



METAL FRAMING CHANNEL

Cold Formed Strut

19449 Progress Dr. • Strongsville • OH • 44149 • PH: 440-878-1199

ES520 STANDARD, ES520EH SLOTTED

1-5/8" x 13/16"

12 Gauge

Part No: ES520 **Weight:** 131lbs /100 Ft.

Part No: ES520EH **Weight:** 120lbs /100 Ft.

ORDER BY: Part Number, Finish, Length

Material: ASTM A-653 LOW CARBON STEEL

Finish: PL - Plain

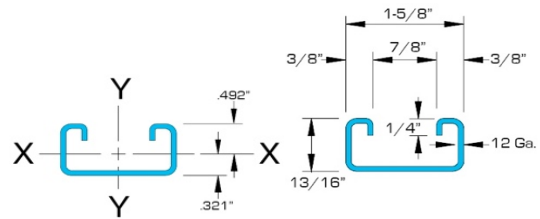
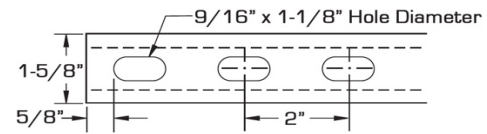
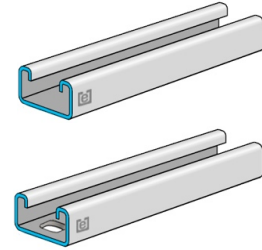
PG90 - Pre-Galvanized Grade 90

PG60 - Pre-Galvanized Grade 60

HG - Hot Dipped Galvanized

Length : 10'

(feet) 20'



ELEMENTS OF SECTION - ES520 & ES520EH						
Area of Section	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)
0.384	0.031	0.064	0.283	0.138	0.170	0.599

BEAM LOADING ES520 & ES520EH						
Span (inch)	Lateral Bracing Load Reduction Factors	Maximum Allowable Uniform Load (lbs)	Deflection at Uniform Load (lbs)	Uniform Loading Deflection		
				Span/180 (lbs)	Span/240 (lbs)	Span/360 (lbs)
24	1.00	540	0.11	540	510	340
36	1.00	360	0.24	300	220	150
48	1.00	270	0.43	170	130	80
60	1.00	220	0.68	110	80	50
72	0.98	180	0.96	70	60	40
84	0.97	150	1.27	60	40	30
96	0.96	130	1.65	40	30	20
108	0.95	120	2.16	30	20	20
120	0.93	110	2.72	30	20	NR
144	0.91	90	3.84	20	NR	NR
168	0.89	80	5.43	NR	NR	NR
192	0.86	70	7.09	NR	NR	NR

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 located in the blue column in the chart above.
 For Pierced Channels, reduce beam load values as follows: ES520EH 15%

COLUMN LOADING ES520 & ES520EH					
Unbraced Height (inches)	Maximum 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	2,250	7,480	6,800	5,820	4,810
36	1,980	5,950	4,810	3,380	2,350
48	1,580	4,310	2,970	1,900	**
60	1,210	2,880	1,900	**	**
72	**	2,000	**	**	**

** KL r > 200

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

BEARING LOADS ES520		
8,400 lbs	7,300 lbs	3,400 lbs

Resistance to Slip: 1,500 lbs. per bolt when 1/2" ES NS channel nuts are used. Pull Out Strength: 1,500 lbs. per bolt when 1/2" ES NS channel nuts are used.