CHANNEL

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



12 Ga.

Radius of

Gyration

(Inch)

0.651









ELEMENTS OF SECTION – PS 200 2T3

	Area of	X-X Axis			Y-Y Axis		
Weight (lbs./100 ft.)	Area of Section (Inch ²)	Moment of Inertia (Inch ⁴)	Section Modulus (Inch³)	Radius of Gyration (Inch)	Moment of Inertia (Inch⁴)	Section Modulus (Inch³)	Radius of Gyration (Inch)
378	1.111	0.928	0.571	0.914	0.471	0.580	0.651



CHANNEL

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

PS 200 & PS 200 2T3 - Load Data

BEAM LOADING – PS 200

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

COLUMN LOADING – PS 200

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

** ^{KL}/r>200

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

PS200 – Crush Loads



Resistance to Slip – 1,500 lbs. per bolt when $1/\!\!2''$ PS NS channel nuts are used. Pull Out Strength – 2,000 lbs. per bolt when $1/\!\!2''$ PS NS channel nuts are used.

COLUMN LOADING - PS 200 2T3

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

** ^{KL}/r>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 200 2T3 EH 15% (See PS 200 2T3 EH on page28.)

* Bearing load may govern capacity.

NR - Not Recommended

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-200-EH 15% PS-200-S 15% PS-200-H 10% PS-200-K06 5% PS-200-SB 30%

For Extruded Aluminum Channels, reduce beam load values 38%.

BEAM LOADING - PS 200 2T3

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

^{*}Load limited by spot weld shear.

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.

CHANNEL

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



PS 200 2T3 EH - Channel with Elongated Holes



Power-Strut[®] Engineering Catalog



R

Channel

POWER-STRUT

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

PS 200 PLC - Welded Steel Channel & Plate

PS 200 PLA – Welded Steel Channel & Plate





1.834" 1.834" Y Y 4.7/8" X



ELEMENTS OF SECTION

		Area of	X-X Axis			Y-Y Axis		
Part No.	Weight (lbs./100 ft.)	Area of Section (Inch ²)	Moment of Inertia (Inch4)	Section Modulus (Inch³)	Radius of Gyration (Inch)	Moment of Inertia (Inch⁴)	Section Modulus (Inch³)	Radius of Gyration (Inch)
PS 200 PLA	333	0.739	0.287	0.248	0.623	0.617	0.290	0.914
PS 200 PLC	668	1.965	4.068	1.669	1.439	1.092	1.190	0.745

PS 200 PLC - Load Data

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

BEAM LOADING - PS 200 PLC

COLUMN LOADING - PS 200 PLC

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

** ^{KL}/r>200

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

*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.