

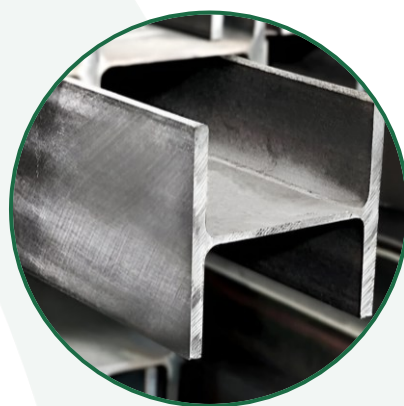
# VIGAS "H"

## STANDARD AMERICANO

### INFOMACIÓN GENERAL

#### DESCRIPCIÓN

Producto que tiene una sección transversal en forma de H que se obtiene por laminación de tochos de acero estructural que son precalentados hasta una temperatura de 1250°C.

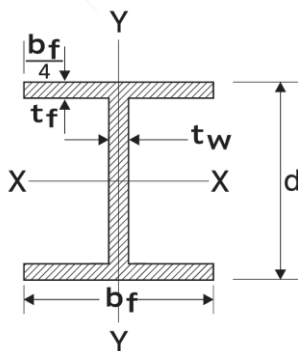


#### USOS

Estructuras metálicas, puentes, edificios, grúas.

### PROPIEDADES MECÁNICAS

Norma técnica	Límite de Fluencia (F)	Resistencia a la Tracción (R)	Elongación (A)	Norma equivalente
	kg/mm <sup>2</sup>	kg/mm <sup>2</sup>	%	
ASTM A-36	25.3 mínimo	41 mínimo	20 mínimo	JIS G 3101 SS400
ASTM A-572 GR50	35.2 mínimo	46 mínimo	16 mínimo	DIN 17100 St 52-3
ASTM A-992	35.2 mínimo	46 mínimo	18 mínimo	JIS G 3106 SM490 YA
ASTM A-709 Grado 50s	35.2 mínimo	46 mínimo	18 mínimo	



