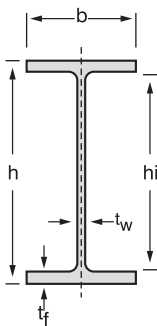


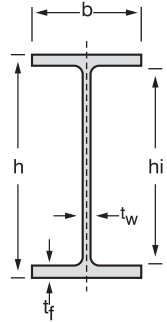
VIGA I.P.R.

Dimensiones pulgadas	Peso		Dimensiones (mm)				
	lb/pie	kg/m	h	b	hi	tw	tf
4" X 4"	13.00	19.90	105.00	103	88.00	7.10	8.80
5" X 5"	16.00	23.80	127.00	127	109.00	6.10	9.10
	19.00	28.10	131.00	128	109.00	6.90	10.90
6" X 4"	9.00	13.40	150.00	100	139.00	4.30	5.50
	12.00	17.90	153.00	102	138.00	5.80	7.10
	16.00	23.80	160.00	102	139.00	6.60	10.30
6" X 6"	15.00	22.30	152.00	152	139.00	5.80	6.60
	20.00	29.80	157.00	153	138.00	6.60	9.30
	25.00	37.20	162.00	154	139.00	8.10	11.60
8" X 4"	10.00	14.90	200.00	100	190.00	4.30	5.20
	13.00	19.30	203.00	102	190.00	5.80	6.50
	15.00	22.30	206.00	102	190.00	6.20	8.00
8" X 5 1/4"	14.00	20.80	203.00	133	190.00	5.00	6.40
	18.00	26.80	207.00	133	190.00	5.80	8.40
	21.00	31.30	210.00	134	190.00	6.40	10.20
8" X 6 1/2"	24.00	35.70	201.00	165	181.00	6.20	10.20
	28.00	41.70	205.00	166	181.00	7.20	11.80
8" X 8"	31.00	46.10	203.00	203	181.00	7.20	11.00
	35.00	52.10	206.00	204	181.00	7.90	12.60
	40.00	59.50	210.00	205	182.00	9.10	14.20
	48.00	71.40	216.00	206	181.00	10.20	17.40
	58.00	86.30	222.00	209	181.00	13.00	20.60
10" X 4"	67.00	99.70	229.00	210	182.00	14.50	23.70
	12.00	17.90	251.00	101	240.00	4.80	5.30
10" X 5 3/4"	15.00	22.30	254.00	102	240.00	5.80	6.90
	17.00	25.30	257.00	102	240.00	6.10	8.40
	19.00	28.30	260.00	102	240.00	6.40	10.00
	16.00	23.80	253.00	145	240.00	5.00	6.40
10" X 8"	22.00	32.70	258.00	146	240.00	6.10	9.10
	26.00	38.70	262.00	147	240.00	6.60	11.20
	30.00	44.60	265.00	148	240.00	7.60	13.00
10" X 10"	33.00	49.10	247.00	202	225.00	7.40	11.00
	39.00	58.00	252.00	203	225.00	8.00	13.50
10" X 10"	45.00	67.00	257.00	204	226.00	8.90	15.70
	49.00	72.90	258.00	254	225.00	8.60	14.20
	54.00	80.40	256.00	255	225.00	9.40	15.60
	60.00	89.30	260.00	256	225.00	10.70	17.30
	68.00	101.20	264.00	257	225.00	11.90	19.60
	77.00	114.60	269.00	259	225.00	13.50	22.10
	88.00	131.00	275.00	261	225.00	15.40	25.10
100.00	148.80	282.00	263	225.00	17.30	28.40	
112.00	166.70	289.00	265	225.00	19.20	31.80	
12" X 4"	14.00	20.80	303.00	101	292.00	5.10	5.70
	16.00	23.80	305.00	101	292.00	5.60	6.70
	19.00	28.30	309.00	102	291.00	6.00	8.90
	22.00	32.70	313.00	102	291.00	6.60	10.80
12" X 6 1/2"	21.00	31.90	306.00	164	291.00	5.00	7.40
	26.00	38.70	310.00	165	291.00	5.80	9.70
	30.00	44.60	313.00	166	291.00	6.60	11.20
	35.00	52.10	317.00	167	291.00	7.60	13.20
12" X 8"	40.00	59.50	303.00	203	277.00	7.50	13.10
	45.00	67.00	306.00	204	277.00	8.50	14.60
	50.00	74.40	310.00	205	277.00	9.40	16.30
12" X 10"	53.00	78.90	306.00	254	277.00	8.80	14.60
	58.00	86.30	310.00	254	277.00	9.10	16.30
12" X 12"	65.00	96.76	308.00	305	277.00	9.90	15.40
	72.00	107.10	311.00	306	277.00	10.90	17.00
	79.00	117.60	314.00	307	277.00	11.90	18.70
	87.00	129.50	318.00	308	277.00	13.10	20.60
	96.00	142.90	323.00	309	277.00	14.00	22.90
	106.00	157.70	327.00	310	277.00	15.50	25.10
	120.00	178.60	333.00	313	277.00	18.00	28.10
	136.00	202.37	341.00	315	277.00	20.10	31.80
12" X 12 1/2"	152.00	226.20	348.00	317	277.00	22.10	35.60
	170.00	253.00	356.00	319	277.00	24.40	39.60
	190.00	282.80	365.00	322	277.00	26.90	44.10
	210.00	312.50	374.00	325	277.00	30.00	48.30
	230.00	342.30	382.00	328	277.00	32.60	52.60
	252.00	375.00	391.00	330	277.00	35.43	57.20
	279.00	415.20	403.00	334	277.00	38.86	62.70
	305.00	453.90	415.00	336	277.00	41.28	68.70
	336.00	500.00	427.00	340	277.00	45.09	75.10
	14" X 5"	22.00	32.70	348.00	127	332.00	5.80
26.00		39.70	353.00	128	332.00	6.50	10.70
14" X 6 3/4"	30.00	44.60	352.00	171	332.00	6.90	9.80
	34.00	50.60	355.00	171	332.00	7.20	11.60
	38.00	56.60	358.00	172	332.00	7.90	13.10
14" X 8"	43.00	64.00	347.00	203	320.00	7.70	13.50
	49.00	71.40	350.00	204	320.00	8.60	15.10
	53.00	78.90	354.00	205	320.00	9.40	16.80
14" X 10"	61.00	90.80	353.00	254	320.00	9.50	16.40
	69.00	101.20	357.00	255	320.00	10.50	18.30
	74.00	110.10	360.00	256	320.00	11.40	19.90
	82.00	122.00	363.00	257	320.00	13.00	21.70



