



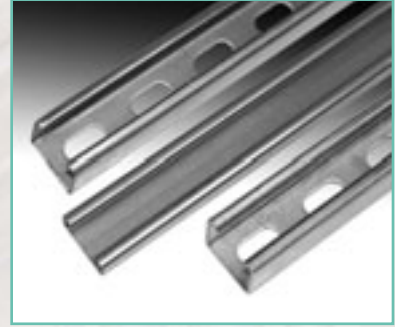
The Power to Build!

The present line of Power-Strut continuous slot metal framing is the result of over one half century of experience in metal framing.

This complete line includes channels, fittings and accessories for any framing or support solution... large or small, heavy or light.

Power-Strut is proud of the exacting standards of research, design, engineering and manufacturing that go into production of the Power-Strut system.

Maximum recommended load ratings for channels have been established through testing and are based on allowable stresses applicable to the Power-Strut Material Specification. Electrical Power-Strut products are listed by the Underwriters' Laboratories, Inc. (U.L.) and certified by the Canadian Standards Association (CSA.)



The Power-Strut Connection, Easy as 1 - 2 - 3...

1. Insert the clamping nut anywhere along the continuous slot channel. A 90° clockwise turn positions the grooves and teeth in the nut with the inserted edges of the channel.

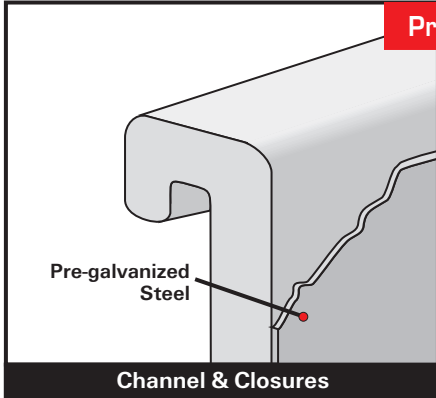


2. The Power-Strut fitting provides the connection of channels.



3. Tighten the bolt(s) to secure the connection.

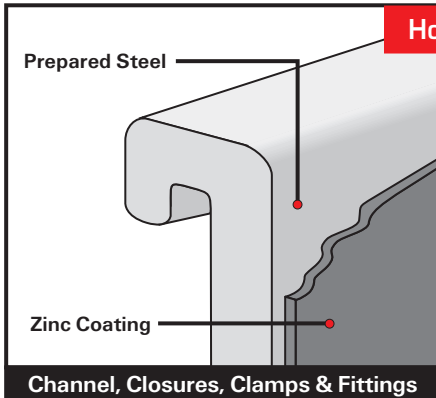




Pregalvanized (PG)

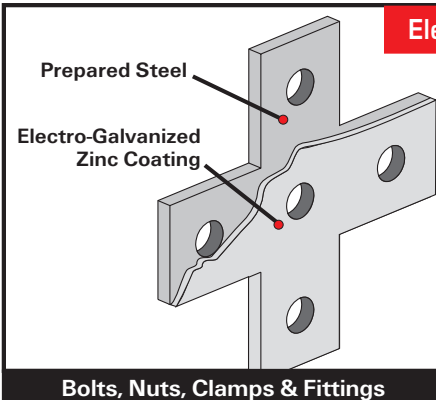
Material (steel strip) is coated with zinc by hot-dip process prior to roll-forming or press operations.

The zinc coating conforms to ASTM A653, Grade 90 General Requirement for Steel Sheet, Zinc-Coated (Galvanized) by Hot Dip Process.



Hot-Dipped Galvanized (HG)

Material is coated with zinc after being roll-formed or after all manufacturing operations are completed, conforming to ASTM specification No. A123 or A153.

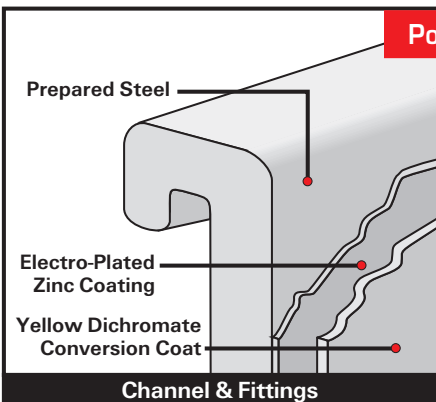


Electro-Galvanized (EG)

Fittings and hardware are electrolytically coated with zinc to commercial standards (ASTM-B633 Type III C1).