**DIMENSIONES STANDARD Y CARACTERÍSTICAS**

Designación pulg x lb/pie*	Área de sección A pulg <sup>2</sup>	Altura d pulg	Ala		Espesor alma t <sub>w</sub> pulg	Peso kg/m	Eje X - X			Eje Y - Y		
			Ancho b <sub>f</sub> pulg	Espesor t <sub>f</sub> pulg			l pulg <sup>4</sup>	s pulg <sup>3</sup>	r pulg	l' pulg <sup>4</sup>	s' pulg <sup>3</sup>	r' pulg
4 x 13	3.83	4.16	4.060	0.345	0.280	19.35	11.3	5.5	1.72	3.86	1.90	1.00
6 x 8.5	2.52	5.83	3.940	0.195	0.170	12.65	14.9	5.10	2.43	1.99	1.01	0.890
6 x 9	2.68	5.90	3.940	0.215	0.170	13.39	16.4	5.6	2.47	2.20	1.11	0.905
6 x 12	3.55	6.03	4.000	0.280	0.230	17.86	22.1	7.3	2.49	2.99	1.50	0.918
6 x 15	4.43	5.99	5.990	0.260	0.230	22.32	29.1	9.7	2.56	9.32	3.11	1.46
6 x 16	4.74	6.28	4.030	0.405	0.260	23.81	32.1	10.2	2.6	4.43	2.20	0.967
6 x 20	5.87	6.20	6.020	0.365	0.260	29.76	41.4	13.4	2.66	13.30	4.41	1.50
6 x 25	7.34	6.38	6.080	0.455	0.320	37.20	53.4	16.7	2.7	17.10	5.61	1.52
8 x 10	2.96	7.89	3.940	0.205	0.170	14.88	30.80	7.8	3.22	2.09	1.06	0.841
8 x 13	3.84	7.99	4.000	0.255	0.230	19.30	39.6	9.91	3.21	2.73	1.37	0.843
8 x 15	4.45	8.11	4.015	0.315	0.245	22.32	48.0	11.8	3.29	3.41	1.70	0.876
8 x 18	5.26	8.14	5.250	0.330	0.230	26.79	61.9	15.2	3.43	7.97	3.04	1.23
8 x 21	6.16	8.28	5.270	0.400	0.250	31.25	75.3	18.2	3.49	9.77	3.71	1.26
8 x 24	7.08	7.93	6.495	0.400	0.245	35.72	82.8	20.9	3.42	18.30	5.63	1.61
8 x 28	8.25	8.06	6.535	0.465	0.285	41.67	98.0	24.3	3.45	21.70	6.63	1.62
8 x 31	9.13	8.00	7.995	0.435	0.285	46.13	110.0	27.5	3.47	37.10	9.27	2.02
8 x 35	10.30	8.12	8.020	0.495	0.310	52.09	127.0	31.2	3.51	42.60	10.60	2.03
8 x 40	11.70	8.25	8.070	0.560	0.360	59.53	146.0	35.5	3.53	49.10	12.20	2.04
8 x 48	14.10	8.50	8.110	0.685	0.400	71.43	184.0	43.3	3.61	60.90	15.00	2.08
8 x 58	8.75	8.22	12.954	20.574	0.510	87.96	228.0	52.00	3.65	75.10	18.3	2.10
8 x 67	19.70	9.00	8.280	0.935	0.570	100.00	272.0	60.40	3.72	88.60	21.40	2.12
10 x 15	4.41	9.99	4.000	0.270	0.230	22.30	68.9	13.80	3.95	2.89	1.45	0.81
10 x 17	4.99	10.11	4.010	0.330	0.240	25.30	81.9	16.2	4.05	3.56	1.78	0.845
10 x 19	5.62	10.20	4.020	0.395	0.250	28.30	96.30	18.80	4.14	4.29	2.14	0.87
10 x 22	6.49	10.17	5.750	0.360	0.240	32.74	118.0	23.2	4.27	11.40	3.97	1.33
10 x 26	7.61	10.33	5.770	0.440	0.260	38.69	144.0	27.9	4.35	14.10	4.89	1.36
10 x 30	8.84	10.47	5.810	0.510	0.300	44.64	170.0	32.4	4.38	16.7	5.75	1.37
10 x 33	9.71	9.73	7.960	0.435	0.290	49.11	170.0	35.0	4.19	36.60	9.20	1.94
10 x 39	11.50	9.92	7.990	0.530	0.315	58.00	209.0	42.10	4.27	45.00	11.30	1.98
10 x 42 HP	12.40	9.70	10.075	0.415	0.420	62.50	210.0	43.4	4.13	71.70	14.20	2.41
10 x 45	13.30	10.10	8.020	0.620	0.350	66.97	248.0	49.1	4.33	53.40	13.30	2.01
10 x 49	14.40	9.98	10.000	0.560	0.340	72.92	272.0	54.6	4.35	93.40	18.70	2.54
10 x 54	15.80	10.09	10.030	0.615	0.370	80.36	303.0	60.0	4.37	103.00	20.60	2.56
10 x 60	17.60	10.22	10.080	0.680	0.420	89.29	341.0	66.7	4.39	116.00	23.00	2.57
10 x 68	19.90	10.40	10.100	0.770	0.470	101.2	394.0	75.70	4.44	134.00	26.40	2.59
10 x 88	25.90	10.84	10.265	0.990	0.605	130.90	534.0	98.50	4.54	179.00	34.80	2.63
12 x 14	4.16	11.91	3.970	0.225	0.200	21.00	88.6	14.90	4.62	2.36	1.19	0.753
12 x 16	4.71	11.99	3.990	0.265	0.220	23.80	103.0	17.10	4.67	2.82	1.41	0.773
12 x 19	5.57	12.16	4.000	0.350	0.235	28.28	130.0	21.3	4.82	3.76	1.88	0.822
12 x 22	6.48	12.31	4.030	0.425	0.260	32.70	156.0	25.40	4.91	4.66	2.31	0.848
12 x 26	7.65	12.22	6.490	0.380	0.230	38.69	204.0	33.4	5.17	17.30	5.34	1.51
12 x 30	8.79	12.34	6.520	0.440	0.260	44.64	238.0	38.6	5.21	20.30	6.24	1.52
12 x 35	10.30	12.50	6.560	0.520	0.300	52.09	285.0	45.6	5.25	24.50	7.47	1.54
12 x 40	11.80	11.94	8.005	0.515	0.295	59.53	310.0	51.9	5.13	44.10	11.00	1.93
12 x 45	13.10	12.10	8.050	0.575	0.335	67.00	348.0	57.70	5.15	50.00	12.40	1.95
12 x 50	14.70	12.19	8.080	0.640	0.370	74.00	391.0	64.20	5.18	56.00	13.90	1.96
12 x 53	15.60	12.06	9.995	0.575	0.345	78.87	425.0	70.6	5.23	95.80	19.20	2.48

