(kN)	(in)	(mm)	(lb)	(kN)
12	304.8	5559	24.7	0.028	0.7	5559	24.7	0.033	0.8	9454	42.1
18	457.2	3706	16.5	0.064	1.6	2914	13.0	0.05	1.3	8866	39.4
24	609.6	2780	12.4	0.113	2.9	1639	7.3	0.067	1.7	8181	36.4
30	762.0	2224	9.9	0.177	4.5	1049	4.7	0.083	2.1	7405	32.9
36	914.4	1853	8.2	0.254	6.5	730	3.2	0.1	2.5	6451	28.7
48	1219.2	1390	6.2	0.452	11.5	410	1.8	0.133	3.4	4534	20.2
60	1524.0	1112	4.9	0.707	18.0	262	1.2	0.167	4.2	2902	12.9
72	1828.8	927	4.1	1.018	25.9	182	0.8	0.2	5.1	2015	9.0

Light Duty Channel Aickinstruct Flange Profile

20P-1000, 20V-1000

Light Duty Single Channel - Aickinstruct flange Profile

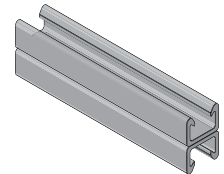
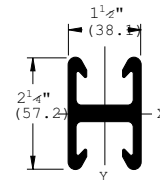
Wt/100 Ft: 47 Lbs (70 kg/100 m)



20P-1100, 20V-1100

Light Duty Back-to-Back Channel - Aickinstruct flange Profile

Wt/100 Ft: 94 Lbs (140 kg/100 m)



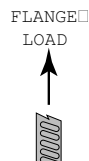
Section Properties

Part Number	Weight lb/ft		Area		X - X Axis								Y - Y Axis					
	(kg)	(m)	(in ²)	(mm ²)	"I"		"R"		"C1"		"C2"		"I"		"R"		"C"	
					(in ⁴)	(mm ⁴)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in ⁴)	(mm ⁴)	(in)	(mm)	(in)	(mm)
20P-1000	0.47	0.7	0.61	3.9	0.1	4.2	0.4	10	0.51	13	0.62	16	0.22	9.2	0.6	15	0.75	19
20V-1000	0.47	0.7	0.61	3.9	0.1	4.2	0.4	10	0.51	13	0.62	16	0.22	9.2	0.6	15	0.75	19
20P-1100	0.94	1.4	1.22	7.9	0.42	17.5	0.59	15	1.13	29	1.13	28	0.44	18.3	0.6	15	0.75	19.1
20V-1100	0.94	1.4	1.22	7.9	0.42	17.5	0.59	15	1.13	29	1.13	28	0.44	18.3	0.6	15	0.75	19.1

Flange Loading

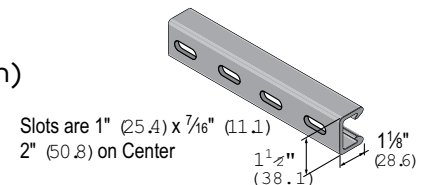
- *Values shown represent a 3:1 safety factor

Part Number	Pull-Out Strength*	
	(lb)	(kN)
20P-1000	213	1.0
20V-1000	213	1.0
20P-1100	213	1.0
20V-1100	213	1.0



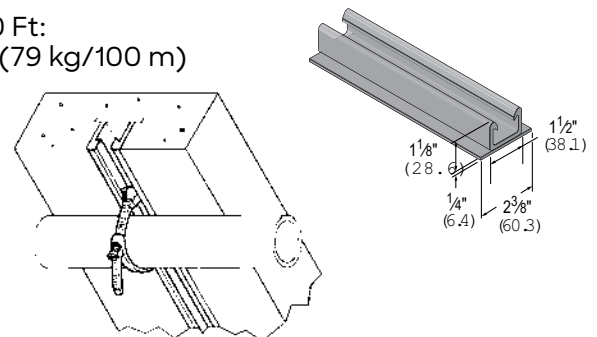
20P-1200, 20V-1200 Slotted Channel

Wt/100 Ft:
47 Lbs (70 kg/100 m)



20P-1300, 20V-1300 w/Concrete Insert

Wt/100 Ft:
53 Lbs (79 kg/100 m)



Light Duty Channel Aickinstrut Flange Profile

20P-2000 SST, F20V-2000 SST Channel Beam/Column Loading

Span		Max. Uniform Beam Load (Safety Factor - 3:1)				Deflection at Max. Allowable Beam Load				Deflection at Max. Deflection = 0.25 In (lb)				Uniform Load at Max. Deflection = 0.50 In (lb)				Maximum Column Load	
		Poly		Vinyl		Poly		Vinyl		Poly		Vinyl		Poly		Vinyl			
(in)	(mm)	(lb)	(kN)	(lb)	(kN)	(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
12	304.8	1,720	7.6	2,150	9.6	0.07	1.8	0.07	1.8	-	-	-	-	-	-	-	-	3,650	16.2
18	457.2	1,150	5.1	1,440	6.4	0.15	3.8	0.17	4.3	-	-	-	-	-	-	-	-	3,370	15.0
24	609.6	860	3.8	1,080	4.8	0.27	6.9	0.3	7.6	810	3.6	910	4.0	-	-	-	-	2,960	13.2
30	762.0	690	3.1	870	3.9	0.42	10.7	0.48	12.2	410	1.8	460	2.0	-	-	-	-	2,450	10.9
36	914.4	580	2.6	730	3.2	0.61	15.5	0.69	17.5	240	1.1	270	1.2	480	2.1	540	2.4	1,800	8.0
48	1219.2	430	1.9	540	2.4	1.07	27.2	1.2	30.5	100	0.4	115	0.5	200	0.9	230	1.0	1,010	4.5
60	1524.0	350	1.6	440	2.0	1.7	43.2	1.91	48.5	60	0.3	70	0.3	120	0.5	135	0.6	260	1.2
72	1828.8	290	1.3	370	1.6	2.44	62.0	2.78	70.6	30	0.1	34	0.2	60	0.3	70	0.3	NR	NR

20P-2100 SST, F20V-2100 SST Channel Beam/Column Loading

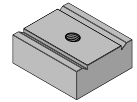
Span		Max. Uniform Beam Load (Safety Factor - 3:1)				Deflection at Max. Allowable Beam Load				Deflection at Max. Deflection = 0.25 In (lb)				Uniform Load at Max. Deflection = 0.50 In (lb)				Maximum Column Load	
		Poly		Vinyl		Poly		Vinyl		Poly		Vinyl		Poly		Vinyl			
(in)	(mm)	(lb)	(kN)	(lb)	(kN)	(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
12	304.8	5,080	22.6	6,350	28.2	0.04	1.0	0.04	1.0	-	-	-	-	-	-	-	-	7,300	32.5
18	457.2	3,390	15.1	4,240	18.9	0.09	2.3	0.1	2.5	-	-	-	-	-	-	-	-	6,740	30.0
24	609.6	2,540	11.3	3,180	14.1	0.16	4.1	0.17	4.3	-	-	-	-	-	-	-	-	5,920	26.3
30	762.0	2,040	9.1	2,550	11.3	0.24	6.1	0.27	6.9	-	-	2,350	10.5	-	-	-	-	4,900	21.8
36	914.4	1,700	7.6	2,130	9.5	0.35	8.9	0.39	9.9	1,220	5.4	1,370	6.1	-	-	-	-	3,600	16.0
48	1219.2	1,270	5.6	1,590	7.1	0.62	15.7	0.69	17.5	520	2.3	590	2.6	1040	4.6	1170	5.2	2,020	9.0
60	1524.0	1,020	4.5	1,280	5.7	0.97	24.6	1.09	27.7	270	1.2	310	1.4	540	2.4	610	2.7	520	2.3
72	1828.8	850	3.8	1,070	4.8	1.4	35.6	1.57	39.9	160	0.7	180	0.8	320	1.4	360	1.6	NR	NR

Fiberglass Channel Nuts & Accessories

Heavy Duty Channel Nuts

- Heavy duty channel nuts are designed to be used where high thread shear values or spring nuts are required. They can not be used with light duty 1000 series channel or SST profile channel
- Material: glass-reinforced polyurethane

Part Number	Size	Thread Shear		Torque		Wt/100 pcs	
		(lb)	(kN)*	(ft/lb)	(N•m)	(lb)	(kg)
375PU-CNHD	3/8"-16	1,400	6.23	8	11	5.7	2.6
500PU-CNHD	1/2"-13	1,400	6.23	8	11	5.3	2.4
625PU-CNHD	5/8"-11	1,400	6.23	10	14	5.1	2.3
750PU-CNHD	3/4"-10	1,400	6.23	10	14	4.4	2.0
10PU-CNMHD	10 mm	1,400	6.23	8	11	5.8	2.6
12PU-CNMHD	12 mm	1,400	6.23	8	11	5.5	2.5
16PU-CNMHD	16 mm	1,400	6.23	10	14	5.3	2.4
20PU-CNMHD	20 mm	1,400	6.23	10	14	4.4	2.0

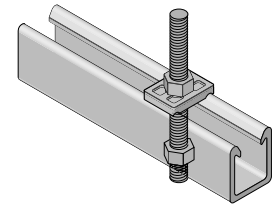


*Thread shear values shown represent a 3:1 safety factor.

Saddle Clips

- Saddle clips mate with the exterior of the channel flanges and are secured with threaded rods and nuts
- Material: glass-reinforced polyurethane

Part Number	Size (in)	Wt/100 pcs	
		(lb)	(kg)
200-4226	3/8	3.5	1.6
200-4217	1/2	2.5	1.1
200-4341	5/8	3.0	1.4
200-4342	3/4	2.5	1.1



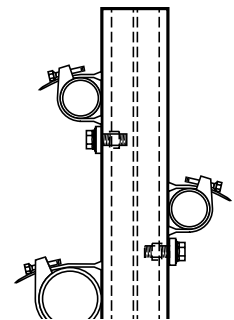
Stop-Lock Assemblies

- Stop-Lock Assemblies reduce the chance of pipe slippage when running supports vertically and are recommended for applications that are subject to vibration, have regular contact with fluids or are vertically mounted. The Stop-Locks fit both sizes of channel
- Material: glass-reinforced polyurethane

Part Number	Size (in)	Force Resistance		Torque		Wt/100 pcs	
		(lb)	(kN)*	(ft/lb)	(N•m)	(lb)	(kg)
200-4227	3/8	200	0.9	7	9	6.3	2.9
200-4219	1/2	220	1.0	12	16	6.4	2.9
200-4343	5/8**	250	1.1	15	20	11.0	5.0

* Force resistance values shown represents a 3:1 safety factor.

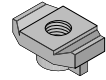
** Supplied with a heavy duty channel nut for use only with the heavy duty series 2000 channel.



Fiberglass Channel Nuts & Accessories

Standard Duty Channel Nuts

- Standard Duty channel nuts are designed for light duty applications that do not require high thread shear values. They can be used with both light duty series 1000 and heavy duty series 2000 fiberglass channel
- Not for use with SST profile channel
- Material: glass-reinforced polyurethane

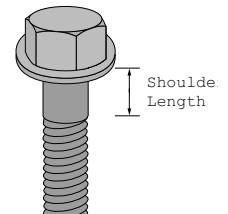


Part Number	Size	Thread Shear		Torque		Wt/100 pcs	
		(lb)	(kN)*	(ft/lb)	(N•m)	(lb)	(kg)
250PU-CN	¼"-20	460	2.05	2	3	1.8	0.8
312PU-CN	⅝"-18	460	2.05	2	3	1.7	0.8
375PU-CN	⅜"-16	460	2.05	3	4	1.8	0.8
500PU-CN	½"-13	460	2.05	3	4	1.4	0.6
10PU-CN	10 mm	460	2.05	3	4	1.7	0.8
12PU-CN	12 mm	460	2.05	3	4	1.4	0.6
10PU-CNS	#10 Screw	460	2.05	N/A	N/A	1.9	0.9

*Thread shear values shown represent a 3:1 safety factor.

Hex Flange Bolts

- Fiberfast bolts are ideal for mechanical connections that require a high degree of corrosion resistance. The ⅜" diameter fasteners are recommended for all channel fitting mechanical connections
- Material: glass-reinforced polyurethane



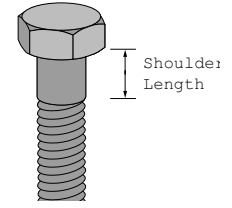
Part Number	Size (in)	Thread Shear		Shank Shear		Shoulder Length		Torque		Wt/100 pcs	
		(lb)	(kN)*	(lb)	(kN)*	(in)	(mm)	(ft/lb)	(N•m)	(lb)	(kg)
250PU-075	¼ x ¾	110	0.49	210	0.93	Full Thread		0.8	1	0.4	0.2
250PU-100	¼ x 1	110	0.49	210	0.93	Full Thread		0.8	1	0.5	0.2
250PU-150	¼ x 1½	110	0.49	210	0.93	½	12.7	0.8	1	0.6	0.3
500PU-125	½ x 1¼	450	2.00	870	3.87	Full Thread		8	11	1.0	0.5
500PU-150	½ x 1½	450	2.00	870	3.87	Full Thread		8	11	1.1	0.5
500PU-200	½ x 2	450	2.00	870	3.87	¾	19.1	8	11	1.3	0.6
500PU-250	½ x 2½	450	2.00	870	3.87	Full Thread		8	11	1.6	0.7
500PU-300	½ x 3	450	2.00	870	3.87	1	25.4	8	11	1.8	0.8
500PU-350	½ x 3½	450	2.00	870	3.87	2 ⅜	55.6	8	11	2.0	0.9

*Thread shear values shown represent a 3:1 safety factor.

Fiberglass Hardware

Hex Bolts

- Fiberfast bolts are ideal for mechanical connections that require a high degree of corrosion resistance. The 3/8" diameter fasteners are recommended for all channel fitting mechanical connections
- Material: glass-reinforced polyurethane

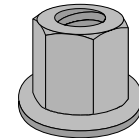


Part Number	Size (in)	Thread Shear		Shank Shear		Shoulder Length		Torque		Wt/100 pcs	
		(lb)	(kN)*	(lb)	(kN)*	(in)	(mm)	(ft/lb)	(N•m)	(lb)	(kg)
375PU-125	3/8 x 1 1/4	250	1.11	470	2.09	Full Thread		3	4	1.0	0.5
375PU-150	3/8 x 1 1/2	250	1.11	470	2.09	1/4	6.4	3	4	1.1	0.5
375PU-200	3/8 x 2	250	1.11	470	2.09	1/2	12.7	3	4	1.3	0.6
375PU-250	3/8 x 2 1/2	250	1.11	470	2.09	3/4	19.1	3	4	1.6	0.7
375PU-300	3/8 x 3	250	1.11	470	2.09	1	25.4	3	4	1.8	0.8
625PU-125	5/8 x 1 1/4	700	3.11	1,360	6.05	1/4	6.4	12	16	2.5	1.1
625PU-150	5/8 x 1 1/2	700	3.11	1,360	6.05	1/4	6.4	12	16	2.8	1.3
625PU-200	5/8 x 1 1/2	700	3.11	1,360	6.05	1/4	6.4	12	16	3.2	1.5
625PU-250	5/8 x 2 1/2	700	3.11	1,360	6.05	1/4	6.4	12	16	3.4	1.5
625PU-300	5/8 x 3	700	3.11	1,360	6.05	1/4	6.4	12	16	3.9	1.8
625PU-350	5/8 x 3 1/2	700	3.11	1,360	6.05	1/4	6.4	12	16	5.5	2.5

*Thread shear values shown represent a 3:1 safety factor.