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.



Power-Gold (ZD)

A Electro-galvanized zinc plate is applied with a cohesive molecular bond to the steel base metal, in compliance with the ASTM B633 standard. Yellow Dichromate is applied over the zinc and results in a gold appearance which acts as a nonporous barrier sealant.

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.

ZINC COATING

Power-Strut products are available in four types of zinc coatings:

- Electroplated (EG)
- Pregalvanized (PG)
- Hot-Dipped Galvanized (HG)
- Yellow Dichromate (ZD)

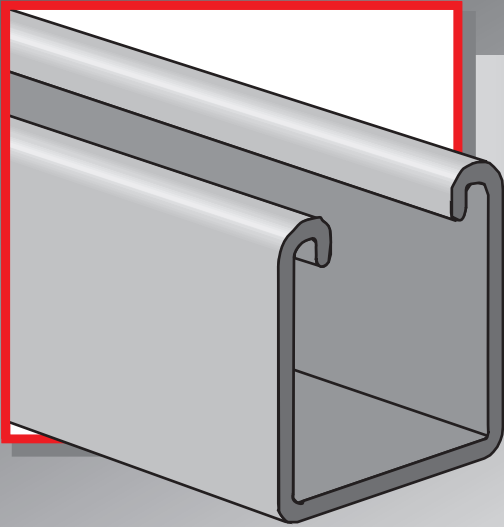
Zinc coatings offer two types of protection:

1. **Barrier:** The zinc coating protects the steel substrate from direct contact with the environment.
2. **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 GALVANIZED FINISHES

Finish	Zinc Thickness
Hot-Dipped Galvanized	2.6 MIL
Pregalvanized	0.75 MIL
Electro-Galvanized (SC1)	0.2 MIL
Electro-Galvanized (SC3)	0.5 MIL
Power-Gold (SC1)	0.2 MIL
Power-Gold (SC3)	0.5 MIL



CHANNEL

Power-Strut channel sections are produced by multiple sets of forming rolls which cold-work strip steel into the channel configuration. This type of roll forming produces a uniform channel section held to the specifications of MFMA-4.

MATERIALS:

Plain and painted green channels are formed from structural quality strip steel which conforms to the requirements of ASTM A-1011 SS Grade 33. Pre-galvanized channel conforms to the requirements of ASTM A-653 Grade 33.

STANDARD LENGTHS:

Stock lengths are 10 and 20 feet. Special lengths are available upon request.

STANDARD FINISHES:

Standard Power-Strut channel is available in plain, painted green, zinc dichromate or pre-galvanized finishes.

ORDERING INFORMATION:

When ordering, add the length or size and finish to the part number. See page 8 - 9 for finish abbreviations and an example.

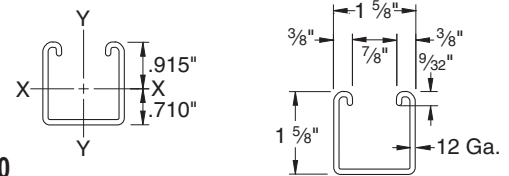
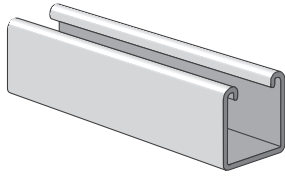
Type of Load	Safety Factor to Yield Strength	Safety Factor to Ultimate Strength
Beam Loads	1.67	2.0
Column Load	1.80	2.2

CHANNEL

Finish: Plain, Painted Green, or Pregalvanized Order By: No., Length and Finish



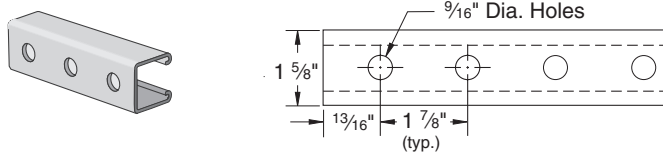
PS 200 – Steel Channel (1⁵/₈" x 1⁵/₈" x 12 ga.)