Designación	Área de sección A	Altura d	Ala		Espesor alma t <sub>w</sub>	Peso	Eje X - X			Eje Y - Y		
			Ancho b <sub>f</sub>	Espesor t <sub>f</sub>			l	S	r	l'	S'	r'
			pulg	pulg								
12 x 53 HP	15.50	11.78	12.045	0.435	0.435	78.87	393.0	66.8	5.03	127.00	21.10	2.86
12 x 58	17.00	12.20	10.000	0.640	0.360	86.40	475.0	78.80	5.28	107.00	21.40	2.51
12 x 65	19.10	12.12	12.000	0.605	0.390	96.73	533.0	87.9	5.28	174.00	29.10	3.02
12 x 72	21.10	12.25	12.240	0.670	0.430	107.10	597.0	97.4	5.31	195.00	32.40	3.04
12 x 79	23.20	12.38	12.080	0.735	0.470	117.60	662.0	107.0	5.34	216.00	35.80	3.05
12 x 87	25.60	12.50	12.100	0.810	0.515	129.50	740.0	118.0	5.38	241.00	39.70	3.07
12 x 96	28.20	12.70	12.200	0.900	0.550	143.00	833.0	131.0	5.44	270.00	44.40	3.09
12 x 106	31.20	12.89	12.220	0.990	0.610	158.00	933.0	145.0	5.47	301.00	49.30	3.11
12 x 120	35.20	13.10	12.300	1.100	0.710	178.60	1070.0	163.0	5.51	345.00	56.00	3.13
14 x 22	6.49	13.74	5.000	0.335	0.230	32.74	199.0	29.0	5.54	7.00	2.80	1.04
14 x 26	7.69	13.90	5.030	0.420	0.255	38.70	245.0	35.30	5.65	8.91	3.55	1.08
14 x 30	8.85	13.84	6.730	0.385	0.270	44.64	291.0	42.0	5.73	19.60	5.82	1.49
14 x 34	10.00	13.98	6.745	0.455	0.285	50.60	340.0	48.6	5.83	23.30	6.91	1.53
14 x 38	11.20	14.10	6.770	0.515	0.310	56.55	385.0	54.6	5.87	26.70	7.88	1.55
14 x 43	12.60	13.66	7.995	0.530	0.305	63.99	428.0	62.7	5.82	45.20	11.30	1.89
14 x 48	14.10	13.79	8.030	0.595	0.340	71.43	485.0	70.3	5.85	51.40	12.80	1.91
14 x 53	15.60	13.92	8.060	0.660	0.370	78.87	541.0	77.8	5.89	57.70	14.30	1.92
14 x 61	17.90	13.89	9.995	0.645	0.375	90.78	640.0	92.2	5.98	107.00	21.50	2.45
14 x 68	20.00	14.04	10.035	0.720	0.415	101.20	723.0	103.0	6.01	121.00	24.20	2.46
14 x 71	21.80	14.17	10.070	0.785	0.450	110.10	796.0	112.0	6.04	134.00	26.60	2.48
14 x 74	21.80	14.17	10.070	0.785	0.450	110.00	795.0	112.0	6.04	134.00	26.60	2.48
14 x 82	24.10	14.31	10.130	0.855	0.510	122.00	882.0	123.0	6.05	148.00	29.30	2.48
14 x 90	26.50	14.02	14.520	0.710	0.440	133.90	999.0	143.0	6.14	362.0	49.90	3.70
14 x 99	29.10	14.16	14.565	0.780	0.485	147.00	1110.0	157.0	6.17	402.00	55.20	3.71
14 x 109	32.00	14.32	14.605	0.860	0.525	162.00	1240.0	173.0	6.22	447.00	61.20	3.73
14 x 120	35.30	14.46	14.670	0.940	0.590	179.00	1380.0	190.0	6.24	495.00	67.50	3.74