Hex Flange Nuts

- The hex flange nut is preferred for applications that require additional thread engagement (such as with all-thread rod) or maximum thread shear strength
- Material: glass-reinforced polyurethane



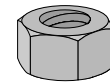
Part Number	Size (in)	Thread Shear		Height		Torque		Wt/100 pcs	
		(lb)	(kN)*	(in)	(mm)	(ft/lb)	(N•m)	(lb)	(kg)
375PU-FN-000	3/8 -16	500	2.22	0.750	19.1	3	4	0.8	0.4
500PU-FN-000	1/2 -13	1,200	5.34	0.855	21.7	8	11	1.6	0.7
625PU-FN-000	5/8 -11	2,200	9.79	1.220	31.0	12	16	3.5	1.6
750PU-FN-000	3/4 -10	2,900	12.90	1.590	40.4	15	20	5.5	2.5

*Thread shear values shown represent a 3:1 safety factor.

Fiberglass Hardware

Hex Nuts

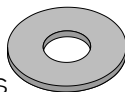
Part Number	Size (in)	Thread Shear		Height		Torque		Wt/100 pcs	
		(lb)	(kN)*	(in)	(mm)	(ft/lb)	(N•m)	(lb)	(kg)
250PU-000	¼-20	150	0.67	0.218	5.5	0.8	1	0.1	0.05
375PU-000	⅜-16	460	2.05	0.328	8.3	3	4	0.3	0.10
500PU-000	½-13	800	3.56	0.437	11.1	8	11	0.5	0.20
625PU-000	⅝-11	1,000	4.45	0.546	13.9	12	16	1.5	0.7



*Thread shear values shown represent a 3:1 safety factor.

Flat Washers

- Material: PVC
- Note: PVC washers are recommended for connections that utilize hex nuts and bolts

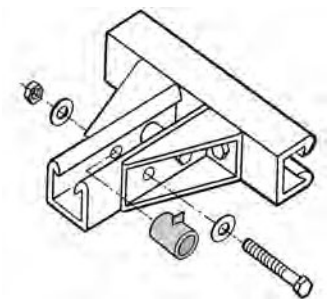
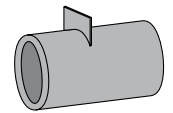


Part Number	Size (in)	Outside Diameter		Wt/100 pcs	
		(in)	(mm)	(lb)	(kg)
250E-999	¼	0.49	12	0.1	0.05
375E-999	⅜	1.00	25	0.1	0.05
500E-999	½	1.25	32	0.5	0.20
625E-999	⅝	1.50	38	0.5	0.20
750E-999	¾	1.50	38	1.0	0.50
1000E-999	1	2.25	57	1.5	0.70

50PU-500SP - Channel Spacers

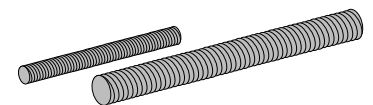
Wt/100 pcs: 2.0 Lbs (.91 kg)

- Channel spacers are designed to prevent wall compression under heavy loading conditions. Such loading occurs during the torquing of hardware for channel fittings
- The spacers are designed to be used only with 1½" channels and will accommodate ⅜" and ½" bolts
- Material: molded from polyurethane



Threaded Rod

- Material: pultruded vinyl ester resin and is gray in color.
- * Thread shear values shown represent a 3:1 safety factor
- ** Standard lengths are 4' and 8'. The part number shown is for 4' lengths. To order eight foot lengths, add suffix "-96" to part number (Example: F200-3827-96)

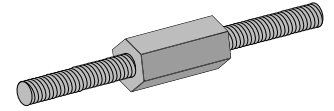


Part Number	Size (in)	Weight		Thread Shear		Torque		Wt/100 pcs 4' in Length	
		(lb)	(kg)	(lb)	(kN)*	(ft/lb)	(N•m)	(lb)	(kg)
200-3827	⅜-16	0.07	0.03	415	1.85	5	7	35	15.9
200-3828	½-13	0.12	0.05	570	2.54	10	14	57	25.9
200-3829	⅝-11	0.18	0.08	1,260	5.60	40	54	91	41.3
200-3830	¾-10	0.28	0.13	1,700	7.56	50	68	133	60.3
200-3831	1-8	0.50	0.23	3,000	13.34	60	81	200	90.7

Fiberglass Hardware

A-Konnector Rod Couplers

- A-Konnectors provide an excellent means for extending FRP all-thread rods beyond their standard lengths. A-Konnectors are manufactured from glass-reinforced polyurethane and are colored gray
- A-Konnectors are packaged in bags containing 25 pieces



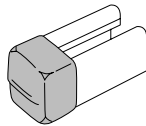
Part Number	Size (in)	Length		Thread Shear		Wt/100 pcs	
		(in)	(mm)	(lb)	(kN)*	(lb)	(kg)
200-3840	3/8-16	2.25	57.2	800	3.56	6.5	2.9
200-3841	1/2-13	2.25	57.2	570	3.87	6.0	2.7
200-3842	5/8-11	2.25	57.2	1,500	6.67	13.0	5.9
200-3843	3/4-10	2.25	57.2	1,500	6.67	11.0	5.0

*Torque and load values shown represent a 3:1 safety factor.

AIC-EC - Channel End Cap

Wt/100 pcs: 3.4 Lbs (1.5 kg)

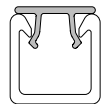
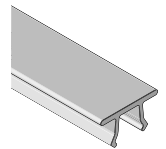
- Material: red PVC and designed for 1 5/8" channel.
- End caps are desired when the ends of the channel need to be enclosed. The cap easily installs by pressing it onto the end of the channel opening



20E-5000 - Channel Capping Strip

Wt/100 Ft:
5 Lbs (7.4 kg/100 m)

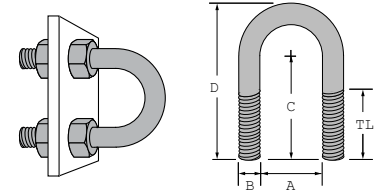
- Material: PVC
- Supplied in 10 foot lengths.
- Installs simply by pressing it onto the channel opening. It is designed to be used when a cover is desired for the channel opening (such as concrete embedment channel)



Fiberglass Hardware

Nonmetallic U-Bolts

- Nonmetallic U-Bolts provide a corrosion resistant alternative to traditional metallic U-Bolts
- They have oversized diameters which allow them to hold steel conduit and plastic pipe. These bolts will outlast stainless steel in most corrosive applications
- Each U-Bolt comes with two polyurethane hex nuts. Additional nuts and washers can be purchased separately
- Material: glass-reinforced polyurethane



Note: Plate not included.
Illustration purpose only

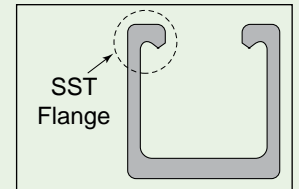
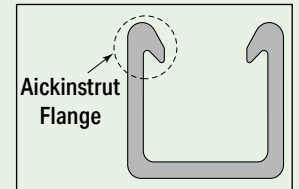
Part Number	Size (in)	"A"		"B"		"C"		"D"		"TL"		Load		Torque		Wt/100 pcs	
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kN)*	(in/lb)	(N•m)	(lb)	(kg)
UB-050	½	0.937	23.8	0.375	9.5	1.568	39.8	2.412	61.3	1.25	31.8	135	0.60	40	5	3	1.4
UB-075	¾	1.125	28.6	0.375	9.5	1.662	42.2	2.600	66.0	1.25	31.8	135	0.60	40	5	3	1.4
UB-100	1	1.375	34.9	0.375	9.5	1.787	45.4	2.850	72.4	1.25	31.8	135	0.60	40	5	4	1.8
UB-125	1¼	1.687	42.8	0.375	9.5	1.943	49.4	3.162	80.3	1.25	31.8	135	0.60	40	5	4	1.8
UB-150	1½	2.000	50.8	0.375	9.5	2.100	53.3	3.475	88.3	1.25	31.8	135	0.60	40	5	5	2.3
UB-200	2	2.437	61.9	0.500	12.7	2.468	62.7	4.187	106.3	1.50	38.1	135	0.60	80	9	10	4.5
UB-250	2½	2.937	74.6	0.500	12.7	2.718	69.0	4.687	119.0	1.50	38.1	135	0.60	80	9	11	5.0
UB-300	3	3.562	90.5	0.500	12.7	3.031	77.0	5.312	134.9	1.50	38.1	135	0.60	80	9	14	6.4
UB-350	3½	4.062	103.2	0.500	12.7	3.281	83.3	5.812	147.6	1.50	38.1	135	0.60	80	9	15	6.8
UB-400	4	4.562	115.9	0.500	12.7	3.531	89.7	6.312	160.3	1.50	38.1	135	0.60	80	9	16	7.3
UB-600	6	6.750	171.5	0.625	15.9	5.750	146.1	9.875	250.8	3.25	82.6	135	0.60	120	14	17	7.7

*Torque and load values shown represent a 3:1 safety factor.

Flat Fiberglass Fittings

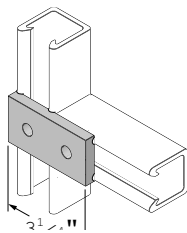
Channel Fittings

- Channel Fittings are required to fabricate structures and are easily attached to Channels with channel nuts and polyurethane fasteners. The fittings are offered in two types; fabricated (cut from flat stock) or molded.
- Material (Fabricated Fittings): Either polyester (P Series) or vinyl ester (V Series) material.
- Material (Molded Fittings): All molded fittings with the exception of the post bases are molded in polyurethane.
- Note: The drawings for all fittings are shown with the Aickinstrut flange profile, however they can be used with either channel profile. All fittings are provided with $1\frac{3}{32}$ " holes which accommodate $\frac{3}{8}$ " hardware. However several of the molded fittings are $\frac{1}{4}$ " thick and come with $\frac{9}{16}$ " holes which accommodate $\frac{1}{2}$ " hardware.



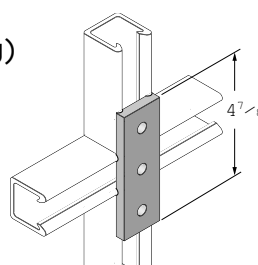
20P-2500, 20V-2500

Wt/100 pcs:
12 Lbs (5.4 kg)



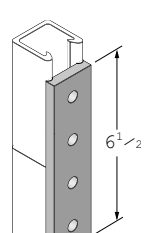
20P-2502, 20V-2502

Wt/100 pcs:
17 Lbs (7.7 kg)



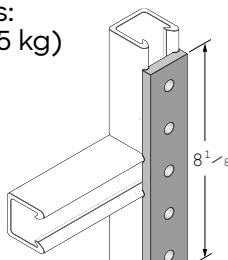
20P-2504, 20V-2504

Wt/100 pcs:
24 Lbs (10.9 kg)



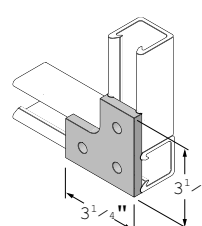
20P-2506, 20V-2506

Wt/100 pcs:
32 Lbs (14.5 kg)



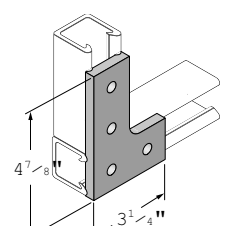
20P-2508, 20V-2508

Wt/100 pcs:
17 Lbs (7.7 kg)



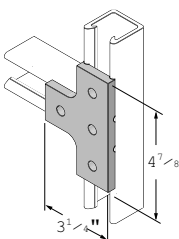
20P-2510, 20V-2510

Wt/100 pcs:
25 Lbs (11.3 kg)



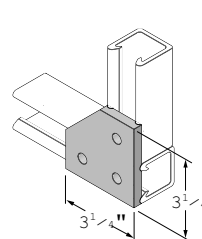
20P-2512, 20V-2512

Wt/100 pcs:
26 Lbs (11.8 kg)



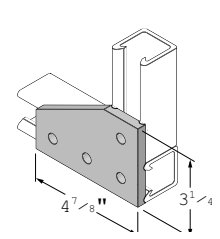
20P-2514, 20V-2514

Wt/100 pcs:
20 Lbs (9.1 kg)



20P-2516, 20V-2516

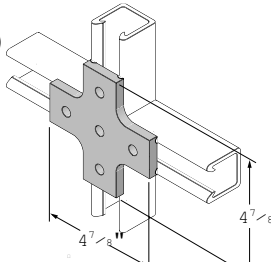
Wt/100 pcs:
32 Lbs (14.5 kg)



Flat Fiberglass Fittings

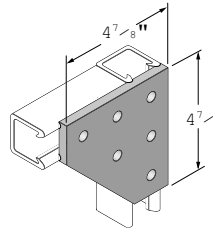
20P-2518, 20V-2518

Wt/100 pcs:
33 Lbs (15.0 kg)



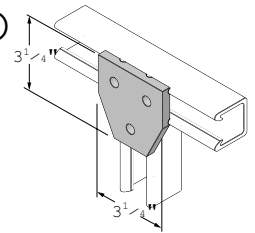
20P-2520, 20V-2520

Wt/100 pcs:
45 Lbs (20.4 kg)



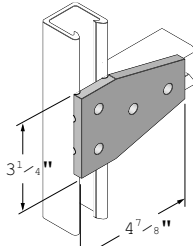
20P-2522, 20V-2522

Wt/100 pcs:
21 Lbs (9.5 kg)



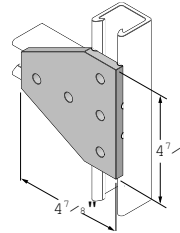
20P-2524, 20V-2524

Wt/100 pcs:
32 Lbs (14.5 kg)



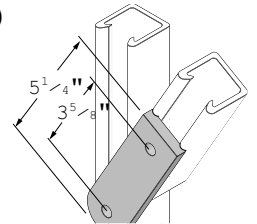
20P-2526, 20V-2526

Wt/100 pcs:
45 Lbs (20.4 kg)



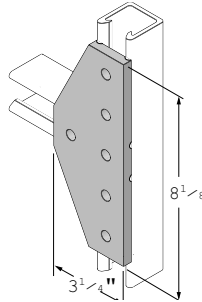
20P-2528, 20V-2528

Wt/100 pcs:
20 Lbs (9.1 kg)



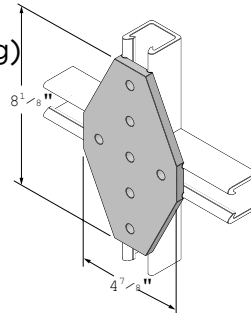
20P-2530, 20V-2530

Wt/100 pcs:
50 Lbs (22.7 kg)



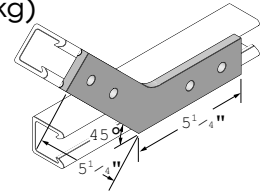
20P-2534, 20V-2534

Wt/100 pcs:
77 Lbs (34.9 kg)



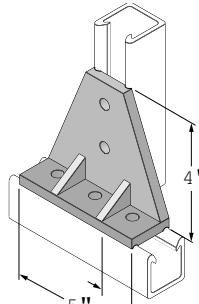
20P-2540, F20V-2540

Wt/100 pcs:
41 Lbs (18.6 kg)



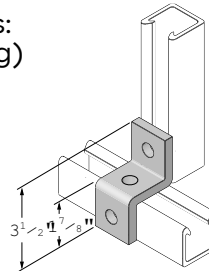
50PU-2538

Wt/100 pcs:
57 Lbs (26.0 kg)



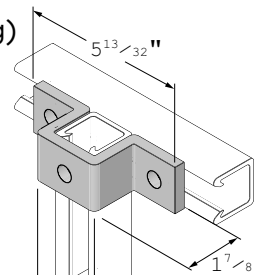
50PU-2611

Wt/100 pcs:
9 Lbs (4.1 kg)



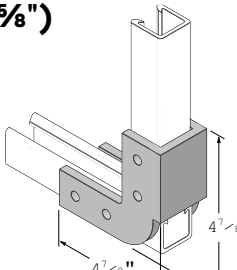
50PU-2613

Wt/100 pcs:
16 Lbs (7.3 kg)



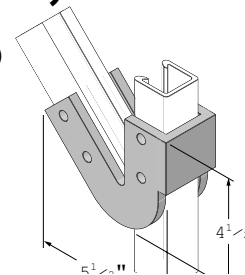
50PU-1508 (1 1/2"), 50PU-2008 (1 5/8")

Wt/100 pcs:
27 Lbs (12.2 kg)



