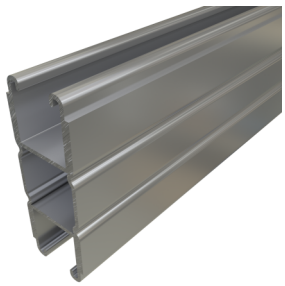

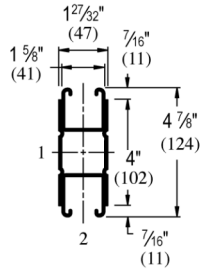

P1004A - 1-27/32" x 4-7/8", 12 Gauge, Plates on Each Side

12 Gauge Welded Strut Channel with Side Plates P1004A (plates on each side) which provides a premium allowable moment over a traditional triple combination channel due to the side-wall reinforcements. This channel is commonly used for electrical supports, mechanical supports, pipe, conduit, duct and cable tray supports, and other general framing. For application examples, refer to our Application Showcase.

Features

- 2-sided attachment
- Product dimensions are 1 27/32" wide x 4 7/8" tall x 12 ga. thick; with plates on each side.
- Our P1004A is available in the following finishes: Pre-Galvanized (PG), Hot-Dip Galvanized (HG), Plain (PL), Green (GR), Zinc Dichromate (ZD) and Stainless Steel (SS).
- High capacity for heavy load requirements
- Made in the USA

Standard Lengths:
· **10 feet:** 10' or 10' 1/8" (3.05m) ± 1/8" (3 mm)
· **20 feet:** 20' or 20' 3/8" (6.11m) ± 1/8" (3 mm)

Special Lengths:

· Available with a tolerance of ±1/8" (3 mm). Request quote.

Curved Channel:

· Many Unistrut channel sections can be supplied with a curve. Click here for our ordering form, specifications, and instructions.

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.
· Safety Factor to Yield Strength is 1.67 for Beam Loads and 1.80 for Column Loads.
· Beam loads are based on a simple beam are given as total uniform load (W) in pounds. For proper calculation procedures, refer to our Beam Load Calculation Guide.
· For bearing loads, reference bearing loads page.

Welds:

· Welded channels are spot welded 2" (51 mm) or 3" (76 mm) on-center.

Materials & Finishes - Standard:
· **Pregalvanized (PG):** Conforms to ASTM A653 SS GR 33, G90.
· **Unistrut Defender (DF):** Conforms to ASTM A1046 SS GR 33
· **Hot Dip Galvanized (HG):** Steel conforms to ASTM A1011 SS GR 33, Finish conforms to ASTM A123
· **Perma-Green (GR):** Steel conforms to ASTM A1011 SS GR 33, E-Coat finish
· **Perma-Gold (ZD):** Steel conforms to ASTM A1011 SS GR 33, Finish conforms to ASTM B633, Type II SC3
· **Plain (PL):** Conforms to ASTM A1011 SS GR 33

Materials & Finishes - Special Metals:

· **Stainless Steel, Type 304 (SS):** ASTM A240, Type 304 *
· **Stainless Steel, Type 316 (ST):** ASTM A240, Type 316 *
· **Aluminum (EA):** ASTM B221, Type 6063-T6 (Extruded) *

* These materials have different physical properties and performance characteristics. Please contact us for design support.

P1004A

Atkore Power-Strut | Atkore Unistrut

Catalog Number	Length (ft)	Gauge	Material Type	Surface Finish	Part Weight (lb/ft)	Standard Package Qty (ft)	Standard Package Weight (lb)
P1004A 10GR	10	12	Steel	Green E-Coat	6.7	100	670
P1004A 10HG	10	12	Steel	Hot-Dip Galvanized	6.7	100	670
P1004A 10PG	10	12	Steel	Pre-Galvanized	6.7	100	670
P1004A 10PL	10	12	Steel	Plain/Oil	6.7	100	670
P1004A 20GR	20	12	Steel	Green E-Coat	6.7	200	1340
P1004A 20HG	20	12	Steel	Hot-Dip Galvanized	6.7	200	1340
P1004A 20PG	20	12	Steel	Pre-Galvanized	6.7	200	1340
P1004A 20PL	20	12	Steel	Plain/Oil	6.7	200	1340

Beam Loading - P1004A

Span (in)	Max Allowable Uniform Load (lbs)	Deflection at Uniform Load (in)	Uniform Loading at Deflection			Lateral Bracing Reduction Factor
			Span/180 (lbs)	Span/240 (lbs)	Span/360 (lbs)	
24	*9,100	0.01	*9,100	*9,100	*9,100	1.00
36	*9,100	0.05	*9,100	*9,100	*9,100	1.00
48	7,000	0.08	7,000	7,000	7,000	0.94
60	5,600	0.13	5,600	5,600	5,600	0.89
72	4,660	0.19	4,660	4,660	4,660	0.83
84	4,000	0.26	4,000	4,000	3,630	0.78
96	3,500	0.34	3,500	3,500	2,780	0.72
108	3,110	0.43	3,110	3,110	2,200	0.67
120	2,800	0.52	2,800	2,670	1,780	0.62
144	2,330	0.75	2,330	1,850	1,230	0.52
168	2,000	1.03	1,810	1,360	910	0.44
192	1,750	1.34	1,390	1,040	690	0.38
216	1,550	1.69	1,100	820	550	0.34
240	1,400	2.10	890	670	440	0.31

Refer to the General Specifications for loading information.

Column Loading - P1004A

Unbraced Height (in)	Allowable Load at Slot Face (lbs)	Max Column Load Applied at C.G.			
		K=0.65 (lbs)	K=0.80 (lbs)	K=1.0 (lbs)	K=1.2 (lbs)
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	KL/r>200
168	4,520	12,990	8,570	KL/r>200	KL/r>200

Refer to the General Specifications for loading information.

Elements of Section - P1004A

Area of Section	1.965 in^2 (12.7 cm^2)	
	Axis 1-1	Axis 2-2
Moment of Inertia (I)	4.068 in^4 (169.3 cm^4)	1.092 in^4 (45.5 cm^4)
Section Modulus (S)	1.669 in^3 (27.4 cm^3)	1.190 in^3 (19.5 cm^3)
Radius of Gyration (r)	1.439 in (3.7 cm)	0.745 in (1.9 cm)