ELEMENTS OF SECTION – PS 200

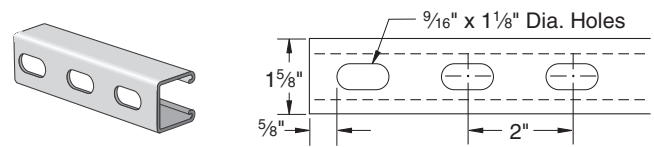
Weight (lbs./100 ft.)	Area of Section (Inch ²)	X-X Axis			Y-Y Axis		
		Moment of Inertia (Inch ⁴)	Section Modulus (Inch ³)	Radius of Gyration (Inch)	Moment of Inertia (Inch ⁴)	Section Modulus (Inch ³)	Radius of Gyration (Inch)
189	0.555	0.185	0.202	0.577	0.236	0.290	0.651

PS 200 H - Channel with Holes



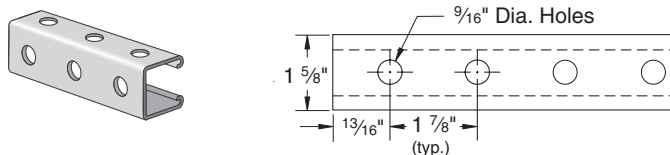
Weight: 186 lbs./100 ft.

PS 200 EH – Channel with Elongated Holes



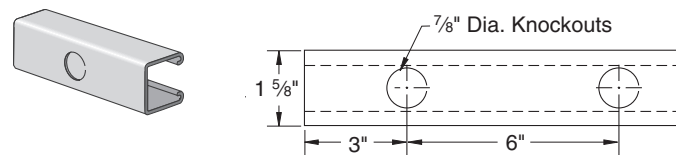
Weight: 185 lbs./100 ft.

PS 200 H3 - Channel with Holes



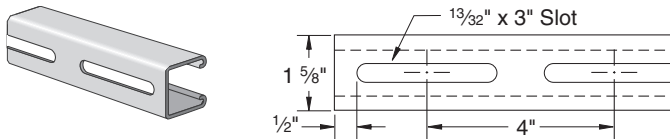
Weight: 175 lbs./100 ft.

PS 200 K06 – Channel with Knockouts



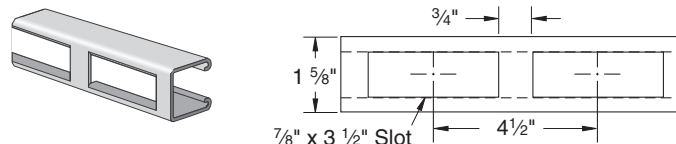
Weight: 189 lbs./100 ft.

PS 200 S - Channel with Slots



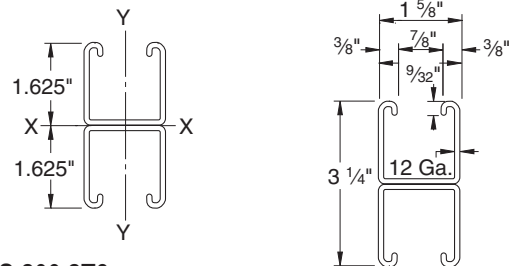
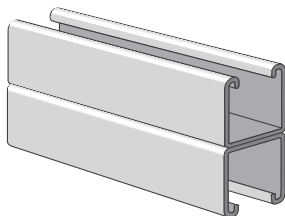
Weight: 185 lbs./100 ft.

PS 200 SB – Channel with Slotted Back



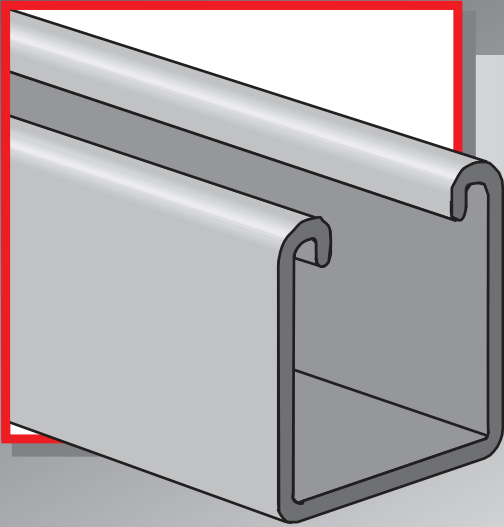
Weight: 173 lbs./100 ft.