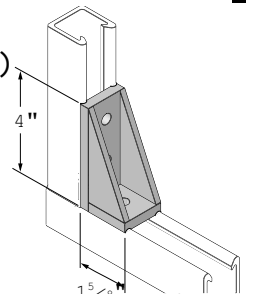
50PU-2045 (1 5/8")

Wt/100 pcs:
35 Lbs (15.9 kg)



50PU-2636

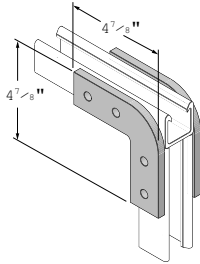
Wt/100 pcs:
14 Lbs (6.4 kg)



Fiberglass Fittings & Post Bases

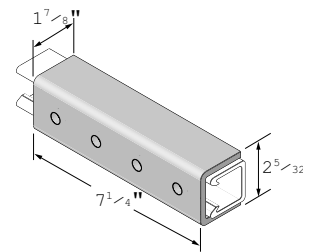
50PU-2090 (1⁵/₈"

Wt/100 pcs:
35 Lbs (15.9 kg)



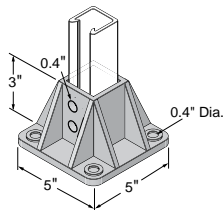
50PU-2616

Wt/100 pcs:
51 Lbs (23.1 kg)



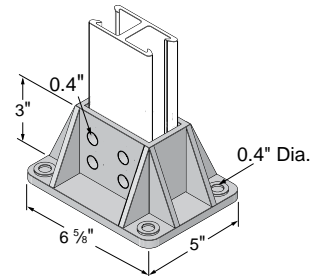
20PU-5853 (1⁵/₈" 20PU-5855 (1⁵/₈"

Wt/100 pcs:
71 Lbs (32.2 kg)



20PU-5903 (3¹/₄" 20PU-5905 (2¹/₄"

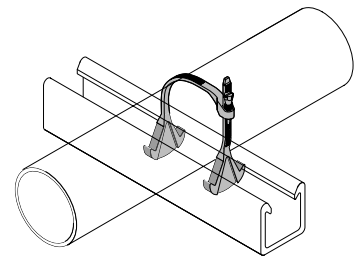
Wt/100 pcs:
86 Lbs (39.0 kg)



Pipe Clamps and Pipe Straps

Adjustable Pipe Clamps

- Adjustable Pipe Clamps are manufactured from glass-reinforced polyurethane and are adjustable to accommodate a wide range of outside diameters. They can be utilized with a variety of piping systems including: PVC, fiberglass, copper, rigid steel conduit and PVC coated rigid steel conduit
- Care should be taken not to exceed 3 ft./lbs. of torque on the adjustable pipe straps



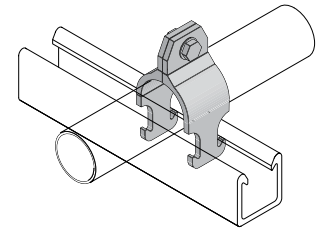
Part Number	O.D. Pipe Size (in)	Design Load				Torque		Wt/100 pcs	
		Type 1		Type 2		(ft/lb)	(N-m)	(lb)	(kg)
		(lb)	(kN)	(lb)	(kN)				
200-3100	1/2 - 1 1/2	135	0.6	65	0.3	0.8	1	3	1.4
200-3110	1 1/2 - 2 1/4	135	0.6	65	0.3	3	4	5	2.3
200-3120	2 1/4 - 3 1/4	145	0.6	70	0.3	3	4	5	2.3
200-3130	3 - 4	215	1.0	70	0.3	3	4	8	3.6
200-3140	4 - 6 1/2	215	1.0	70	0.3	3	4	10	4.5

*Design loads shown represent a 3:1 safety factor.

Pipe Clamps and Pipe Straps

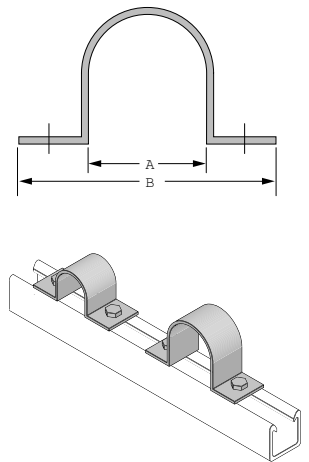
Rigid Pipe Clamps

- Rigid Pipe Clamps resemble the more traditional style of pipe clamps and are sized based on the pipe inside diameter or nominal size
- Polyurethane clamps are recommended for applications up to 160°F. For high temperature applications (up to 230°F)
- Care should be taken not to exceed the recommended torque values of the rigid pipe clamps
- Material: glass-reinforced polyurethane



Two Hole Pipe Straps

- Two Hole Pipe Straps are designed for use in securing pipe, conduit and ducts to Channel. Two hole fiberglass straps can also be used independently from the channel for surface mounting. All sizes of the straps are suitable for load bearing applications
- Material: fire-retardant, glass-reinforced polyester resin
- For extreme chemical environments, the straps can be manufactured from vinyl ester resin. Larger diameter straps for special applications are also available. Contact the factory for pricing and availability of vinyl ester and large diameter straps. Two hole pipe straps should not be torqued above recommended values
- Notes:
 - (1) Bolts and channel nuts are sold separately.
 - (2) When bolting onto 1 5/8" channel a 1 1/4" long bolt is req'd.

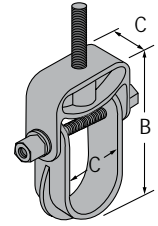


Part Number	Dimension		Bolt Size	Material Size	Design Load		Torque	Part Number	Dimension		Bolt Size	Material Size	Design Load		Torque
	"A"	"B"			Type 1	Type 2			"A"	"B"			Type 1	Type 2	
	(in)	(in)			(lb)	(lb)			(in)	(in)			(lb)	(lb)	
PS050	0.840	4.840	1/2	2.412	1.25	31.8	3	PS400	4 1/2	8.500	1/2	4.687	1.50	38.1	11
PS075	1.050	5.050	1/2	2.600	1.25	31.8	3	PS500	5 5/16	9.563	1/2	4.687	1.50	38.1	11
PS100	1.315	5.315	1/2	2.850	1.25	31.8	4	PS600	6 3/8	10.625	1/2	4.687	1.50	38.1	11
PS150	1.900	5.900	1/2	3.162	1.25	31.8	4	PS800	8 5/8	12.625	1/2	4.687	1.50	38.1	11
PS200	2 3/8	6.375	1/2	3.475	1.25	31.8	5	PS1000	10 3/4	15.750	5/8	4.687	1.50	38.1	11
PS250	2 7/8	6.875	1/2	4.187	1.50	38.1	10	PS1200	12 3/4	16.250	5/8	5.312	1.50	38.1	14
PS300	3 1/2	7.500	1/2	4.687	1.50	38.1	11	PS1400	14	18.000	5/8	5.812	1.50	38.1	15
PS350	4	8.000	1/2	4.687	1.50	38.1	11	PS1600	16	20.000	5/8	6.312	1.50	38.1	16
								PS1800	18	23.000	5/8	9.875	3.25	82.6	17

Fiberglass Clevis Hangers

Molded Clevis Hangers

- Material: glass-reinforced polyurethane

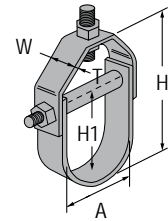


Part Number	Nominal Diameter		Max Pipe O.D.		"A" Dim.		"B" Dim.		"C" Dim.		Hanger Rod		Load*		Wt/100 pcs	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kg)
CVHPU-100	½ - 1	127 - 25.4	1	25.4	1.500	38.1	4.25	108	1.25	32	½	12.7	670	2.98	29	13.2
CVHPU-150	1 ¼ - 1 ½	31.8 - 38.1	1 ½	38.1	2.000	50.8	5.14	131	1.25	32	½	12.7	670	2.98	40	18.1
CVHPU-200	1 ½ - 2	38.1 - 50.8	2	50.8	2.500	63.5	6.52	166	1.25	32	½	12.7	730	3.25	43	19.5
CVHPU-400	2 ½ - 4	63.5 - 101.6	4	101.6	5.125	130.2	10.00	254	1.50	38	½	12.7	1,150	5.12	129	58.5
CVHPU-600	4 ½ - 6	114.3 - 152.4	6	152.4	6.750	171.5	12.33	313	1.50	38	½	12.7	1,170	5.20	168	76.2

*Design load values shown represent a 3:1 safety factor.

Fabricated Clevis Hangers

- Material: glass-reinforced polyester resin



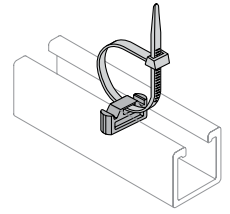
Part Number	Size Range		Dimensions								Hanger Rod		Trans Rod		Spreader Rod O.D.		Loads*		Wt/100 pcs	
	"A" (in)	"A" (mm)	"T" (in)	"T" (mm)	"H" (in)	"H" (mm)	"H1" (in)	"H1" (mm)	"W" (in)	"W" (mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kN)	(lb)	(kg)
100-1500	1 - 1 ½	25.4 - 38.1	⅛	3.2	2 ¾	69.9	1 ⅞	47.6	1 ½	38.1	½	12.7	⅜	9.5	½	12.7	60	0.27	21	9.5
100-1501	1 ½ - 2	38.1 - 50.8	⅛	3.2	3 ½	88.9	2 ⅜	60.3	1 ½	38.1	½	12.7	⅜	9.5	½	12.7	60	0.27	25	11.3
100-1502	2 - 2 ⅝	50.8 - 66.7	⅛	3.2	4 ¾	120.7	3	76.2	2	50.8	½	12.7	⅜	9.5	½	12.7	90	0.40	55	24.9
100-1503	2 ½ - 3 ¼	63.5 - 82.6	⅛	3.2	5 ½	139.7	3 ⅝	92.1	2	50.8	⅝	15.9	⅜	9.5	½	12.7	160	0.71	61	27.7
100-1504	3 - 3 ⅞	76.2 - 98.4	⅛	3.2	7	177.8	4 ¼	108.0	2	50.8	⅝	15.9	⅜	9.5	½	12.7	160	0.71	61	27.7
100-1505	4 - 5 ½	101.6 - 130.2	1 ⅜	20.6	8 ½	215.9	5 ⅝	142.9	2	50.8	⅝	15.9	⅜	9.5	½	12.7	250	1.11	82	37.2
100-1506	6 - 7 ⅞	152.4 - 181.0	1 ⅜	20.6	10 ⅞	276.2	7 ½	190.5	3	76.2	⅝	15.9	⅜	9.5	½	12.7	300	1.33	136	61.7
100-1507	8 - 9 ¼	203.2 - 235.0	¼	6.4	14	355.6	9 ¾	247.7	3	76.2	⅝	15.9	⅜	9.5	½	12.7	350	1.56	189	85.7
100-1508	10 - 11 ⅜	254.0 - 288.9	¼	6.4	18	457.2	12	304.8	4	101.6	⅝	15.9	½	12.7	¾	19.1	450	2.00	333	151.0
100-1509	12 - 13 ½	304.8 - 342.9	¼	6.4	21 ½	546.1	14 ⅞	358.8	5	127.0	⅝	15.9	½	12.7	¾	19.1	600	2.67	350	158.8
100-1510	14 - 15 ¾	355.6 - 400.1	¼	6.4	24 ½	622.3	16 ½	419.1	5	127.0	¾	19.1	½	12.7	¾	19.1	700	3.11	872	395.5
100-1511	16 - 18	406.4 - 457.2	⅜	9.5	27 ⅜	695.3	19 ½	495.3	6	152.4	¾	19.1	¾	19.1	1	25.4	750	3.34	1,023	464.0
100-1512	19 - 21	482.6 - 533.4	⅜	9.5	34 ½	876.3	22 ½	571.5	6	152.4	¾	19.1	¾	19.1	1	25.4	800	3.56	1,673	758.9
100-1513	21 - 22	533.4 - 558.8	½	12.7	35 ½	901.7	24	609.6	6	152.4	¾	19.1	¾	19.1	1	25.4	850	3.78	2,323	1,053.7
100-1514	22 - 24	558.8 - 609.6	½	12.7	41	1,041.4	28	711.2	6	152.4	¾	19.1	¾	19.1	1	25.4	900	4.00	2,973	1,348.5

*Design load values shown represent a 3:1 safety factor.

Fiberglass Channel Insert and Beam Clamps

200-4101 – Unisert Channel Insert

- Unisert is a polyurethane nonmetallic insert which can be used with standard cable ties for securing tubing, conduit and cables to standard metal channels
- The Unisert works with all 1 $\frac{5}{8}$ " channels that are $\frac{13}{16}$ " deep or more. One size fits 12, 14 and 16 metal gauge channels
- Note: For use only with metallic channel

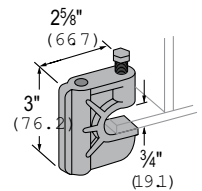


375PU & 500PU – Molded Beam Clamps

- Material: glass-reinforced polyurethane

Assembly Part Number	Size (in)	Thread Shear		Torque		Wt/100 pcs	
		(lb)	(kN)*	(ft/lb)	(N•m)	(lb)	(kg)
375PU-BC	$\frac{3}{8}$	400	1.78	10	14	30	13.6
500PU-BC	$\frac{1}{2}$	400	1.78	10	14	30	13.6

*Design load values shown represent a 3:1 safety factor.

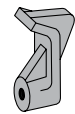
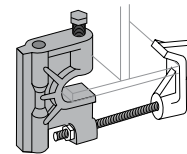


RGBC Molded Beam Clamp Assembly

- Material: glass-reinforced polyurethane

Note: Beam clamp clip must be purchased separately. Illustration purpose only

Part Number	Size (in)	Thread Shear		Torque		Wt/100 pcs	
		(lb)	(kN)*	(ft/lb)	(N•m)	(lb)	(kg)
RGBC-1	$\frac{3}{8}$	500	2.22	10	14	43	19.5
RGBC-2	$\frac{1}{2}$	500	2.22	10	14	43	19.5
RGBC-3	$\frac{5}{8}$	500	2.22	10	14	43	19.5



F375PU-BCCLP ($\frac{3}{8}$ "
Beam Clip Only

Fiberglass Power-Rack Stanchions

Power-Rack Stanchions

The Power-Rack Stanchion is made entirely from glass-reinforced nylon, these stanchions offer greater corrosion resistance than classical metal stanchions. The interlocking design allows the arm to “lock” into nine different levels on the 14¼" stanchions and fourteen on the 17½" stanchion. Glass-reinforced polyurethane stanchions are available as a special order. Contact for pricing and availability.

Dimensions – The stanchion back has 9/16" x 15/16" holes to accept fasteners for mounting. There are two mounting holes in the 21 3/8" long stanchion and three in the 33 5/16" long stanchion. Thickness at the slotted mounting holes is 1 7/8". The mounting holes are spaced on 12" centers and require 1/2" diameter fasteners.

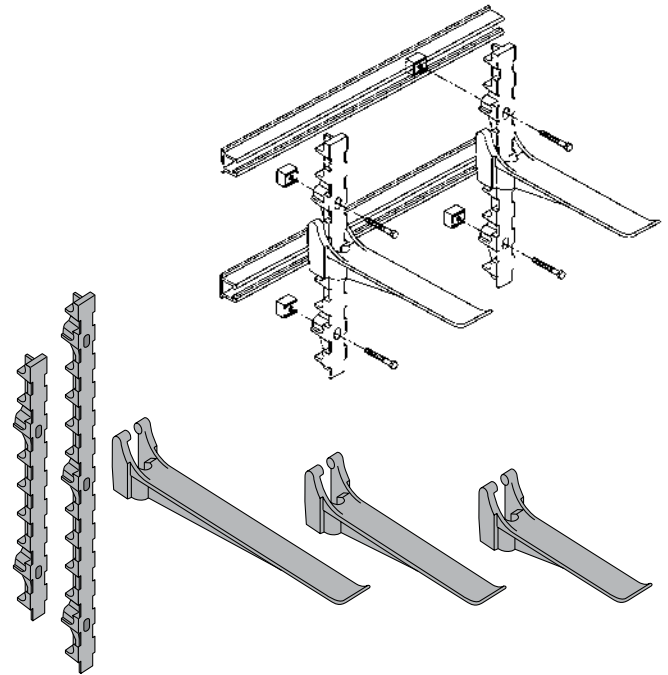
Installation – The Stanchions can be anchored into existing concrete structures using any industrial anchoring system. For new concrete structures, the Stanchions can be mounted to fiberglass concrete embedment channel and attached with 1/2" channel nuts and 1/2"x 3" Fiberfast Bolts.

