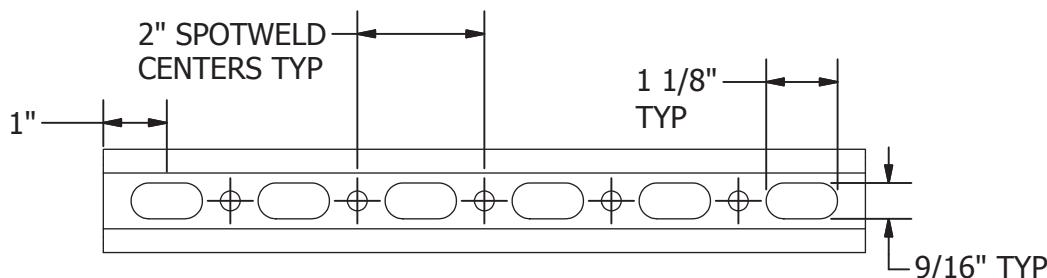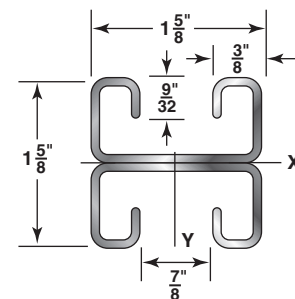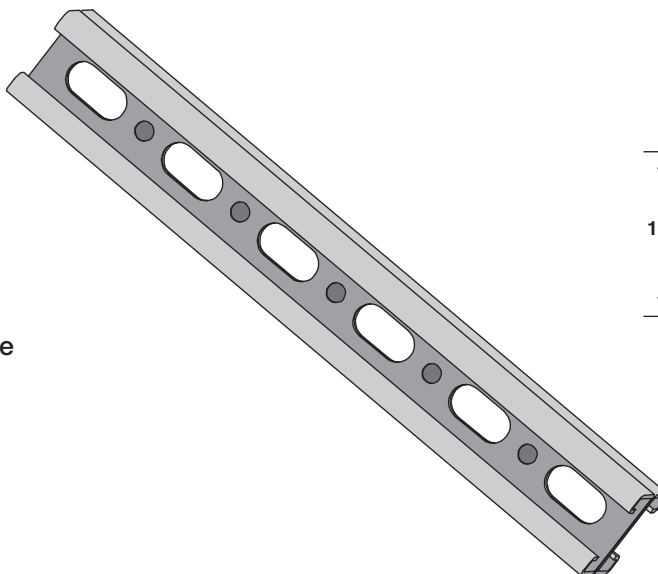# HAYDON
H-STRUT DIVISION

Submittal Sheets

H-164-OSA

1⅝" X 1⅝"
14 Gauge Back-to-Back
wt./100 ft. - 196#

Stocked in pre-galvanized, plain, powder coated Supr-Green, zinc trivalent, PVC coated & aluminum, in 10 & 20 ft. lengths. Note: Also available in Stainless Steel 304 & 316 Alloys. Other materials, finishes, lengths and configurations are available upon request.

Specifications

GENERAL

H-STRUT channels are manufactured by a series of forming dies, or rolls, which progressively cold work the strip steel into the desired channel configuration. This method produces a cross section of uniform dimensions within a tolerance of plus or minus 0.015", on outside dimensions.

WELDING

Channel combinations of two or more elements are spot welded together to form various multiple combinations. The spot welds are spaced two inches on centers throughout the length of the multiple channel sections.

LENGTH INFORMATION

H-STRUT Channels are produced and stocked in 10' and 20' lengths with a tolerance of ± ⅛". Other lengths are available upon request.

LOADING DATA

1. When calculating load at center of span, multiply load from table by 0.5 and deflection by 0.8.

2. When calculating beam and column loads for aluminum, multiply by 33%.

MATERIAL

H-STRUT channels are produced from prime structural steel covered by the following specifications. (See technical section for additional information)

❏ Pre-Galvanized Steel . . . . ASTM A-653
❏ Plain Steel . . . . ASTM A-1011-04-SS
❏ Aluminum (Type 6063T6) . . . . ASTM B-221
❏ Stainless Steel (Type 304 & 316) . . ASTM A-240
Other materials and specifications available on request.

FINISHES

All H-STRUT channels are stocked in pre-galvanized and powder coated Supr-Green. Some sizes are stocked in zinc trivalent chromium, PVC or hot dipped galvanized.