PS 200 2T3 – Steel Channel (1⁵/₈" x 3¹/₄" x 12 ga.)



ELEMENTS OF SECTION – PS 200 2T3

Weight (lbs./100 ft.)	Area of Section (Inch ²)	X-X Axis			Y-Y Axis		
		Moment of Inertia (Inch ⁴)	Section Modulus (Inch ³)	Radius of Gyration (Inch)	Moment of Inertia (Inch ⁴)	Section Modulus (Inch ³)	Radius of Gyration (Inch)
378	1.111	0.928	0.571	0.914	0.471	0.580	0.651



CHANNEL

Power-Strut channel sections are produced by multiple sets of forming rolls which cold-work strip steel into the channel configuration. This type of roll forming produces a uniform channel section held to the specifications of MFMA-4.

MATERIALS:

Plain and painted green channels are formed from structural quality strip steel which conforms to the requirements of ASTM A-1011 SS Grade 33. Pre-galvanized channel conforms to the requirements of ASTM A-653 Grade 33.

STANDARD LENGTHS:

Stock lengths are 10 and 20 feet. Special lengths are available upon request.

STANDARD FINISHES:

Standard Power-Strut channel is available in plain, painted green, zinc dichromate or pre-galvanized finishes.

ORDERING INFORMATION:

When ordering, add the length or size and finish to the part number. See page 8 - 9 for finish abbreviations and an example.

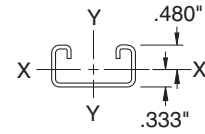
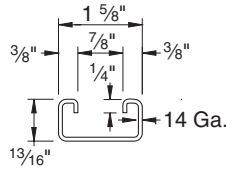
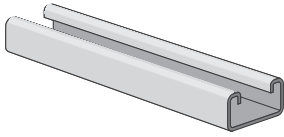
Type of Load	Safety Factor to Yield Strength	Safety Factor to Ultimate Strength
Beam Loads	1.67	2.0
Column Load	1.80	2.2

CHANNEL

Finish: Plain, Painted Green, or Pregalvanized Order By: No., Length and Finish



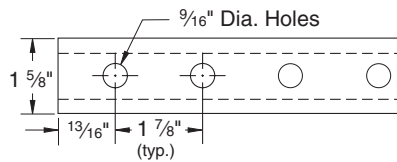
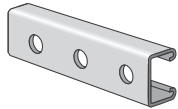
PS 500 – Steel Channel (1 5/8" x 1 3/16" x 14 ga.)



ELEMENTS OF SECTION – PS 500

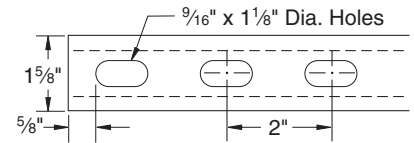
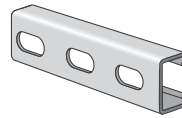
Weight (lbs./100 ft.)	Area of Section (Inch ²)	X-X Axis			Y-Y Axis		
		Moment of Inertia (Inch ⁴)	Section Modulus (Inch ³)	Radius of Gyration (Inch)	Moment of Inertia (Inch ⁴)	Section Modulus (Inch ³)	Radius of Gyration (Inch)
98	0.290	0.026	0.054	0.298	0.107	0.132	0.609

PS 500 H - Channel with Holes



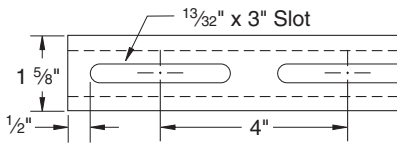
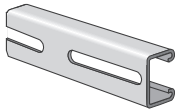
Weight: 87 lbs./100 ft.

PS 500 EH – Channel with Elongated Holes



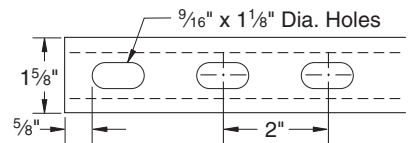
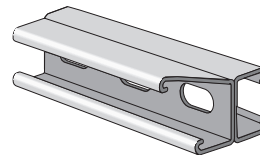
Weight: 87 lbs./100 ft.