Fire Retardance – Power-Rack materials meet or exceed the requirements of UL94 HB.

Loading – The recommended allowable loads on Power-Rack Stanchions vary depending upon the position of the arm. Use these guidelines for a safe, reliable installation:

- Total load on any one arm should not exceed 800 lbs.
- The sum of the loads on an arm multiplied by their distances to the wall stanchion should not exceed 1200 in./lbs.

Example: A cable weighing 200 lbs. is positioned on an arm at a distance of 5" from the wall stanchion.



If the total load is less than 800 lbs and the sum of the load multiplied by their distances to the wall stanchion does not exceed 1200 in./lbs., then the system is adequate. In this case,

- Total load (200<800 lbs) = OK
- Tot. moment (200x5 in. = 1000<1200 in./lbs.) = OK

Part Number	Description	Size		Wt/100 pcs		Load	
		(in)	(mm)	(lb)	(kg)	(lb)	(kN)*
20N-ARM08	Arm	8	203.2	100	45.4	800	3.56
20N-ARM14	Arm	14 ¼	362.0	116	52.6	800	3.56
20N-ARM17	Arm	17 ½	444.5	145	65.8	800	3.56
20N-ARM23	Arm	23 7/8	606.4	186	84.4	800	3.56
20N-STA21	Stanchion	21 3/8	542.9	149	67.6	N/A	N/A
20N-STA33	Stanchion	33 5/16	846.1	231	104.8	N/A	N/A

*Design load values shown represent a 3:1 safety factor.

Fiberglass Technical Data

Fiberglass Clamps Design Load Information

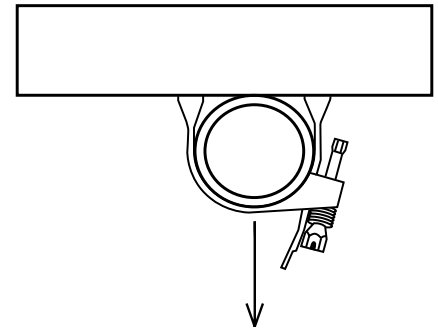
There are two types of piping system loadings:

- Overhead (Type 1) and
- Vertical (Type 2) as described below

All pipe straps and clamps show the recommended loading for both types of loading.

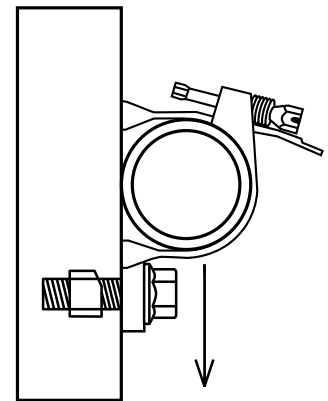
Type 1 Overhead Design Load

The design load shown represents pipes supported below the strut. The design loads shown are based on a minimum ultimate failure safety factor of 3:1.



Type 2 Vertical Design Load

- The design loading shown can be achieved with the addition of a vertical stop lock assembly (Part #F200-4219) installed directly beneath the pipe clamp. The adjacent illustration shows how the vertical stop lock assembly provides additional support for pipe and how it can be used to achieve full Type 2 design loads.
- Design loads are based on a minimum clamp slip safety factor of 3:1. It is recommended that stop lock assemblies be used for all vertical pipe support applications.



Chemical Compatibility Table

Chemical	Series									
	E Rigid PVC		P Poly/Glass		V Vinyl/Glass		PU Poly		N Nylon	
	70°	160°F	70°	160°F	70°	160°F	70°	160°F	70°	160°F
Acetic Acid, Up to 50%	R	R	R	R	R	R	R	-	nr	nr
Acetone, Up to 10%	nr	nr	nr	nr	nr	nr	R	-	R	R
Aluminum Hydroxide	R	R	R	R	R	R	R	-	nr	nr
Ammonium Hydroxide (Aqueous Ammonia), Up to 5%	R	R	nr	nr	R	R	R	-	-	-
Ammonium Hydroxide (Aqueous Ammonia), Up to 10%	R	R	nr	nr	R	150°	R	-	-	-
Ammonium Hydroxide, Up to 20%	R	R	nr	nr	R	150°	R	-	-	-
Ammonium Nitrate	R	nr	R	R	R	R	R	-	-	-
Ammonium Phosphate	R	R	R	nr	R	R	R	-	-	-
Ammonium Sulfide, saturated	R	R	nr	nr	R	120°	R	-	-	-
Aqua Regia, fumes	nr	nr	nr	nr	R	150°	nr	-	-	-
Benzene	nr	nr	nr	nr	nr	nr	R	R	-	R
Benzoic Acid	R	R	R	R	R	R	R	-	-	-

Legend "nr" - "Not Recommended" for use "R" - "Recommended" "-" - no information available

Table continued next page

Fiberglass Technical Data

Chemical Compatibility Table

Chemical	Series									
	E Rigid PVC		P Poly/Glass		V Vinyl/Glass		PU Poly		N Nylon	
	70°	160°F	70°	160°F	70°	160°F	70°	160°F	70°	160°F
Bromine, wet gas	R	nr	nr	nr	R	100°	-	-	-	-
Butylene Glycol, Up to 100%	R	R	R	R	R	R	R	-	R	R
Butyric Acid, Up to 50%	nr	nr	R	R	R	R	R	-	-	-
Calcium Hydroxide	R	R	R	nr	R	R	R	-	-	-
Calcium Hypochlorite	R	R	R	nr	R	R	R	-	nr	nr
Chlorine, Dry Gas	nr	nr	nr	nr	R	R	-	-	-	-
Chlorine, Wet Gas	nr	nr	nr	nr	R	R	-	-	-	-
Chlorine, Liquid	nr	nr	nr	nr	nr	nr	-	-	-	-
Chlorine, Water	nr	nr	R	R	R	R	R	-	nr	nr
Chromic Acid, Up to 5%	R	R	nr	nr	R	R	-	-	R	R
Copper Chloride	R	R	R	R	R	R	R	-	-	-
Copper Cyanide	R	R	R	nr	R	R	R	-	-	-
Copper Fluoride	R	R	R	nr	R	R	R	-	-	-
Copper Nitrate	R	R	R	R	R	R	R	-	-	-
Copper Sulfate	R	R	R	R	R	R	R	-	-	-
Dechlorinated Brine Storage	R	R	-	-	R	R	R	-	-	-
Esters, Fatty Acid	nr	nr	R	R	R	R	R	-	-	-
Ferric Chloride	R	R	R	R	R	R	R	-	-	-
Ferrous Chloride	R	R	R	R	R	R	R	-	-	-
Fluoboric Acid	R	R	R	120°	R	R	-	-	-	-
Fluosilicic Acid, Up to 10%	nr	nr	nr	nr	R	R	-	-	nr	nr
Fluosilicic Acid, Up to 32%	nr	nr	nr	nr	R	100°	-	-	-	-
Formic Acid, Up to 10%	R	R	nr	nr	R	R	R	-	nr	nr
Formic Acid, Up to 50%	R	R	nr	nr	R	100°	R	-	-	-
Gasoline, Aviation	R	nr	R	nr	R	R	R	-	-	-
Green Liquor, Pulp Mill	R	R	-	-	R	R	-	-	-	-
Hydrochloric Acid, Up to 15%	R	R	R	nr	R	R	R	-	-	-
Hydrochloric Acid, Up to 37%	R	R	R	nr	R	R	R	-	-	-
Hydrofluoric Acid, Up to 10%	R	R	nr	nr	R	150°	-	-	-	-
Hydrofluoric Acid, Up to 20%	R	nr	nr	nr	R	100°	-	-	-	-
Hydrogen Chloride Wet Gas	nr	nr	R	nr	R	R	nr	-	-	-
Hydrogen Sulfide Wet Gas	R	R	R	nr	R	R	R	-	-	-
Lactic Acid	R	R	R	nr	R	R	R	-	-	-
Lead Nitrate	R	R	-	-	R	R	R	-	-	-
Magnesium Hydroxide	R	R	nr	nr	R	R	R	-	R	R
Nickel Sulfate	R	R	nr	nr	R	R	R	-	-	-
Nitric Acid, Up to 5%	R	R	nr	nr	R	150°	R	-	-	-
Nitric Acid, Up to 35%	R	R	nr	nr	R	150°	R	-	-	-
Nitric Acid, Vapor	R	R	nr	nr	R	R	R	-	-	-
Perchloric Acid, Up to 10%	nr	nr	nr	nr	R	150°	R	-	nr	nr
Pickling Liquids, 3-5% H2SO4	R	R	R	R	R	R	R	-	-	-
Phosphoric Acid	R	R	nr	nr	R	R	R	-	nr	nr
Super or Poly (115%, P20%)	R	R	nr	nr	R	R	R	-	-	-
Vapor or Condensate	R	R	nr	nr	R	R	R	-	-	-

Legend "nr" - "Not Recommended" for use "R" - "Recommended" "-" - no information available

Table continued next page

Fiberglass Technical Data

Chemical Compatibility Table

Chemical	Series									
	E Rigid PVC		P Poly/Glass		V Vinyl/Glass		PU Poly		N Nylon	
	70°	160°F	70°	160°F	70°	160°F	70°	160°F	70°	160°F
Potassium Chloride	R	R	R	R	R	R	R	-	-	-
Potassium Nitrate	R	R	R	R	R	R	R	-	-	-
Potassium Persulfate	R	R	nr	nr	R	R	R	-	-	-
Silver Cyanide, Up to 5%	R	R	nr	nr	R	R	R	-	-	-
Sodium Hydroxide, Up to 25%	R	R	nr	nr	R	150°	R	-	-	-
Sodium Hydroxide, Up to 50%	R	R	nr	nr	R	180°	R	-	R	R
Sodium Hypochlorite, Up to 15%	R	R	nr	nr	R	150°	R	-	nr	nr
Sodium Nitrate	R	R	R	R	R	R	R	-	-	-
Sodium Sulfate	R	R	R	nr	R	R	R	-	-	-
Sodium Sulfide	R	R	nr	nr	R	R	R	-	-	-
Sulfuric Acid, Up to 25%	R	R	R	R	R	R	R	-	nr	nr
Sulfuric Acid, Up to 70%	R	R	nr	nr	R	R	R	-	nr	nr
Sulfuric Acid, Up to 75%	nr	nr	nr	nr	R	120°	R	-	nr	nr
Sulfuric Acid, Up to 80%	nr	nr	nr	nr	nr	nr	nr	-	nr	nr
Sulfuric Acid, Vapor	R	R	R	nr	R	R	R	-	-	-
Trichlorethylene, Fumes	nr	nr	nr	nr	R	120°	R	-	-	-
Trisodium Phosphate	R	R	R	nr	R	R	R	-	-	-
Urea	R	R	R	nr	R	150°	R	-	R	R
Vegetable Oils	R	R	R	R	R	R	R	-	R	R
Vinegar	R	R	R	R	R	R	R	R	R	R
White Liquor, Pulp Mill	R	R	-	-	R	R	R	-	-	-

Note

The recommendations contained in this table are made without guarantee of representation as to results. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Unistrut as to effects of such use or results to be obtained nor does Unistrut assume any liability arising out of the use by others of the products referenced in this table. Nor is the information herein to be construed as absolutely complete since additional information may be needed or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations. We suggest that you evaluate these recommendations and suggestions in your own laboratory prior to use. Our responsibility for claims arising from breach of warranty, negligence, or otherwise is limited to the purchase price of the material.

Legend

"nr" - "Not Recommended" for use
 "R" - "Recommended"
 "-" - no information available

Fiberglass Sample Specifications

Fiberglass Specifications

1.0 Scope

- 1.1 This specification covers the requirements for the Nonmetallic Channel Framing System.

2.0 Material

- 2.1 FRP channel shall be of pultruded glass-reinforced polyester or vinyl ester resin having the physical property values listed in this catalog.
- 2.2 Some accessories shall be of injection molded, 40% long glass fiber reinforced polyurethane, or nylon.

3.0 Composition

- 3.1 Glass-reinforced channel shall have a synthetic surfacing veil applied on exterior surfaces to improve weatherability and inhibit ultraviolet degradation. An ultraviolet stabilizer shall be incorporated in the resin formulation to further inhibit ultraviolet degradation.

4.0 Structural Design

- 4.1 Channel shall incorporate Unistrut's Aickinstrut flange profile design which allows full and positive interlocking contact of channel accessories and prohibits premature flange failure from torqued accessories.
- 4.2 Channel profile dimensions shall be: $1\frac{5}{8}$ " x $1\frac{5}{8}$ " x $\frac{1}{4}$ " or $1\frac{1}{2}$ " x $1\frac{1}{8}$ " x $\frac{1}{8}$ ".
- 4.3 All $1\frac{5}{8}$ " x $1\frac{5}{8}$ " channel profiles shall have a minimum pull out resistance of 1,000 pounds when load is applied over a $\frac{3}{8}$ " long section of the inside flanges.
- 4.4 Channel section lengths shall be supplied in 10' or 20' lengths ($\pm\frac{1}{8}$ ").
- 4.5 Universal Pipe Clamps shall have full interlocking contact with interior channel flanges to maximize pull-out resistance and be adjustable to accommodate a minimum $\frac{3}{4}$ " variance in piping or conduit O.D. sizes.

5.0 Standards

- 5.1 Glass-reinforced channels covered in this specification shall have a flame spread rating of 25 or less when tested per ASTM E84 and meet the requirements of UL 94V0 thereby qualifying them as Class 1 material in the Uniform Building Code.
- 5.2 Glass-reinforced channels covered in this specification shall comply with the requirements of ASTM D 3917 and ASTM D 4385 which govern the dimensional tolerance and visual defects of pultruded shapes.

Fiberglass Sample Specifications

Fiberglass Specifications

6.0 General

- 6.1 Nonmetallic Channel Framing shall be furnished as a system which includes all the necessary fasteners, channel splice plates, brackets, sealants, hangers, pipe clamps, etc.
- 6.2 Nonmetallic fasteners shall be manufactured from long glass fiber reinforced polyurethane to ensure maximum strength and corrosion resistance.
- 6.3 All components shall be nonmetallic except where type 316 stainless steel hardware is used as part of the assembly.
- 6.4 The manufacturer shall not have had less than 10 years experience in manufacturing strut systems.
- 6.5 All products are manufactured in the United States of America.



Special Metals

- Special Metals Pictorial Index 232
- Stainless Steel Channel..... 233
- Stainless Steel Channel Nuts & Closure Strips..... 235
- Aluminum Channels 236
- Aluminum Channels, Closure Strips, and End Caps.....237

Material

Stainless Steel

- Channels: ASTM A 240 (Type 304)
- Sintered nuts: ASTM B783 (Type SS316N1-25)
- Fittings: ASTM A240 (Type 304 or Type 316) or ASTM A276 (Type 304 or Type 316)
Contact factory for specific material availability.

Aluminum

- Channels (Extruded): ASTM B221 (Type 6063-T6)
- Fittings: ASTM B209 (Type 1100F or Type 5052-H32)
- Nuts: Stainless steel nuts are recommended for Aluminum channel

Material/Finish	Part Number Suffix	Example
Stainless Steel Type 304	SS	P1109 SS
Stainless Steel Type 316	ST	P1109 ST

LOAD DATA (BEAM & COLUMN)

To determine maximum allowable beam and column loading for channels in this section, multiply the load data in the appropriate mild steel channel sections of this catalog by the following factors:

Channel Material	Beam Load % Factor	Column Load % Factor
Extruded Aluminum	33%	33%
Stainless Steel	100%	100%

Load Data (Slip & Pull Out)

Extruded Aluminum

- To determine nut slip resistance, multiply load data for appropriate nut by 75%. To determine nut pull-out load, multiply load data for appropriate nut by 50%.