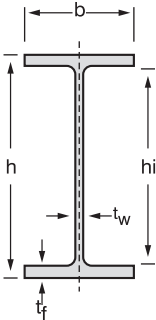
VIGA I.P.R.

Dimensiones pulgadas	Peso		Dimensiones (mm)				
	lb/pie	kg/m	h	b	hi	tw	tf
14" X 14 1/2"	90.00	133.90	356.00	369	320.00	11.20	18.00
	99.00	147.30	360.00	370	320.00	12.30	19.80
	109.00	162.20	364.00	371	320.00	13.30	21.80
	120.00	178.60	368.00	373	320.00	15.00	23.90
	132.00	196.40	372.00	374	320.00	16.40	26.20
14" X 16"	145.00	215.80	375.00	384	319.00	17.27	27.70
	159.00	236.60	380.00	385	320.00	18.92	30.20
	176.00	261.90	387.00	388	321.00	21.08	33.30
	193.00	287.20	393.00	389	319.00	22.61	36.60
	211.00	314.00	399.00	401	319.00	24.89	39.60
	233.00	346.70	407.00	404	319.00	27.18	43.70
	257.00	382.50	416.00	406	320.00	29.85	48.00
	283.00	421.10	425.00	409	319.00	32.77	52.60
	311.00	462.80	435.00	412	321.00	35.81	57.40
	342.00	509.00	446.00	416	320.00	39.12	62.70
	370.00	550.60	455.00	418	319.00	42.04	67.60
398.00	592.30	465.00	421	321.00	44.96	72.30	
426.00	634.00	474.00	424	320.00	47.63	77.10	
16" X 5 1/2"	28.00	38.70	399.00	140	381.00	6.35	8.80
	31.00	46.10	403.00	140	381.00	6.99	11.20
16" X 7"	36.00	53.60	403.00	177	381.00	7.50	10.90
	40.00	59.50	407.00	178	381.00	7.70	12.80
	45.00	67.00	410.00	179	381.00	8.80	14.40
16" X 7"	50.00	74.40	413.00	180	381.00	9.70	16.00
	57.00	84.80	417.00	181	381.00	10.90	18.20
16" X 10 1/4"	67.00	99.70	415.00	260	381.00	10.00	16.90
	77.00	114.60	420.00	261	381.00	11.60	19.30
	89.00	132.40	425.00	263	381.00	13.30	22.20
16" X 10 1/4"	100.00	148.80	431.00	265	381.00	14.90	25.00
	35.00	52.10	450.00	152	428.00	7.60	10.80
18" X 6"	40.00	59.50	450.00	153	428.00	8.00	13.30
	48.00	68.50	459.00	154	428.00	9.10	15.40
18" X 7 1/2"	41.00	61.00	450.00	189	428.00	8.10	10.80
	45.00	67.00	454.00	190	428.00	8.50	12.70
	50.00	74.40	457.00	190	428.00	9.00	14.50
	55.00	81.80	460.00	191	428.00	9.90	16.00
	60.00	89.30	463.00	192	428.00	10.50	17.70
	65.00	96.70	466.00	193	428.00	11.40	19.00
	71.00	105.70	469.00	194	428.00	12.60	20.60
18" X 11"	76.00	113.10	463.00	280	428.00	10.80	17.30
	86.00	128.00	467.00	282	428.00	12.20	19.60