PS 500 S - Channel with Slots



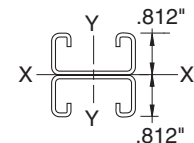
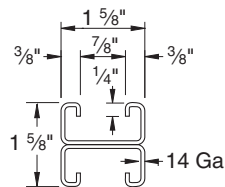
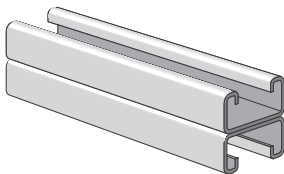
Weight: 87 lbs./100 ft.

PS 500 2T3 EH – Channel with Elongated Holes



Weight: 174 lbs./100 ft.

PS 500 2T3 – Steel Channel (1 5/8" x 1 5/8" x 14 ga.)



ELEMENTS OF SECTION – PS 500 2T3

Weight (lbs./100 ft.)	Area of Section (Inch ²)	X-X Axis			Y-Y Axis		
		Moment of Inertia (Inch ⁴)	Section Modulus (Inch ³)	Radius of Gyration (Inch)	Moment of Inertia (Inch ⁴)	Section Modulus (Inch ³)	Radius of Gyration (Inch)
197	0.579	0.117	0.143	0.449	0.214	0.264	0.608



Channel

PS 500 & PS 500 2T3 – Load Data

BEAM LOADING – PS 500

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lbs)	Span/240 (lbs)	Span/360 (lbs)
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

* Bearing load may govern capacity.

This load table is based on a solid channel section.

For concentrated load at center of span, divide uniform load by 2 and multiply corresponding deflection by 0.8.

Loads include weight of channel, which must be deducted.

Loads must be multiplied by the applicable unbraced factor from page 42.

For Pierced Channels, reduce beam load values as follows:

- PS-500-EH 15%
- PS-500-S 15%
- PS-500-H 10%

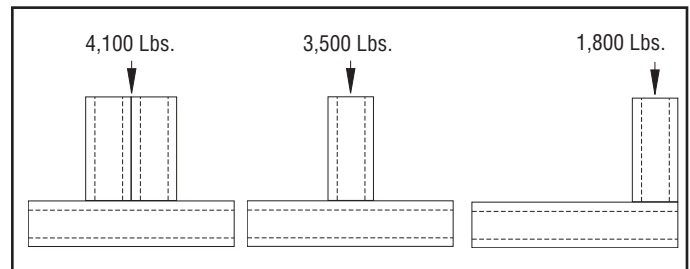
COLUMN LOADING – PS 500

Unbraced Height (in)	Max. Allowable Load at Slot Face (lbs)	Maximum Column Load Applied at C.G.			
		K = 0.65 (lbs)	K = 0.80 (lbs)	K = 1.0 (lbs)	K = 1.2 (lbs)
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	**	**

** $K_L > 200$

Column loads are for allowable axial loads and must be reduced for eccentric loading.

PS500 – Crush Loads



Resistance to Slip – 1,000 lbs. per bolt when 1/2" PS NS channel nuts are used.

Pull Out Strength – 1,400 lbs. per bolt when 1/2" PS NS channel nuts are used.

BEAM LOADING – PS 500 2T3

Span (in)	Max Allowable Uniform Load (lb)	Defl. at Uniform Load (in)	Uniform Loading at Deflection		
			Span/180 (lbs)	Span/240 (lbs)	Span/360 (lbs)
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

*Load limited by spot weld shear.

† Bearing load may govern capacity.

For concentrated load at center of span, divide uniform load by 2 and multiply corresponding deflection by 0.8. This load table is based on a solid channel section.

Loads include weight of channel, which must be deducted.

Loads must be multiplied by the applicable unbraced factor from page 42.

COLUMN LOADING – PS 500 2T3

Unbraced Height	Max Allowable Load at Slot Face	Max. Column Load Applied at C.G.			
		K = 0.65	K = 0.80	K = 1.0	K = 1.2
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	**	**

** $K_L > 200$

Column loads are for allowable axial loads and must be reduced for eccentric loading.

For Pierced Channels, reduce beam load values as follows:

- PS-500 2T3 EH 15%