Stainless Steel

- For design assistance, consult Unistrut customer engineering.

Product Availability

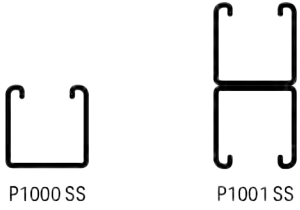
Most fittings and channels shown in this catalog, are available in aluminum or stainless steel. Consult factory for ordering information.

Dimensions

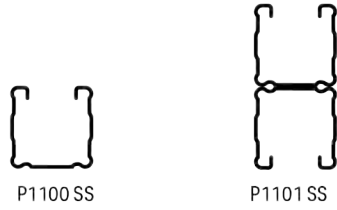
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

Special Metals Pictorial Index

P1000 Series (12 gauge)



P1100 Series (14 gauge)



P3000 Series (12 gauge)



P3300 Series (12 gauge)



P6000 Series (19 gauge)



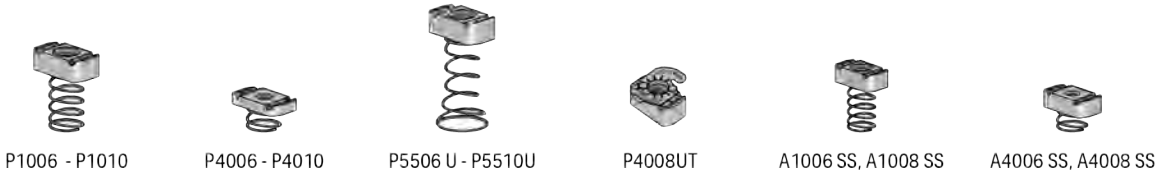
P7000 Series (19 gauge)



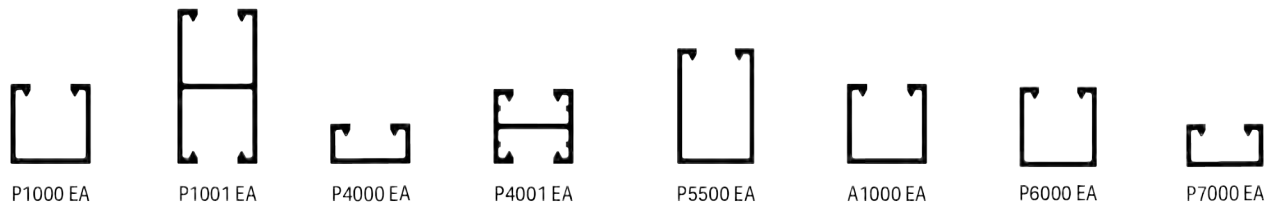
Closure Strips and End Caps



Stainless Steel Channel Nuts



Extruded Aluminum Channels

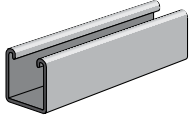


Stainless Steel Channel

P1000 Series

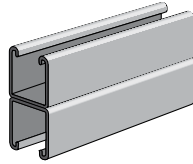
P1000

Wt/100 Ft:
190 Lbs (283 kg/100m)



P1001

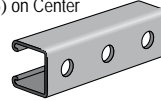
Wt/100 Ft:
380 Lbs (566 kg/100m)



P1000HS

Wt/100 Ft:
185 Lbs (275 kg/100m)

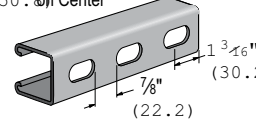
$\frac{9}{16}$ " (14.3) Dia. Holes
 $1 \frac{7}{8}$ " (47.6) on Center



P1000T

Wt/100 Ft:
185 Lbs (275 kg/100m)

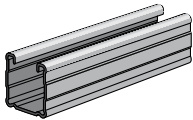
Slots are
 $1 \frac{1}{8}$ " (28.6) x $\frac{9}{16}$ " (14.3)
2" (50.8) on Center



P1100 Series

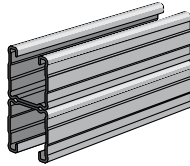
P1100

Wt/100 Ft :
142 Lbs (211 kg/100m)



P1101

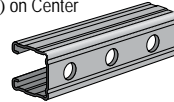
Wt/100 Ft :
284 Lbs (422 kg/100m)



P1100HS

Wt/100 Ft :
136 Lbs (202 kg/100 m)

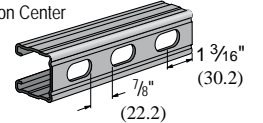
$\frac{9}{16}$ " (14.3) Dia. Holes
 $1 \frac{7}{8}$ " (47.6) on Center



P1100T

Wt/100 Ft:
136 Lbs (202 kg/100m)

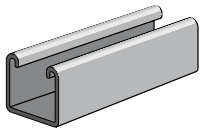
Slots are
 $1 \frac{1}{8}$ " (28.6) x $\frac{9}{16}$ " (14.3)
2" (50.8) on Center



P3000 Series

P3000

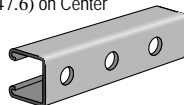
Wt/100 Ft:
170 Lbs (253 kg/100m)



P3000HS

Wt/100 Ft:
165 Lbs (112 kg/100m)

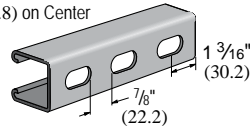
$\frac{9}{16}$ " (14.3) Dia. Holes
 $1 \frac{7}{8}$ " (47.6) on Center



P3000T

Wt/100 Ft:
165 Lbs (112 kg/100m)

Slots are
 $1 \frac{1}{8}$ " (28.6) x $\frac{9}{16}$ " (14.3)
2" (50.8) on Center

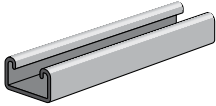


Stainless Steel Channel

P3300 Series

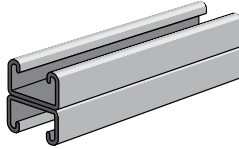
P3300

Wt/100 Ft:
135 Lbs (201 kg/100m)



P3301

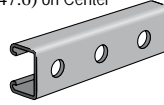
Wt/100 Ft:
270 Lbs (402 kg/100m)



P3300HS

Wt/100 Ft:
130 Lbs (193 kg/100m)

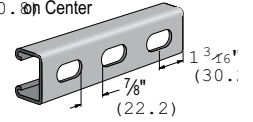
$\frac{9}{16}$ " (14.3) Dia. Holes
1 $\frac{7}{8}$ " (47.6) on Center



P3300T

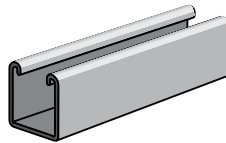
Wt/100 Ft:
130 Lbs (193 kg/100m)

Slots are
1 $\frac{1}{8}$ " (28.0) $\frac{9}{16}$ " (14.3)
2" (50.8) on Center



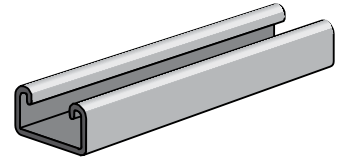
P6000

Wt/100 Ft:
37 Lbs (55 kg/100m)



P7000

Wt/100 Ft:
36 Lbs (54 kg/100m)

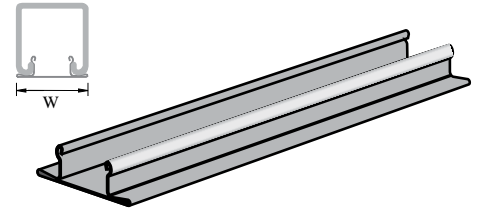


Stainless Steel Channel Nuts & Closure Strips

P1184 – Closure Strip

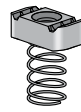
- Standard length 10 Ft.
- Material: Stainless steel type 304.

Part Number	Use With Channel	"W"		Wt/100 pcs	
		(in)	(mm)	(lb)	(kg)
P1184 SS	P1000, P1100, P3300	1 5/8	41.3	27	40.2



Channel Nut With Spring - Use with 1/4" Channel

Part Number	Nut Size Thread	Wt/100 pcs		Use With
		(lb)	(kg)	
A1006-1420	1/4"-20	6	2.7	A1000
A1008	3/8"-16	6	2.7	



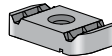
Part Number	Nut Size Thread	Wt/100 pcs		Use With
		(lb)	(kg)	
A4008	3/8"-16	5	2.3	A3300, A4000



All Springs are Pre-Galvanized

Channel Nut Without Springs - Use with 1 5/8" Channel

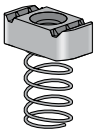
Part Number	Nut Size Thread	Wt/100 pcs		Use With 1 5/8" Channel
		(lb)	(kg)	
P3006-1420 SS	1/4"-20	7	3.2	Any Channel
P3008 SS	3/8"-16	10	4.5	Any Channel
P3010 SS	1/2"-13	12	5.4	P1000, P1100, P3000



* Domestic stainless steel nuts are available. To designate a domestic part, insert "US" as the sixth and seventh character in the part number. Ex: P3008US SS or P3010US SS

Channel Nut With Spring - Use with 1 5/8" Channel

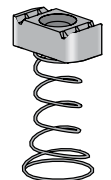
Part Number	Nut Size Thread	Wt/100 pcs		Use With 1 5/8" Channel
		(lb)	(kg)	
P1006-1420*	1/4"-20	7	3.2	P1000, P1100, P3000,
P1008*	3/8"-16	10	4.5	
P1010*	1/2"-13	12	5.4	



Part Number	Nut Size Thread	Wt/100 pcs		Use With 1 5/8" Channel
		(lb)	(kg)	
P4006-1420*	1/4"-20	7	3.2	P3300, P4100
P4008*	3/8"-16	9	4.1	
P4010*	1/2"-13	9	4.1	



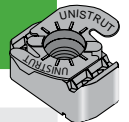
Part Number	Nut Size Thread	Wt/100 pcs		Use With 1 5/8" Channel
		(lb)	(kg)	
P5506-1420*	1/4"-20	7	3.2	P5000, P5500
P5508*	3/8"-16	10	4.5	
P5510*	1/2"-13	10	4.5	



* Domestic stainless steel nuts are available. To designate a domestic part, insert "US" as the sixth and seventh character in the part number. Ex: P4006US1420SS or P1008US SS.

Top Spring Channel Nuts - Use with 1 5/8" Channel

Part Number	Nut Size Thread	Wt/100 pcs		Use With 1 5/8" Channel
		(lb)	(kg)	
P4008UT US*	3/8"-16	12	5.4	P3300, P4100
P1006TU1420 US*	1/4"-20	7	3.2	Any Channel
P1008TU US*	3/8"-16	10	4.5	Any Channel
P1010TU US*	1/2"-13	12	5.4	Any Channel — Except P3300, P4100



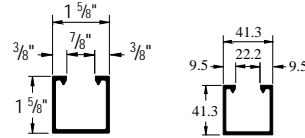
Top Spring stainless steel channel nuts are domestic

Aluminum Channels

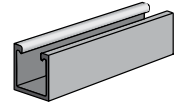
P1000 EA

Wt/100 Ft: 76 Lbs (113 kg/100 m)

- Aluminum Type 6063-T6
- Nominal Thickness .109" (2.8mm)



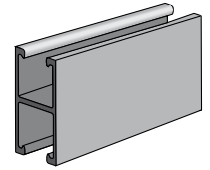
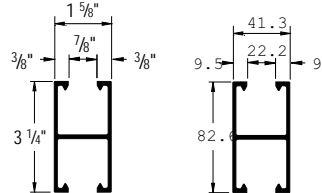
When used with P3184 EA.



P1001 EA

Wt/100 Ft: 134 Lbs (199 kg/100 m)

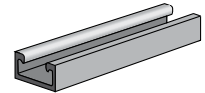
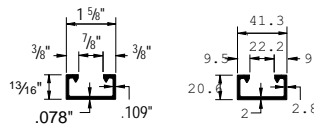
- Aluminum Type 6063-T6
- 12 Gauge Nominal Thickness .109" (2.8mm)



P4000 EA

Wt/100 Ft: 45 Lbs (67 kg/100 m)

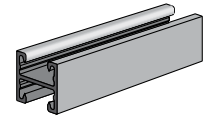
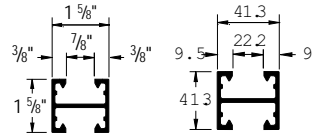
- Aluminum Type 6063-T6
- Nominal Thickness .078" (2.0mm)



P4001 EA

Wt/100 Ft: 66 Lbs (98 kg/100 m)

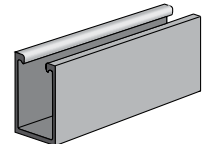
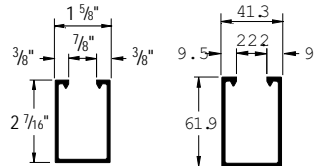
- Aluminum Type 6063-T6
- Nominal Thickness .078" (2.0mm)



P5500 EA

Wt/100 Ft: 97 Lbs (144 kg/100 m)

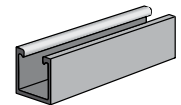
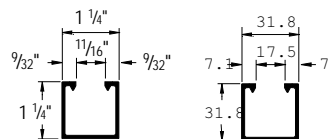
- Aluminum Type 6063-T6
- Nominal Thickness .109" (2.8mm)



A1000 EA

Wt/100 Ft: 40 Lbs (60 kg/100 m)

- Aluminum Type 6063-T6
- Nominal Thickness .075" (1.9mm)

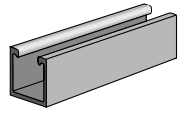
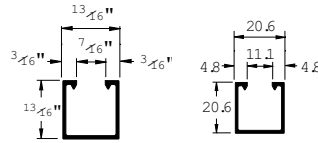


Aluminum Channels, Closure Strips, and End Caps

P6000 EA

Wt/100 Ft: 12 Lbs (18 kg/100 m)

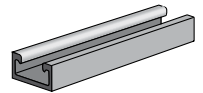
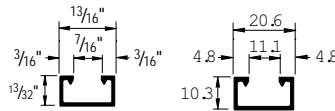
- Aluminum Type 6063-T6
- Nominal Thickness .040" (1.0mm)
- Standard Length 16 Ft.



P7000 EA

Wt/100 Ft: 9 Lbs (13 kg/100 m)

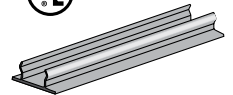
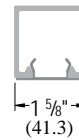
- Aluminum Type 6063-T6
- Nominal Thickness .040" (1.0mm)
- Standard Length 10 Ft.