14 x 132	38.80	14.66	14.725	1.030	0.645	196.00	1530.0	209.0	6.28	548.00	74.50	3.76
14 x 193	-	15.48	15.71	-	-	-	-	-	-	-	-	-
16 x 26	7.68	15.69	5.500	0.345	0.250	38.69	301.0	38.4	6.26	9.59	3.49	1.12
16 x 31	9.13	15.90	5.530	0.440	0.275	46.20	375.0	47.2	6.41	12.40	4.49	1.17
16 x 36	10.60	15.86	6.985	0.430	0.295	53.57	448.0	56.5	6.51	24.50	7.00	1.52
16 x 40	11.80	16.01	6.995	0.505	0.305	59.53	518.0	64.7	6.63	28.90	8.25	1.57
16 x 45	13.30	16.13	7.035	0.565	0.345	66.97	586.0	72.7	6.65	32.80	9.34	1.57
16 x 57	16.80	16.43	7.120	0.715	0.430	84.83	758.0	92.2	6.72	43.10	12.10	1.6
16 x 67	19.60	16.30	10.200	0.665	0.395	99.70	954.0	117.0	6.96	119.00	23.20	2.46
16 x 77	22.60	16.50	10.300	0.760	0.455	114.60	1110.0	134.0	7.00	138.00	26.90	2.47
16 x 89	26.20	16.75	10.365	0.875	0.525	132.00	1300.0	155.0	7.05	163.00	31.40	2.49
18 x 35	10.30	17.70	6.000	0.425	0.300	52.09	510.0	57.6	7.04	15.30	5.12	1.22
18 x 40	11.80	17.90	6.015	0.525	0.315	59.33	612.0	68.4	7.21	19.10	6.35	1.27
18 x 46	13.50	18.10	6.060	0.605	0.360	68.50	712.0	78.8	7.25	22.50	7.43	1.29
18 x 50	14.70	17.99	7.495	0.570	0.355	74.41	800.0	88.9	7.38	40.10	10.70	1.65
18 x 55	16.20	18.11	7.530	0.630	0.390	81.85	890.0	98.3	7.41	44.90	11.90	1.67
18 x 60	17.60	18.20	7.560	0.695	0.415	89.30	984.0	108.0	7.47	50.10	13.30	1.68
18 x 65	19.10	18.35	7.590	0.750	0.450	96.73	1070.0	117.0	7.49	54.80	14.40	1.69
18 x 76	22.30	18.21	11.035	0.680	0.425	113.10	1330.0	146.0	7.73	152.00	27.60	2.61
18 x 86	25.30	18.39	11.090	0.770	0.480	128.00	1530.0	166.0	7.77	175.00	31.60	2.63
18 x 97	28.50	18.59	11.145	0.870	0.535	144.00	1750.0	188.0	7.82	201.00	36.10	2.65
18 x 106	31.10	18.70	11.200	0.940	0.590	157.80	1910.0	204.0	7.84	220.00	39.40	2.66
18 x 119	35.10	18.97	11.265	1.060	0.655	177.00	2190.0	231.0	7.90	253.00	44.90	2.69
18 x 130	38.20	19.25	11.160	1.200	0.670	193.00	2460.0	256.0	8.03	278.00	49.90	2.70
18 x 158	46.30	19.70	11.300	1.440	0.810	235.20	3060.0	310.0	8.12	347.00	61.40	2.74
21 x 44	13.00	20.66	6.500	0.750	0.350	65.18	843.0	81.6	8.06	20.70	6.36	1.26
21 x 55	16.20	20.80	8.220	0.522	0.375	82.00	1140.0	110.0	8.40	48.40	11.80	1.73
21 x 62	18.30	20.99	8.240	0.615	0.400	92.27	1330.0	127.0	8.54	57.50	13.90	1.77
21 x 68	20.00	21.13	8.270	0.685	0.430	101.20	1480.0	140.0	8.60	64.70	15.70	1.8