❏ Hot Dipped Galvanized. . . . . . . .ASTM A-123
❏ Zinc Trivalent Chromium. . . . . . .ASTM B-633-85
❏ Powder Coated Supr-Green. . . .ASTM B-117
❏ PVC Coating 40 ML Thickness - Available Upon Request
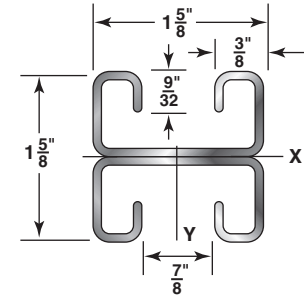
H-164-OSA

1⅝" X 1⅝"
14 Gauge Back-to-Back
wt./100 ft. - 196# (Cont.)

SECTION PROPERTIES

Catalog No.	Wt./Ft. Lbs.	Area of Section Sq. In.	X-X Axis			Y-Y Axis		
			I in⁴	S in³	r in.	I in⁴	S in³	r in.
H-164-OSA	1.96	0.589	0.123	0.151	0.457	0.220	0.271	0.611

I = Moment of Inertia   S = Section Modulus   r = Radius of Gyration

Span or Unbraced Height (In)	Static Beam Load (X-X Axis)						Max. Allowable Load at Slot Face (Lbs)	Column Loading Data			
	Max Allowable Uniform Load (Lbs)	Deflection at Uniform Load (In)	Uniform Load at Deflection			Weight of Channel (Lbs)		Max. Column Load Applied at C.G.			
			Span/180 Deflection (Lbs)	Span/240 Deflection (Lbs)	Span/360 Deflection (Lbs)			k=.65 (Lbs)	k=.80 (Lbs)	k=1.0 (Lbs)	k=1.2 (Lbs)
12	1,090 *	0.02	1,090 *	1,090 *	1,090 *	2.1	3,420	13,500	13,380	13,180	12,940
18	1,090 *	0.04	1,090 *	1,090 *	1,090 *	3.1	3,340	13,210	12,940	12,510	12,010
24	1,090 *	0.06	1,090 *	1,090 *	1,090 *	4.1	3,230	12,810	12,350	11,630	10,810
30	1,010	0.10	1,010	1,010	860	5.2	3,100	12,310	11,630	10,590	9,450
36	850	0.14	850	850	600	6.2	2,950	11,730	10,810	9,450	8,010
42	720	0.19	720	660	440	7.2	2,790	11,080	9,920	8,250	6,590
48	630	0.25	630	500	340	8.2	2,620	10,370	8,970	7,060	5,260
60	510	0.39	430	320	220	10.3	2,280	8,850	7,060	4,850	3,370
72	420	0.57	300	220	150	12.4	1,940	7,300	5,260	3,370	2,340
84	360	0.77	220	160	110	14.4	1,630	5,800	3,860	2,470	**
96	320	1.01	170	130	80	16.5	1,390	4,480	2,960	**	**
108	280	1.27	130	100	70	18.5	1,190	3,540	2,340	**	**
120	250	1.57	110	80	50	20.6	**	2,870	**	**	**
144	210	2.27	70	60	40	24.7	**	**	**	**	**
168	180	3.08	50	40	30	28.8	**	**	**	**	**
180	170	3.54	50	40	NR	30.9	**	**	**	**	**
192	160	4.03	40	NR	NR	33.0	**	**	**	**	**
216	140	5.10	NR	NR	NR	37.1	**	**	**	**	**
240	130	6.29	NR	NR	NR	41.2	**	**	**	**	**

\# Bearing Load may limit load

NR = Not Recommended

* Load limited by spot weld shear

** Not recommended - KL/r exceeds 200

Notes

1. The beam capacities shown above include the weight of the strut beam. The beam weight must be subtracted from these capacities to arrive at the net beam capacity.

2. Refer to the latest Haydon Engineering Catalog in our Literature Section for reduction factors for unbraced lengths or call us 1-800-2-HAYDON.

3. Allowable beam loads are based on a uniformly loaded, simply supported beam. For capacities of a beam loaded at midspan at a single point, multiply the beam capacity by 50% and deflection by 80%.

4. The above chart shows beam capacities for strut without holes. For strut with holes, multiply by the following:

   OS by 88%

Project Information	
Project:	**Notes:**
Address:	
Contractor:	
Engineer: / **Date:**	
Approval	
❏ **Approved** / **Signature:**	**Remarks:**
❏ **Approved as Noted**	
❏ **Not Approved**	