	97.00	144.40	472.00	283	428.00	13.60	22.10
	106.00	157.70	476.00	284	428.00	15.00	23.90
	119.00	177.10	482.00	286	428.00	16.60	26.90
	130.00	193.50	489.00	283	428.00	17.00	30.50
	143.00	212.80	495.00	285	428.00	18.50	33.50
	158.00	235.10	501.00	287	428.00	20.60	36.60
	175.00	260.40	509.00	289	428.00	22.60	40.40
	192.00	285.70	517.00	291	429.00	24.38	44.50
	211.00	314.00	525.00	293	427.00	26.92	48.50
	234.00	348.20	535.00	296	427.00	29.46	53.60
	258.00	383.90	545.00	299	429.00	32.51	58.40
283.00	421.10	555.00	302	427.00	35.56	63.50	
311.00	462.80	567.00	305	427.00	38.61	69.60	
21" X 6 1/2"	44.00	65.50	525.00	165	502.00	8.90	11.40
	50.00	74.40	529.00	166	502.00	9.70	13.60
	57.00	84.80	535.00	166	502.00	10.30	16.50
21" X 8 1/4"	62.00	92.30	533.00	209	502.00	10.20	15.60
	68.00	101.20	537.00	210	502.00	10.90	17.40
	73.00	108.60	539.00	211	501.00	11.60	18.80
	83.00	123.50	544.00	212	502.00	13.10	21.20
	93.00	138.40	549.00	214	502.00	14.70	23.60
21" X 12 1/2"	101.00	150.30	543.00	312	502.00	12.70	20.30
	111.00	165.20	546.00	313	502.00	14.00	22.20
	122.00	181.60	551.00	315	502.00	15.20	24.40
	132.00	196.40	554.00	316	501.00	16.50	26.30
	147.00	218.80	560.00	318	502.00	18.30	29.20
	166.00	247.00	571.00	315	502.00	19.00	34.50
	182.00	270.80	577.00	318	502.00	21.10	37.60
201.00	299.10	585.00	319	502.00	23.10	41.40	
24" X 7"	55.00	81.80	599.00	178	573.00	10.00	12.80
	62.00	92.30	603.00	179	573.00	10.90	15.00
24" X 9"	68.00	101.20	603.00	228	573.00	10.50	14.90
	76.00	113.10	608.00	228	573.00	11.20	17.30
	84.00	125.00	612.00	229	573.00	11.90	19.60
	94.00	139.90	617.00	230	573.00	13.10	22.20
	103.00	153.30	623.00	229	573.00	14.00	24.90
24" X 12 3/4"	104.00	154.80	611.00	324	573.00	12.70	19.00
	117.00	174.10	616.00	325	573.00	14.00	21.60
	131.00	194.90	622.00	327	573.00	15.40	24.40
	146.00	217.30	628.00	328	573.00	16.50	27.70
	162.00	241.10	635.00	329	573.00	17.10	31.00
	176.00	261.90	641.00	327	573.00	19.00	34.00
	192.00	285.70	647.00	329	573.00	20.60	37.10



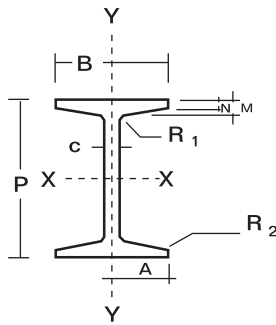
VIGA I.P.R.