Designación	Área de sección A pulg <sup>2</sup>	Altura d pulg	Ala		Espesor alma t <sub>w</sub> pulg	Peso kg/m	Eje X - X			Eje Y - Y		
			Ancho b <sub>f</sub> pulg	Espesor t <sub>f</sub> pulg			I pulg <sup>4</sup>	S pulg <sup>3</sup>	r pulg	I' pulg <sup>4</sup>	S' pulg <sup>3</sup>	r' pulg
21 x 73	21.50	21.24	8.295	0.740	0.455	108.60	1600.0	151.0	8.64	70.60	17.00	1.81
21 x 83	24.30	21.43	8.355	0.835	0.515	123.00	1830.0	171.0	8.67	81.40	19.50	1.83
21 x 101	29.0	21.36	12.290	0.800	0.500	150.00	2420.0	227.0	9.02	248.00	40.30	2.89
21 x 111	32.70	21.51	12.340	0.875	0.550	165.00	2670.0	249.0	9.05	274.00	44.50	2.90
21 x 122	35.90	21.68	12.390	0.960	0.600	182.00	2960.0	273.0	9.09	305.00	49.20	2.92
21 x 132	38.80	21.83	12.440	1.035	0.650	196.00	3220.0	295.0	9.12	333.00	53.50	2.93
21 x 147	43.20	22.06	12.510	1.150	0.720	219.00	3630.0	329.0	9.17	376.00	60.10	2.95
21 x 166	48.90	22.48	12.420	1.360	0.750	248.00	4280.0	380.0	9.36	435.00	70.00	2.99
21 x 201	59.20	23.03	12.575	1.630	0.910	300.00	5310.0	461.0	9.47	542.00	86.10	3.02
24 x 55	16.20	23.57	7.005	0.505	0.395	81.85	1350.0	114.0	9.11	29.10	8.30	1.34
24 x 62	18.20	23.70	7.040	0.590	0.430	92.30	1550.0	131.0	9.23	34.50	9.80	1.38
24 x 68	20.10	23.73	8.965	0.585	0.415	101.20	1830.0	154.0	9.55	70.40	15.70	1.87
24 x 76	22.40	23.92	8.990	0.680	0.440	113.10	2100.0	176.0	9.69	82.50	18.40	1.92
24 x 84	24.70	24.10	9.020	0.770	0.470	125.00	2370.0	196.0	9.79	94.40	20.90	1.95
24 x 94	27.70	24.31	9.065	0.875	0.515	139.90	2700.0	222.0	9.87	109.00	24.00	1.98
24 x 104	30.60	24.06	12.750	0.750	0.500	154.80	2100.0	258.0	10.1	259.00	40.70	2.91
24 x 117	34.40	24.26	12.800	0.850	0.550	174.10	3540.0	291.0	10.1	297.00	46.50	2.94
24 x 131	38.50	24.48	12.855	0.960	0.605	195.00	4020	329.0	10.20	340.0	53.00	2.97
24 x 146	43.00	24.74	12.900	1.090	0.650	217.00	4580	371.0	10.30	391.0	60.50	3.01
24 x 162	47.70	25.00	12.955	1.220	0.705	241.00	5170	414.0	10.40	443.0	68.40	3.05
24 x 176	51.70	25.24	12.890	1.340	0.750	262.00	5680	450.0	10.50	479.0	74.30	3.04
24 x 192	56.30	25.47	12.950	1.460	0.810	285.00	6260	491.0	10.50	530.0	81.80	3.07
24 x 207	60.70	25.71	13.010	1.570	0.870	307.00	6820	531.0	10.60	578.0	88.80	3.08
24 x 250	73.50	26.34	13.185	1.890	1.040	372.00	8490	644.0	10.70	724.0	110.00	3.14
24 x 335	98.40	27.52	13.520	2.480	1.380	498.00	11900	864.0	11.00	1030.0	152.00	3.23
27 x 84	24.80	26.71	9.960	0.640	0.460	125.00	2850	23.0	10.70	106.0	21.20	2.07
27 x 94	27.70	26.92	9.990	0.745	0.490	140.00	3270	24.30	10.90	124.0	24.80	2.12
27 x 114	33.60	27.30	10.100	0.570	0.570	169.70	4080	299.0	11.00	159.0	31.50	2.18
27 x 178	52.30	27.81	14.085	1.190	0.725	265.00	7020	505.0	11.60	555.0	78.80	3.25
27 x 194	57.00	28.11	14.035	1.340	0.750	289.00	7860	559.0	11.70	619.0	88.10	3.29
27 x 217	63.80	28.43	14.115	1.500	0.830	323.00	8910	657.0	11.80	704.0	100.00	3.32
30 x 90	26.40	29.53	10.400	0.610	0.470	134.00	3610	245.0	11.70	115.0	22.10	2.09
30 x 99	29.10	29.65	10.450	0.670	0.520	147.00	3940	269.0	11.70	128.0	24.50	2.10
30 x 124	36.50	30.17	10.515	0.930	0.585	185.00	5360	355.0	12.10	181.0	34.40	2.23
30 x 148	43.50	30.67	10.480	1.180	0.650	220.00	6680	436.0	12.40	227.0	43.30	2.28
33 x 118	34.70	32.86	11.480	0.740	0.550	176.00	5900	359.0	13.00	187.0	32.60	2.32
36 x 150	44.20	35.85	11.975	0.940	0.625	223.00	9040	504.0	14.30	270.0	45.10	2.47
36 x 170	50.00	36.17	12.030	1.100	0.680	253.00	10500	581.0	14.50	320.0	53.20	2.53
36 x 210	61.80	36.69	12.180	1.360	0.830	313.00	13200	719.0	14.60	411.0	67.50	2.58
36 x 441	129.70	38.85	16.965	2.40	1.360	656.00	32100	1650.0	15.70	1990.0	235.00	3.92
40 x 149	43.80	38.20	11.810	0.830	0.630	222.00	9800	513.0	15.00	229.0	38.80	2.29

