



P3000 - 1-5/8" x 1-3/8", 12 Gauge, Solid

12 Gauge Solid Strut Channel is commonly used for trapeze supports, seismic bracing, ceiling grids, pipe, conduit, duct and cable tray supports, racks, and other general framing. For application examples, refer to our Application Showcase.

Features

- Product dimensions are 1 5/8" wide x 1 3/8" tall x 12 ga. thick, solid.
- Punched holes are also available for ease of installation
- This channel type provides a shorter alternative to its closest comparable, P1000.
- UL and CSA listed
- 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 apply only to UNISTRUT brand channel. Look for "UNISTRUT" on the product.
- 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 and are given as a total uniform load (W) in pounds. For proper calculation procedures, refer to our Beam Load Calculation Guide under Resources.
- For bearing loads, reference our Bearing Loads Page.

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.



Catalog Number	Length (ft)	Gauge	Material Type	Surface Finish	Part Weight (lb/ft)	Standard Package Qty (ft)	Standard Package Weight (lb)
P3000 10GR	10	12	Steel	Green E-Coat	1.7	500	850
P3000 10HG	10	12	Steel	Hot-Dip Galvanized	1.7	500	850
P3000 10PG	10	12	Steel	Pre-Galvanized	1.7	500	850
P3000 10PL	10	12	Steel	Plain/Oil	1.7	500	850
P3000 10SS	10	12	Stainless Steel - 304		1.7	500	850
P3000 20GR	20	12	Steel	Green E-Coat	1.7	1000	1700
P3000 20HG	20	12	Steel	Hot-Dip Galvanized	1.7	1000	1700
P3000 20PG	20	12	Steel	Pre-Galvanized	1.7	1000	1700
P3000 20PL	20	12	Steel	Plain/Oil	1.7	1000	1700
P3000 20SS	20	12	Stainless Steel - 304		1.7	1000	1700
P3000 20ST	20	12	Stainless Steel - 316		1.7	1000	1700

Beam Loading - P3000						
Span (in)	Max Allow. 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	1,280	0.07	1,280	1,280	1,280	1.00
36	850	0.15	850	850	580	0.96
48	640	0.26	640	490	330	0.91
60	510	0.41	420	310	210	0.88
72	430	0.59	290	220	150	0.84
84	370	0.81	210	160	110	0.82
96	320	1.05	160	120	80	0.79
108	280	1.30	130	100	60	0.77
120	260	1.66	100	80	50	0.75
144	210	2.32	70	50	40	0.70
168	180	3.15	50	40	30	0.66
192	160	4.18	40	30	NR	0.62
216	140	5.21	NR	NR	NR	0.58
240	130	6.64	NR	NR	NR	0.54
Note	NR - Not Recommended					

Refer to the General Specifications for loading information.

Column Loading - P3000					
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	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	KL/r>200
96	1,650	3,530	2,770	1,840	KL/r>200
108	1,450	3,080	2,270	KL/r>200	KL/r>200
120	1,250	2,710	1,840	KL/r>200	KL/r>200

Refer to the General Specifications for loading information.

Elements of Section - P3000		
Area of Section	0.5 in ² (3.2 cm ²)	
	Axis 1-1	Axis 2-2
Moment of Inertia (I)	0.12 in ⁴ (5 cm ⁴)	0.203 in ⁴ (8.4 cm ⁴)
Section Modulus (S)	0.153 in ³ (2.5 cm ³)	0.250 in ³ (4.1 cm ³)
Radius of Gyration (r)	0.489 in (1.2 cm)	0.638 in (1.6 cm)