P3184 EA – Closure Strip

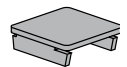
Wt/100 Ft: 21 Lbs (31 kg/100 m)

- Aluminum Type 6063-T6
- Standard Length 10 Ft



P4280 EA, P5580 EA – End Caps

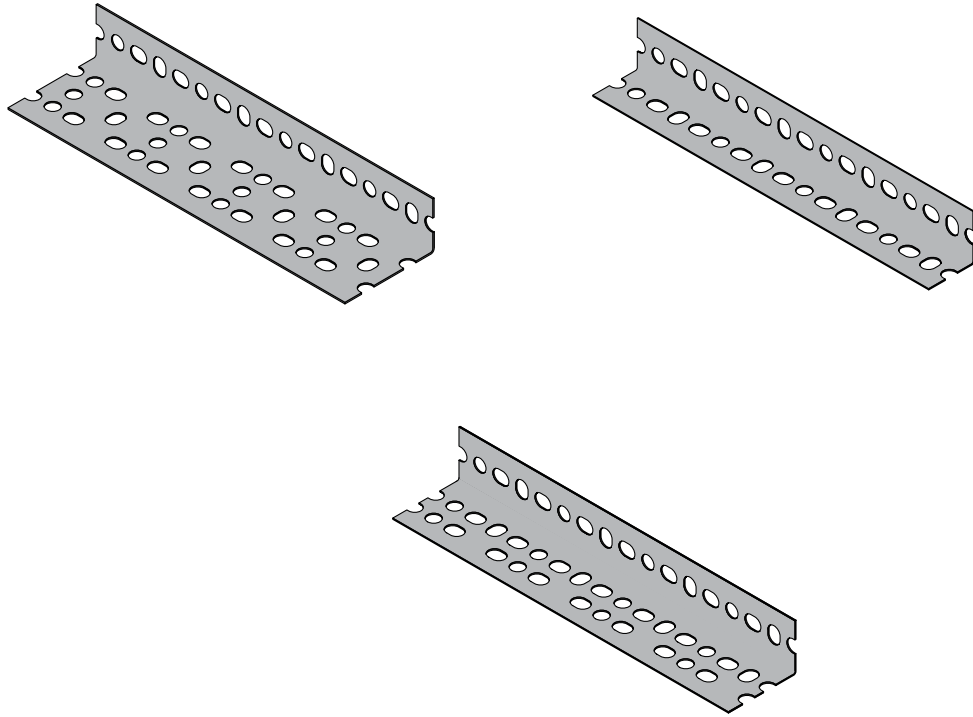
Part Number	Use With Channel	Wt/100 pcs	
		(lb)	(kg)
P4280 EA	P4000 EA	1.5	0.7
P5580 EA	P5500 EA	4.9	2.2





PrimeAngle

PrimeAngle Accessories	242
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PrimeAngle Column Loads	247



Material

Steel: Plain

- 12 Gauge (.105" 1.0 mm)
ASTM 1011 SS GR 33,
- 14 Gauge (.076) ASTM 1011 SS GR 33

Steel: Pre-Galvanized

- 12 Gauge (.105" 1.0 mm) ASTM A653 GR 33,
- 14 Gauge (.076) ASTM A653 GR 33

Finishes

Available in two durable, long-lasting finishes:

- Pre-Galvanized (PG) or
- Perma-Green III (GR) conforming to
ASTM B633 Type III SC1.

Standard Lengths

Standard lengths are 10' and 12'. Slotted angle is shipped in ten-piece bundles complete with 75 pieces of 3/8" - 16 x 3/4" hex head bolts and 3/8" nuts.

Ordering Information:

When ordering, add the length or size and finish to the part number.

Dimensions

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

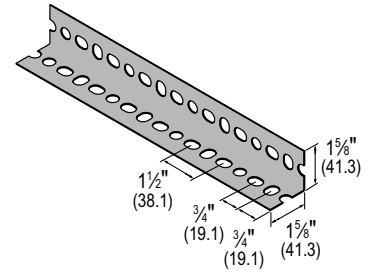
PA 158 – (1½" x 1½" x 14 ga.) Light Duty

PG

Wt/100 Ft.: 66 lbs (29.9 kg)

For those jobs where extra strength is not necessary. Ideal for light-duty shelving or racking.

Note: Includes Serrated Nuts & Bolts



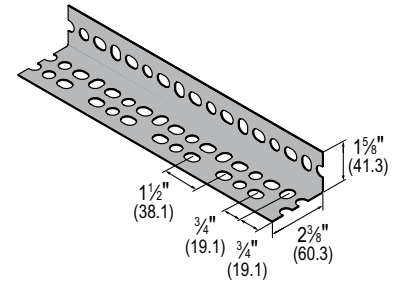
PA 238 – (1½" x 2¾" x 14 ga.) Medium Duty

PG

Wt/100 Ft.: 80 lbs (36.3 kg)

Perfect for the majority of framing needs, including shelving, racking and electrical or mechanical support jobs.

Note: Includes Serrated Nuts & Bolts

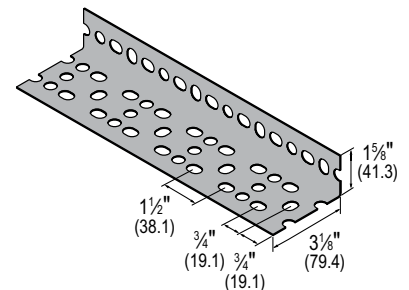


PA 318 – (1½" x 3½" x 12 ga.) Heavy Duty

Wt/100 Ft.: 130 lbs (59.0 kg)

Suitable for balconies, ramps, large racks and shelving systems, as well as other structures with substantial load requirements.

Note: Includes Serrated Nuts & Bolts

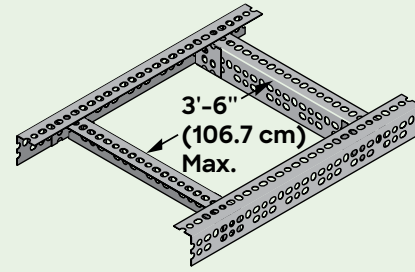


PrimeAngle Accessories

Transverse Stiffeners

When supporting concentrated loads, the capacity of a pair of slotted-angle beams can be increased by the addition of transverse stiffeners. These should be placed immediately under the load bearing point. The slotted-angle segment used as the stiffener is bolted into place using a metal connector at each junction.

Beams that are 6' (182.9 cm) long or less require only one stiffener in the center of the span. Seven-foot beams need two stiffeners placed 2' (61.0 cm) from each end. Eight-foot beams require two stiffeners 2'6" (76.2 cm) from the ends. For beams with a nine-foot span, it is necessary to have three stiffeners at 2'3" (68.6 cm) intervals. Ten-foot beams need three stiffeners with 2'6" spacings.

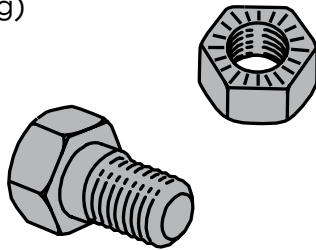


For maximum effectiveness, transverse stiffeners should never be spaced more than 3'6" (106.7 cm) apart.

Note: All loads based on actual physical testing. Documentation available on request.

PA 1SNB – Serrated Nuts and Bolts

Wt/100 pcs: 7 lbs (3.2 kg)

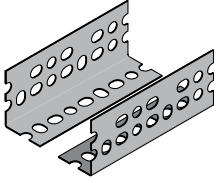


PrimeAngle Beam Loads

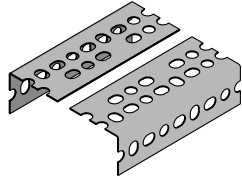
Beam Configurations

(See corresponding letters in table on following page for load data)

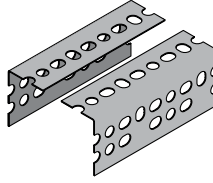
G – Two Single Pieces (Up)



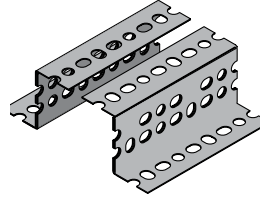
H – Two Single Pieces (Level)



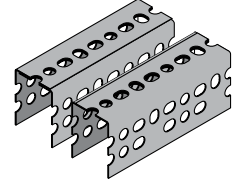
I – Two Single Pieces (Down)



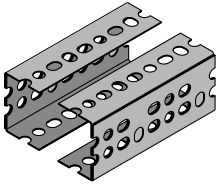
J – Two Z-Sections



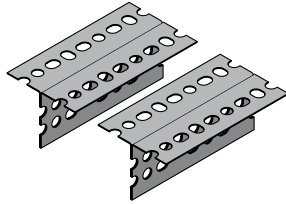
K – Two Narrow Channels



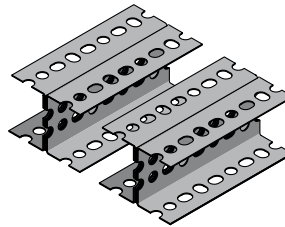
L – Two Broad Channels



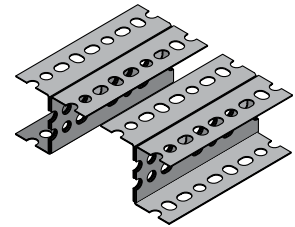
M – Two T-Sections



N – Two I-Sections



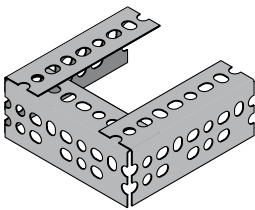
O – Two J-Sections



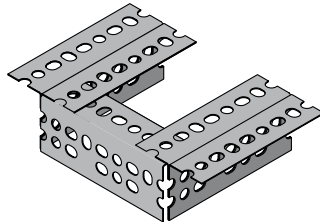
Beam Configurations With Stiffeners

(See corresponding letters in table on following page for load data)

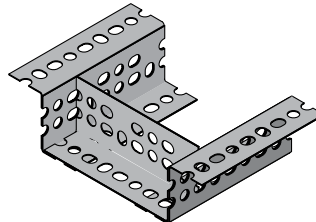
P – Single Pieces w/Stiffener



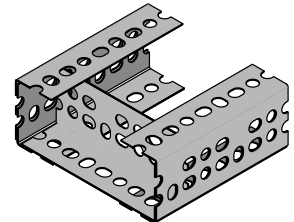
Q – T-Sections w/Stiffener



R – Z-Sections w/Stiffener



R – I-Sections w/Stiffener



PrimeAngle Beam Loads

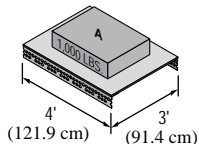
Beam Load Calculations

The beam loading depends on which slotted angle is used and the manner in which the beam is constructed. The diagrams above show how individual slotted angle components can be combined to form a beam. The loading for each beam configuration is shown in the beam loading tables on the next page.

Example - Load "A"

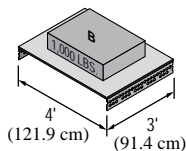
Load "A" is supported by two 48" (121.9 cm) sections of PA-238 (15/8" x 23/8") (41.3mm x 60.3mm).

The 48" row in the PA 238 table on next page indicates what each beam configuration will support. Since the columns are sorted from lowest to highest load, the first configuration that satisfies the requirement is "J" which will support 1,100 lbs (4.9 kN).



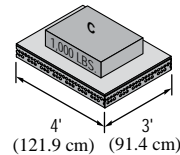
Example - Load "B"

Load "B" is supported by two 36" (91.4 cm) sections of PA-238 (15/8" x 23/8") (41.3mm x 60.3mm). The 36" row in the PA 238 table on next page indicates what each beam configuration will support. Since the columns are sorted from lowest to highest load, the first configuration that satisfies the requirement is "J" which will support 1,100 lbs (4.9 kN).



Example - Load "C"

Load "C" is supported by all four beam sections. The load is distributed uniformly on two 3' (91.4 cm) and two 4' (121.9 cm) beams which total 14' (426.7 cm) of supporting beam length. Dividing the 1,000 lbs. (4.5 kN) load by 14-foot equals 72 lbs. per foot (106.3 kg per meter). Using the two 4' (121.9 cm) longest (weakest) lengths, calculate the total weight as follows:



$2 \text{ (beams)} \times 4' \text{ (length)} \times 72 \text{ lbs./ft.} = 576 \text{ lbs. total wt.}$

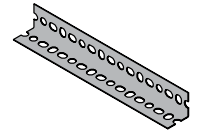
$2 \text{ (beams)} \times 121.9\text{cm (length)} \times 106.3 \text{ kg/M} = 25,915 \text{ kg total wt.}$

The 36" (91.4 cm) row in the PA 238 table on next page indicates what each beam configuration will support. Since the columns are sorted from lowest to highest load, the first configuration that satisfies the requirement is "J" which will support 830 lbs. (3.7 kN) and is adequate for this requirement. The 3-foot beams configured in the same manner will support the load because they are shorter and stronger.

PrimeAngle Beam Loads

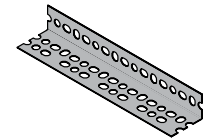
PA 158 – Light Duty, (1 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ " x 14 ga.)

Span		G		H		I		P		L		R		M	
(in)	(cm)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
24	61.0	550	2.45	830	3.69	830	3.69	920	4.09	1600	7.12	1700	7.56	1840	8.18
36	91.4	370	1.65	560	2.49	560	2.49	610	2.71	1070	4.76	1130	5.03	1230	5.47
48	121.9	280	1.25	420	1.87	420	1.87	460	2.05	800	3.56	850	3.78	920	4.09
60	152.4	220	0.98	330	1.47	330	1.47	370	1.65	640	2.85	680	3.02	740	3.29
72	182.9	180	0.80	280	1.25	280	1.25	310	1.38	530	2.36	570	2.54	610	2.71
84	213.4	•	•	240	1.07	240	1.07	260	1.16	460	2.05	490	2.18	530	2.36
96	243.8	•	•	210	0.93	210	0.93	230	1.02	400	1.78	430	1.91	460	2.05
108	274.3	•	•	•	•	•	•	•	•	360	1.60	380	1.69	410	1.82
120	304.8	•	•	•	•	•	•	•	•	320	1.42	340	1.51	370	1.65



PA 238 – Medium Duty, (1 $\frac{1}{2}$ " x 2 $\frac{3}{8}$ " x 14 ga.)

Span		G		H		I		P		J		L	
(in)	(cm)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
24	61.0	700	3.11	1020	4.54	1660	7.38	1740	7.74	2220	9.8	3170	14.10
36	91.4	460	2.05	680	3.02	1100	4.89	1160	5.16	1480	6.58	2110	9.39
48	121.9	350	1.56	510	2.27	830	3.69	870	3.87	1110	4.94	1580	7.03
60	152.4	280	1.25	410	1.82	660	2.94	700	3.11	890	3.96	1270	5.65
72	182.9	230	1.02	340	1.51	550	2.45	580	2.58	740	3.29	1060	4.72
84	213.4	•	•	290	1.29	470	2.09	500	2.22	630	2.80	910	4.05
96	243.8	•	•	260	1.16	410	1.82	440	1.96	550	2.45	790	3.51
108	274.3	•	•	•	•	•	•	•	•	490	2.18	700	3.11
120	304.8	•	•	•	•	•	•	•	•	440	1.96	630	2.80



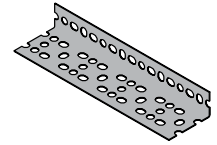
Span		R		M		K		Q		O		N	
(in)	(cm)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
24	61.0	3230	14.37	3490	15.52	3590	15.97	3630	16.15	6060	26.96	7560	33.63
36	91.4	2150	9.56	2320	10.32	2390	10.63	2420	10.76	4040	17.97	5040	22.42
48	121.9	1620	7.21	1740	7.74	1800	8.01	1810	8.05	3030	13.48	3780	16.81
60	152.4	1290	5.74	1390	6.18	1440	6.41	1450	6.45	2420	10.76	3020	13.43
72	182.9	1080	4.80	1160	5.16	1200	5.34	1210	5.38	2020	8.99	2520	11.21
84	213.4	920	4.09	1000	4.45	1030	4.58	1040	4.63	1730	7.70	2160	9.61
96	243.8	810	3.60	870	3.87	900	4.00	910	4.05	1520	6.76	1890	8.41
108	274.3	720	3.20	770	3.43	800	3.56	810	3.60	1350	6.01	1680	7.47
120	304.8	650	2.89	700	3.11	720	3.20	730	3.25	1210	5.38	1510	6.72

(See corresponding letters in table on previous page for configurations)

PrimeAngle Beam Loads

PA 318 – Heavy Duty, (1½" x 3½" x 12 ga.)