\*Longitud Standard: 20' y 30'

I: momento de Inercia  
 S: módulo de sección alrededor del eje  
 R: radio de rotación alrededor del eje

**DIMENSIONES STANDARD Y CARACTERÍSTICAS**

Designación	Área de sección A	Altura d	ALA		Espesor alma t <sub>w</sub>	Peso	Eje X -X			Eje Y -Y		
			Ancho b <sub>f</sub>	Ancho t <sub>f</sub>			I	S	r	I'	S'	r'
mm (kg/m)	cm <sup>2</sup>	mm	mm	mm	mm	lb/pie	cm <sup>4</sup>	cm <sup>3</sup>	cm	cm <sup>4</sup>	cm <sup>3</sup>	cm
HE 100 A (16.7)	21.24	96	100	8.0	5.0	11.22	349.20	72.76	4.06	133.8	26.76	2.51
HE 100 B (20.4)	26.04	100	100	10.0	6.0	13.71	449.50	89.91	4.16	167.30	33.45	2.53
HE 140 B (33.7)	42.96	140	140	12.0	7.0	22.60	1509.00	215.60	5.93	549.70	78.52	3.58
JIS 125 (23.8)	30.31	125	125	9.0	6.5	15.95	847.00	136.00	5.29	293.00	47.00	3.11
JIS 150 (31.1)	39.65	150	150	10.0	7.0	20.80	1620	216.0	6.40	563.0	75.10	3.77
JIS 200 (21.3)	27.16	200	100	8.0	5.5	14.27	1840.00	184.00	8.24	134.00	26.80	2.22
JIS 200 (49.9)	65.53	200	200	12.0	8.0	33.40	4720	472.0	8.62	1600.0	160.00	5.02
JIS 300 (55.8)	71.05	294	200	12.0	8.0	37.50	11100	756.0	12.50	1600.0	160.00	4.75
JIS 400 (65.4)	83.37	400	200	13.0	8.0	43.95	1260.0	1170.0	16.80	1740.0	174.00	4.56
JIS 450 (65.1)	82.97	446	199	12.0	8.0	43.75	28100	1260.0	18.40	1580.0	159.00	4.36