Span		G		H		I		P		J		L	
(in)	(cm)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
24	61.0	1790	7.96	1610	7.16	4300	19.13	4960	22.06	6520	29.00	7910	35.19
36	91.4	1200	5.34	1070	4.76	2870	12.77	3310	14.72	4350	19.35	5270	23.44
48	121.9	900	4.00	810	3.60	2150	9.56	2480	11.03	3260	14.50	3950	17.57
60	152.4	720	3.20	640	2.85	1720	7.65	1980	8.81	2610	11.61	3160	14.06
72	182.9	600	2.67	540	2.40	1430	6.36	1650	7.34	2170	9.65	2640	11.74
84	213.4	•	•	560	2.05	1230	5.47	1420	6.32	1860	8.27	2260	10.05
96	243.8	•	•	400	1.78	1080	4.80	1240	5.52	1630	7.25	1980	8.81
108	274.3	•	•	•	•	•	•	1100	4.89	1450	6.45	1760	7.83
120	304.8	•	•	•	•	•	•	990	4.40	1300	5.78	1580	7.03



Span		R		M		K		Q		O		N	
(in)	(cm)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
24	61.0	8070	35.90	9920	44.13	9990	44.44	10170	45.24	14600	64.94	16120	71.71
36	91.4	5380	23.93	6610	29.40	6660	29.63	6780	30.16	9730	43.28	10750	47.82
48	121.9	4030	17.93	4960	22.06	4990	22.20	5080	22.60	7300	32.47	8060	35.85
60	152.4	3230	14.37	3970	17.66	4000	17.79	4070	18.10	5840	25.98	6450	28.69
72	182.9	2690	11.97	3310	14.72	3330	14.81	3390	15.08	4870	21.66	5370	23.89
84	213.4	2300	10.23	2830	12.59	2850	12.68	2910	12.94	4170	18.55	4610	20.51
96	243.8	2020	8.99	2480	11.03	2500	11.12	2540	11.30	3650	16.24	4030	17.93
108	274.3	1790	7.96	2200	9.79	2220	9.88	2260	10.05	3240	14.41	3580	15.92
120	304.8	1610	7.16	1980	8.81	2000	8.90	2030	9.03	2920	12.99	3220	14.32

(See corresponding letters in table on previous page for configurations)

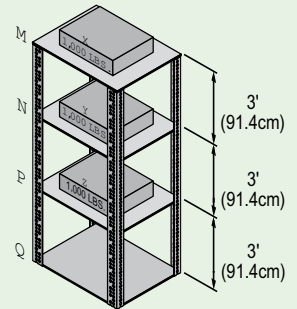
PrimeAngle Column Loads

Column Loads

Column sections are calculated as described in the following example: (Assumes use of PA-238 15/8" x 2 3/8" (41.3mm x 60.3mm), material.)

Since all load areas are supported equally by the 4-columns, the calculations are based on a single-column section.

Section MN is one-fourth of "X", or 250 pounds (1.1 kN). Column section NP supports one-fourth of "Y" (250 pounds) plus the load supported by MN, or a total of 500 pounds (2.2 kN). Section PQ supports one-fourth of "Z" (250 pounds) plus the 500 pound load on section NP, or a total of 750 (3.3kN) pounds.

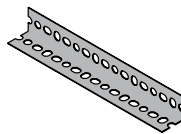


Column loads are based on free and unbraced column lengths. Since MN, NP and PQ are each 3' long, the load requirement is for a 36" section that will bear 750 pounds safely. A reference to the PA 238 table to the right indicates that all sections designated "A" will support 2,280 lbs. (10.1 kN) and meet the necessary requirements.

Note: To simplify assembly, we recommend using the same size material as for the horizontal members. This would be found in Table 2 to match the 14 gauge 15/8" x 23/8" (41.3mm x 60.3mm) material selected for the beams of this structure.

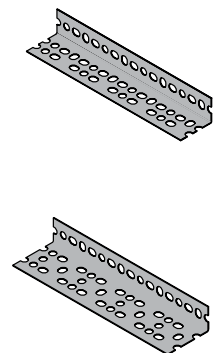
PA 158 – (1 5/8" x 1 5/8" x 14 ga.)

Span		A		B	
(in)	(cm)	(lb)	(kN)	(lb)	(kN)
36	91.4	1450	6.45	3850	17.13
48	121.9	1150	5.12	3500	15.57
60	152.4	950	4.23	3000	13.34
72	182.9	750	3.34	2500	11.12



PA 238 – (5/8" x 2 3/8" x 14 ga.)

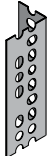
Span		A		B		C		D		E		F	
(in)	(cm)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
36	91.4	2280	10.14	4760	21.17	4940	21.97	7270	32.34	9520	42.35	9865	43.88
48	121.9	1970	8.76	4490	19.97	4680	20.82	6920	30.78	8970	39.90	9330	41.50
60	152.4	1520	6.76	3995	17.77	4310	19.17	6370	28.34	7990	35.54	8620	38.34
72	182.9	1070	4.76	3140	13.97	3870	17.21	5840	25.98	6280	27.93	7715	34.32
84	213.4	660	2.94	2340	10.41	3665	16.30	4930	21.93	4660	20.73	6740	29.98
96	243.8	•	•	1750	7.78	2700	12.01	3850	17.13	3500	15.57	5365	23.86
108	274.3	•	•	•	•	2060	9.16	2870	12.77	•	•	4115	18.30
120	304.8	•	•	•	•	1610	7.16	2690	11.97	•	•	3210	14.28



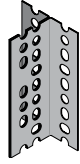
PrimeAngle Column Loads

PA 318 – (1½" x 3½" x 12 ga.)

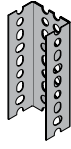
A – Single Piece



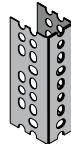
B – T-Section



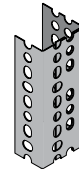
B – Broad Channel Section



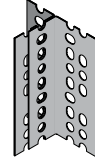
B – Narrow Channel Section



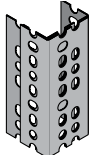
C – Uneven T-Section



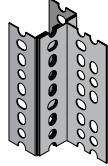
C – Uneven Channel Section



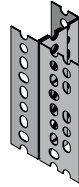
D – Dual Channel Section



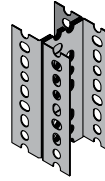
D – T-Channel Section



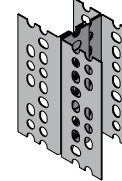
D – T-Channel Section



E – I-Section



F – Uneven I-Section



Span		A		B		C		D		E		F	
(in)	(cm)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)
36	91.4	3470	15.44	7970	35.45	8770	39.01	12560	55.87	15940	70.90	17550	78.07
48	121.9	2870	12.77	7360	32.74	8580	38.17	11970	53.25	14750	65.61	17150	76.29
60	152.4	1970	8.76	6570	29.22	8180	36.39	11360	50.53	13160	58.54	16360	72.77
72	182.9	1280	5.69	5270	23.44	7690	34.21	10480	46.62	10560	46.97	15360	68.32
84	213.4	•	•	3670	16.32	6970	31.00	9470	42.12	7370	32.78	13970	62.14
96	243.8	•	•	2580	11.48	6260	27.85	8370	37.23	5170	23.00	12570	55.91
108	274.3	•	•	•	•	5460	24.29	6880	30.60	•	•	10970	48.80
120	304.8	•	•	•	•	4460	19.84	5370	23.89	•	•	8960	39.86



Appendix	
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Materials and Finishes

Material

Nuts and Bolts

Unistrut and Power-Strut nuts are made from steel bars. After all machining operations are complete, they are thoroughly case hardened. Nuts are rectangular with ends shaped to permit a quarter turn clockwise in the framing member after insertion through the slotted opening in the channel. Two toothed grooves in the top of the nut engage the inturned edges of the channel and, after bolting operations are completed, will prevent any movement of the bolt and nut within the framing member.

All bolts and nuts have Unified coarse screw threads. The standard framing nut is 1/2" and conforms to ASTM A576 GR 1015 modified and A1011 SS GR 45. Screws conform to SAE J429 GR 2.

Gage	Finish	ASTM No.
12	GR & HG	A1011 SS GR 33
	PG	A653 GR 33
14	GR & HG	A1011 SS GR 33
	PG	A653 GR 33
16	GR & HG	A1011 SS GR 33
	PG	A653 GR 33
19	GR	A1008

Framing Members

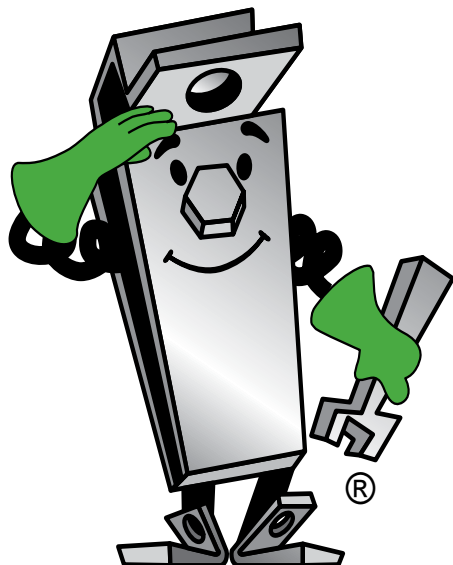
Unistrut and Power-Strut channels and continuous inserts are accurately and carefully cold-formed to size from low carbon strip steel. One side of the channel has a continuous slot with inturned edges. Secure attachments may be made to the framing member with the use of hardened, toothed, slotted nuts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

Weights and Dimensions

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

Fittings

Unistrut and Power-Strut fittings, unless noted otherwise, are punch-press made from hot rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A575, A576, A635 or A36. The fitting steel also meets the physical requirement of ASTM A1011 SS GR 33. The pickling of the steel produces a smooth surface free from scale.



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

Finishes

Defender

Defender is designed for harsh environments, providing a service life between Hot-Dip Galvanized and stainless steel systems. Independent testing shows that Defender is THREE times more corrosion-resistant than Hot-Dip Galvanized products. In addition, Defender avoids the use of costly stainless steel hardware, allowing for greater cost savings.

Technical Information

Finishes:

Defender is a combination of two proprietary material coatings conforming to ASTM standards A1046 and A1059.

Materials:

Channel, Fittings, and Pipe Clamps meet the physical requirements of ASTM A1011 SS GR 33.

Technical Notes:

1. Structural performance, including Slip and Pull-Out Loads, meets all Allowable Loads as specified in this catalog for carbon steels.
2. To achieve full performance and cost benefits, Defender must be used as a complete metal framing system. In addition, Defender should not be put in contact with stainless steel materials due to a dissimilar metals condition that will create galvanic corrosion.
3. Some red staining may be observed over time on Defender parts in corrosive environments. Red staining is superficial oxidation of the zinc/iron ions at the surface, and not corrosion of the substrate steel. This is noted in ASTM A 1059 section 6.3.
4. One of the unique characteristics of Defender is that it contains self-healing properties. If the product is cut or scratched in the field, the finish will propagate into those areas eliminating the need for secondary touch-ups.

Finishes

Plain (PL)

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

Pregalvanized Zinc (PG) ASTM A653

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

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

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

Materials and Finishes

Finishes

Hot Dip Galvanized (HG) ASTM A123 OR A153

In hot dip galvanizing, the finished part is immersed in a bath of molten zinc. This method results in complete zinc coverage and a thicker coating than pregalvanized or plated zinc. The zinc coating is typically 2.6 MIL or 1.5 oz./sq. ft. of surface area.

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

Special Coating

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

Electroplated Zinc (EG) ASTM B633, Type III SC1 or SC3

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

SC1 (Mild) has a Zinc coating of 0.2 and is recommended for dry indoor use. SC1 is the standard finish thickness. SC3 (Severe) has a Zinc coating of 0.5 mill and is the standard finish thickness only on UL Listed raceway products.

Perma-Gold (ZD) ASTM B633, Type II SC3

Similar to the EG process except in a yellow color.

Zinc Coating

Unistrut and Power-Strut products are available in four types of zinc coatings:

- Electroplated (EG)
- Perma-Gold (ZD)
- Pregalvanized (PG)
- Hot Dip Galvanized (HG)

Zinc offer two types of protection:

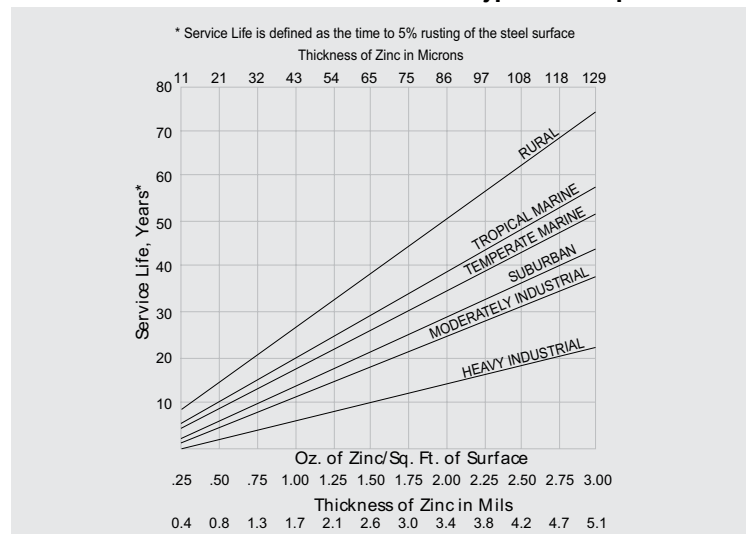
- Barrier: The zinc coating protects the steel substrate from direct contact with the environment.
- Sacrificial: The zinc coating will protect scratches, cut edges, etc. through an anodic sacrificial process.

The service life of zinc coating is directly related to the zinc coating thickness as shown below.

Comparison of Zinc Finishes

Finish	Zinc Thickness (mil)
Hot Dip Galvanized	2.60
Pre-Galvanized	0.75
Electro-Galvanized (SC1)	0.20
Electro-Galvanized (SC3)	0.50
Perma-Gold (SC3)	0.50

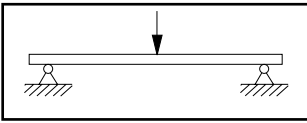
Life of Protection vs. Thickness of Zinc and Type of Atmosphere



Beams

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

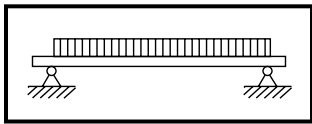
- The amount of load applied,
- The type of loading applied, and
- The support conditions



Beam Loading - Point Load

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

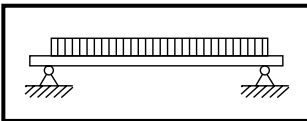
Beam Loading - Uniform Load



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

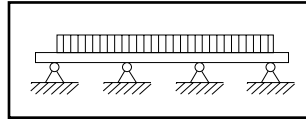
Point and uniform loads can be placed on a beam in any combination. A series of point loads can approximate a uniform loading. The load charts and tables are based on a uniform load unless identified otherwise.

Support Conditions - Simple Beam



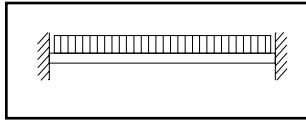
A simple beam has supports that prevent movement left and right, or up and down, but do not restrain the beam from rotating at the supports into a natural deflected curve. Most Unistrut and Power-Strut Metal Framing connections produce simple beams. The load charts and tables are based on simple beams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

Support Conditions - Continuous Beam



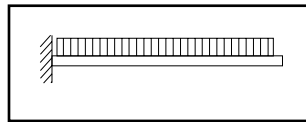
Any simple beam that is supported at one or more intermediate points is a continuous beam. A mezzanine joist that passes over three or more columns is an example of a continuous beam.

Support Conditions - Fixed-End Beam



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

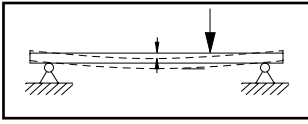
Support Conditions - Cantilever Beam



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

Beams

Deflection



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

- the amount of load,
- the support conditions,
- the stiffness of the beam's cross-sectional shape, and
- the stiffness of the beam material.

The stiffness of the beam's cross-sectional shape is measured by its "Moment Of Inertia" or "I". The larger a beam's "I", the stiffer it is and the less it will deflect. A beam's "I" can change for each major axis. The "I" of both major axes (I 1-1 and I 2-2) are provided.

The stiffness of a beam's material is measured by its "Modulus of Elasticity" or "E". The larger a material's "E", the stiffer it is and the less it deflects. For example, steel is about three times stiffer than aluminum and as a result, deflects only one-third as much. Do not confuse stiffness with strength. Two materials may have identical strengths yet still have different "E's". A high-strength aluminum may be as strong as steel and still deflect three times as much.

The load charts and tables give calculated deflections for the loads shown. In many cases, a final design will be determined by the maximum deflection, not the maximum load.

Bending Moment

Is it strong enough? This is the final consideration for any beam. A beam must not only hold up the anticipated loads, but must also have sufficient additional capacity to safely hold unforeseen variations in applied loads and material strengths. This additional capacity is called a safety factor and is usually regulated by the various design codes and standards. A beam's strength is usually measured by an allowable bending moment or an allowable stress. The traditional approach is the allowable stress method, where a beam is determined to have a maximum allowable stress (in pounds per square inch) which is not to be exceeded.

The approach of the current AISI "Specification For The Design Of Cold-Formed Steel Structural Members" is to use a maximum allowable bending moment (in inch-pounds) which is not to be exceeded. Bending moment divided by a beam's section modulus or "S" equals stress.

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

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

- the length of column,
- the type of loading,
- the support conditions, and
- the column's cross-sectional shape and material.

Columns

Column Length

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

Column Loading - Concentric Loading

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

Column Loading - Eccentric Loading

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

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

Support Conditions

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

Cross-Sectional Shape

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

Bolt Torque

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

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

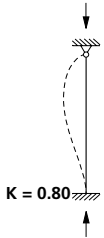
	Bolt Torque					
BOLT SIZE	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Rec.Torque Ft/Lbs (N•m)	6 (8)	11 (15)	19 (26)	50 (68)	100 (136)	125 (170)
Max Torque Ft/Lbs (N•m)	7 (9)	15 (20)	25 (34)	70 (95)	125 (170)	135 (183)

Columns



Support Conditions - Fixed Top - Fixed Bottom

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



Support Conditions - Pinned Top - Fixed Bottom

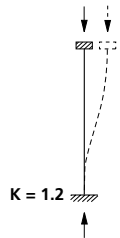
The top is restrained against lateral movement (translation) but is allowed to rotate. The bottom is restrained against rotation and lateral movement.

This is a common support condition and is used to construct the allowable column load applied at the Slot Face tables.



Support Conditions - Pinned Top - Pinned Bottom

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



Support Conditions - Fixed / Free Top - Fixed Bottom

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

Conversion Factors

Unit Conversions

English to Metric

To Convert From	To	Multiply By
Length		
Inch (in)	Millimeter (mm)	25.400,000
Foot (ft)	Meter (m)	0.304,800
Yard (yd)	Meter (m)	0.914,400
Mile (mi) (U.S. Statute)	Kilometer (km)	1.609,347
Area		
Square Inch (in ²)	Square Millimeter (mm ²)	645.16
Square Foot (ft ²)	Square Meter (m ²)	0.092,903
Square Yard (yd ²)	Square Meter (m ²)	0.836,127
Square Mile [mi ²] (U.S. Statute)	Square Kilometer (km ²)	2.589,998
Acre	Square Meter (m ²)	4046.873
Acre	Hectare	0.404,687
Volume		
Cubic Inch (in ³)	Cubic Millimeter (mm ³)	16,387.06
Cubic Foot (ft ³)	Cubic Meter (m ³)	0.028,317
Cubic Yard (yd ³)	Cubic Meter (m ³)	0.764,555
Gallon (gal) (U.S. Liquid)	Litre (l)	3.785,412
Quart (qt) (U.S. Liquid)	Litre (l)	0.946,353
Mass		
Ounce (Avoirdupois) (oz)	Gram (g)	28.349,520
Pound (Avoirdupois) (lb)	Kilogram (kg)	0.453,592
Short Ton	Kilogram (kg)	907.185
Force		
Ounce-Force	Newton (N)	0.278,014
Pound-Force (lbf)	Newton (N)	4.448,222
Bending Moment		
Pound-Force-Inch (lbf-in)	Newton-Meter (N-m)	0.112,985
Pound-Force-Foot (lbf-ft)	Newton-Meter (N-m)	1.355,818
Pressure, Stress		
Pound-Force per Square Inch (lbf/in ²)	Kilopascal (kPa)	6.894 757
Foot of Water (39.2 F)	Kilopascal (kPa)	2.988 980
Inch of Mercury (32 F)	Kilopascal (kPa)	3.386 380
Energy, Work, Heat		
Foot-Pound-Force (ft-lbf)	Joule (J)	1.355,818
British Thermal Unit (Btu)	Joule (J)	1055.056
Calorie (cal)	Joule (J)	4.186 800
Kilowatt Hour (kW-h)	Joule (J)	3,600,000
Power		
Foot-Pound-Force /Second [ft-lbs/s]	Watt [W]	1.355,818
British Thermal Unit /Hour [Btu/h]	Watt [W]	0.293,071
Horsepower [hp] (550 Ft. Lbf/s)	Kilowatt [kW]	0.745,700
Angle		
Degree	Radian [rad]	0.017,453
Temperature		
Degree Fahrenheit [°F]	Degree Celsius [°C]	(°F -32)/1.8

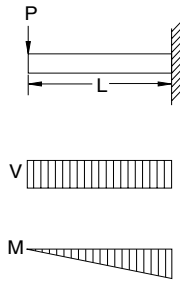
Metric to English

To Convert From	To	Multiply By
Length		
Millimeter (mm)	Inch (in)	0.039,370
Meter (m)	Foot (ft)	3.280,840
Meter (m)	Yard (yd)	1.093,613
Kilometer (km)	Mile (mi) (U.S. Statute)	0.621,370
Area		
Square Millimeter (mm ²)	Square Inch (in ²)	0.001,550
Square Meter (m ²)	Square Foot (ft ²)	10.763,915
Square Meter (m ²)	Square Yard (yd ²)	1.195,991
Square Kilometer (km ²)	Square Mile [mi ²] (U.S. Statute)	0.386,101
Square Meter (m ²)	Acre	0.000,247
Hectare	Acre	2.471,046
Volume		
Cubic Millimeter (mm ³)	Cubic Inch (in ³)	0.000,061
Cubic Meter (m ³)	Cubic Foot (ft ³)	35.314,662
Cubic Meter (m ³)	Cubic Yard (yd ³)	1.307,950
Litre (l)	Gallon (gal) (U.S. Liquid)	0.264,172
Litre (l)	Quart (qt) (U.S. Liquid)	1.056,688
Mass		
Gram (g)	Ounce (Avoirdupois) (oz)	0.035,274
Kilogram (kg)	Pound (Avoirdupois) (lb)	2.204,624
Kilogram (kg)	Short Ton	0.001,10
Force		
Newton (N)	Ounce-Force	3.596,941
Newton (N)	Pound-Force (lbf)	0.224,809
Bending Moment		
Newton-Meter (N-m)	Pound-Force-Inch (lbf-in)	8.850,732
Newton-Meter (N-m)	Pound-Force-Foot (lbf-ft)	0.737,562
Pressure, Stress		
Kilopascal (kPa)	Pound-Force per Square Inch (lbf/in ²)	0.145,038
Kilopascal (kPa)	Foot of Water (39.2 F)	0.334,562
Kilopascal (kPa)	Inch of Mercury (32 F)	0.295,301
Energy, Work, Heat		
Joule (J)	Foot-Pound-Force (ft-lbf)	0.737,562
Joule (J)	British Thermal Unit (Btu)	0.000,948
Joule (J)	Calorie (cal)	0.238,846
Joule (J)	Kilowatt Hour (kW-h)	2.78 ⁻⁷
Power		
Watt [W]	Foot-Pound-Force /Second [ft-lbs/s]	0.737,562
Watt [W]	British Thermal Unit /Hour [Btu/h]	3.412,142
Kilowatt [kW]	Horsepower [hp] (550 Ft. Lbf/s)	1.341,022
Angle		
Radian [rad]	Degree	57.295,788
Temperature		
Degree Celsius [°C]	Degree Fahrenheit [°F]	1.8xC°+32

Reference Tables & Data

Beam Support Conditions

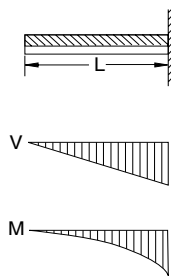
Cantilever Beams



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

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

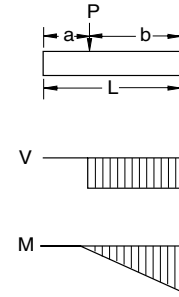
$$\Delta \text{ max.} = \frac{PL^3}{3EI}$$



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

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

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

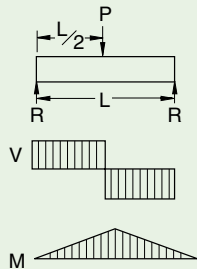


$$V \text{ max.} = P$$

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

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

Simple Beams

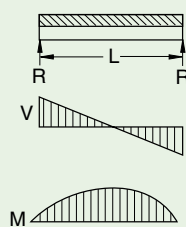


$$R = \frac{P}{2}$$

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

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

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

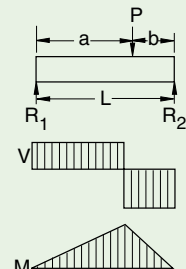


$$R = \frac{W}{2}$$

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

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

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



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

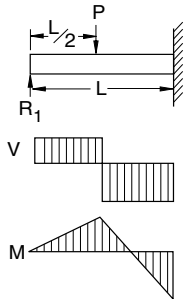
$$R_2 = \frac{Pa}{L}$$

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

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

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

Beams Fixed At One End & Supported At The Other



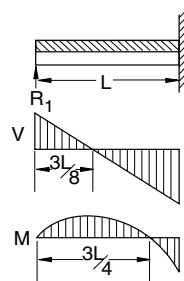
$$R_1 = \frac{5P}{16}$$

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

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

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

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



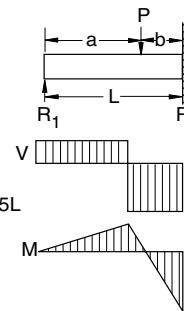
$$R_1 = \frac{3W}{8}$$

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

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

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

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



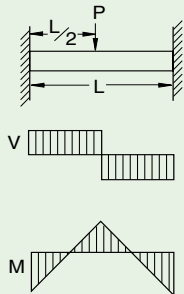
$$R_1 = \frac{Pb^2}{2L^3}(a+2L)$$

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

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

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

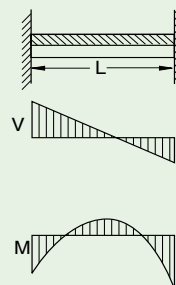
Beams Fixed At Both Ends



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

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

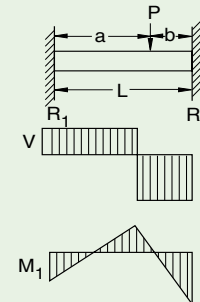
$$\Delta \text{ max.} = \frac{PL^3}{192EI}$$



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

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

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



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

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

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

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

R – Reaction
M – Moment
P – Concentrated Load



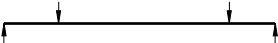
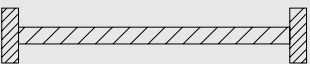
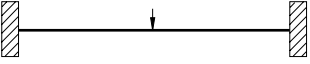
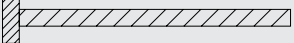
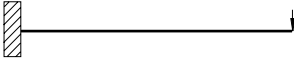
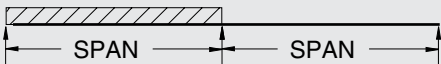
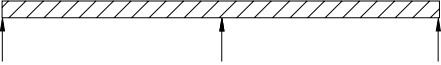
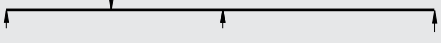
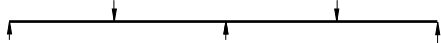
W – Total Uniform Load
V – Shear
L – Length

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

Reference Tables & Data

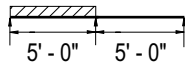
Conversion Factors For Beams With Various Static Loading Conditions

All Beam Load tables are for single-span (simple) beams supported at the ends. These can be used in the majority of the cases. However, there are times when it is necessary to know what happens with other loading and support conditions. Some common arrangements are shown below. Simply multiply the values from the Beam Load tables by factors given below

Load and Support Condition		Load Factor	Deflection Factor
Simple Beam, Uniform Load		1.00	1.00
Simple Beam, Concentrated Load at Center		0.50	0.80
Simple Beam, Two Equal Concentrated Loads at 1/4 pts		1.00	1.10
Beam Fixed at Both Ends, Uniform Loads		1.50	0.30
Beam Fixed at Both Ends, Concentrated Load at Center		1.00	0.40
Cantilever Beam, Uniform Load		0.25	2.40
Cantilever Beam, Concentrated Load at Center		0.12	3.20
Contenuous Beam, Two Equal Spans, Uniform Load on One Spn		1.30	0.92
Contenuous Beam, Two Equal Spans, Uniform Load on Both Ends		1.00	0.42
Contenuous Beam, Two Equal Spans, Concentrated Load at Center of One Span		0.62	0.71
Contenuous Beam, Two Equal Spans, Concentrated Load at Center of Each Span		0.67	0.48

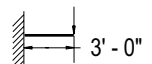
Example I:

Determine load and deflection of a P1000 beam continuous over one support and loaded uniformly on one span.



Example II:

Determine load and deflection of a P5500 cantilever beam with a concentrated load on the end.



Solution:

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

Solution:

- From load table P5500 on load for a 3'-0" span is 2180# and deflection is .09".
- Multiply by factors from Table above.
 - Load = 2180# x .12 = 262#
 - Deflection = .09" x 3.20 = .29"

Part I - General

1.01 Scope of Work

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

1.02 Quality Assurance

- A. Manufacturer's qualifications:
 - 1. The manufacturer shall not have had less than 10 year's experience in manufacturing Strut Systems.
 - 2. The manufacturer must certify in writing all components supplied have been produced in accordance with an established quality assurance program.
- B. Installer's qualifications:
 - 1. Installer must be a trained representative/installer with not less than 5 years experience in the installation of Strut Systems of this size and conformation.
 - 2. All Strut System components must be supplied by a single manufacturer.
- C. Standards:
 - 1. Work shall meet the requirements of the following standards: Federal, State and Local codes.
 - a. American Iron and Steel Institute (AISI) Specification for the Design of Cold-Formed Steel Structural Members 2007 Edition.
 - b. American Society for Testing and Materials (ASTM).

1.03 Submittals

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

1.04 Product Delivery, Storage, and Handling

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

1.05 Guarantee

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

Part 2 - Products

2.01 Acceptable Manufacturers

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

2.02 Materials

- A. All channel members shall be fabricated from structural grade steel conforming to one of the following ASTM specifications:
A 1011 SS GR 33, A 653 GR 33.
- B. All fittings shall be fabricated from steel conforming to one of the following ASTM specifications: A 575, A 576, A 36 or A 635.
- C. Substitutions: Any substitutions of product or manufacturer must be approved in writing ten days prior to bid date, by Architect or Engineer of record.

2.03 Finishes

- A. Strut System components shall be finished in accordance with one of the following standards:
 - 1. PERMA-GREEN® III (GR)
Rust inhibiting epoxy enamel paint applied by electro-deposition, after cleaning and phosphating, and thoroughly baked. Color is per Federal Highway Green, Color Tolerance Chart PR Color No. 4. Finish to withstand minimum 400 hours salt spray when tested in accordance with ASTM B117.
 - 2. ELECTRO-GALVANIZED (EG)
Electrolytically zinc coated per ASTM B 633 Type III SC 1
 - 3. PRE-GALVANIZED (PG)
Zinc coated by hot-dipped process prior to roll forming. The zinc weight shall be G90 conforming to ASTM A 653.
 - 4. HOT-DIPPED GALVANIZED (HG)
Zinc coated after all manufacturing operations are complete. Coating shall conform to ASTM A 123 or A 153.
 - 5. DEFENDER™ (DF) Coating conforming to ASTM A1046 or A1059.
 - 6. SPECIAL COATING / MATERIAL
(Describe as applicable)

Part 3 - Execution

3.01 Examination

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

3.02 Installation

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

3.03 Cleanup

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

3.04 Protection

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

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