Dimensiones pulgadas	Peso		Dimensiones (mm)			
	lb/pie	kg/m	h	b		
24" X 12 3/4"	229.00	340.80	661.00	333		
	279.00	415.20	679.00	338		
	306.00	455.40	689.00	340		
	335.00	498.50	699.00	343		
	370.00	550.60	711.00	347		
27" X 10"	84.00	125.00	678.00	253		
	94.00	139.90	684.00	254		
	102.00	151.80	688.00	254		
	114.00	169.70	693.00	256		
	129.00	192.00	702.00	254		
27" X 14"	146.00	217.30	695.00	355		
	161.00	239.60	701.00	356		
	178.00	264.90	706.00	358		
	194.00	288.70	714.00	356		
	217.00	322.90	722.00	359		
	235.00	349.00	728.00	360		
	258.00	383.90	736.00	362		
	307.00	456.90	752.00	367		
	336.00	500.00	762.00	370		
368.00	547.60	772.00	372			
30" X 10 1/2"	99.00	147.30	753.00	265		
	108.00	160.70	758.00	266		
	118.00	172.60	762.00	267		
	124.00	184.50	765.00	267		
	132.00	196.40	770.00	268		
30" X 15"	148.00	220.20	779.00	269		
	173.00	257.50	773.00	381		
	191.00	284.20	779.00	382		
	211.00	314.00	786.00	384		
	235.00	349.70	795.00	382		
33" X 11 1/2"	261.00	388.40	803.00	385		
	292.00	434.50	813.00	387		
	326.00	485.10	823.00	390		
	357.00	531.30	833.00	393		
	391.00	581.90	843.00	396		
	118.00	175.60	835.00	292		
33" X 15 3/4"	130.00	193.50	840.00	292		
	141.00	209.80	846.00	293		
	152.00	226.20	851.00	294		
	169.00	251.50	859.00	295		
36" X 12"	201.00	299.10	855.00	400		
	221.00	328.90	862.00	401		
	241.00	358.60	868.00	403		
	263.00	391.40	877.00	401		
	291.00	433.10	885.00	404		
	318.00	473.20	893.00	406		
	354.00	526.80	903.00	409		
	387.00	575.90	913.00	411		
40" X 12"	135.00	200.90	903.00	304		
	150.00	223.20	911.00	304		
	160.00	238.10	915.00	305		
	170.00	253.00	919.00	306		
	182.00	270.80	923.00	307		
	194.00	288.70	927.00	308		
	210.00	312.50	932.00	309		
	232.00	345.30	943.00	308		
256.00	381.00	951.00	310			
40" X 16"	149.00	221.70	970.00	300		
	167.00	248.50	980.00	300		
	183.00	272.30	990.00	300		
	211.00	314.00	1000.00	300		
	235.00	349.70	1008.00	302		
	264.00	392.90	1016.00	303		
	294.00	437.50	1026.00	305		
	327.00	486.60	1036.00	308		
44" X 16"	199.00	296.10	982.00	400		
	215.00	320.00	990.00	400		
	249.00	370.50	1000.00	400		
	277.00	412.20	1008.00	402		
	297.00	442.00	1012.00	402		
	324.00	482.20	1020.00	404		
	362.00	538.70	1030.00	407		
	372.00	553.60	1032.00	408		
397.00	590.80	1040.00	409			
431.00	641.40	1048.00	412			
44" X 16"	230.00	342.30	1090.00	400		
	262.00	389.90	1100.00	400		
	290.00	431.60	1108.00	402		
	335.00	498.50	1118.00	405		



VIGA I.P.S.

Peralte		Peso	Área	Eje X-X			Eje Y-Y			
mm	pulg			kg/m	cm ²	I	r	s	I	r
					cm ⁴	cm	cm ³	cm ⁴	cm	cm ³
76.2	3	8.49	10.52	103.30	3.12	27.1	19.1	1.35	6.5	
100.0	4L	8.34	10.60	171.00	4.01	34.2	12.2	1.07	4.8	
101.6	4	11.46	14.26	249.30	4.17	48.9	32.1	1.50	9.5	
127.0	5	14.88	18.52	503.30	5.21	79.3	52.1	1.65	13.4	
152.4	6	18.60	23.29	906.80	6.25	119.0	77.0	1.83	18.2	
177.8	7	22.78	28.90	1506.80	7.26	169.5	112.3	1.98	24.2	
203.2	8	27.38	34.39	2367.20	8.31	233.0	157.3	2.13	31	



DATOS PARA DETALLAR

Peralte de la viga	Peso	Peso		Alma			Distancia				Gra Mil	Diámetro máximo de los remaches o tornillos
		Ancho	Espesor	Espesor	Medio Espesor	Tangente	F		E			
		B	D	C	C/2	T	F	E	F	A	G	
mm	kg/m	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
76.2	8.5	59.0	6.6	4.3	2.0	45.0	15.5	38.0	12.0	27.0	36.0	9.5
101.6	11.5	68.0	7.4	4.8	3.0	70.0	16.0	50.0	13.0	32.0	38.0	12.7
127.0	14.9	76.0	8.3	5.3	3.0	89.0	19.0	64.0	13.0	35.0	40.0	12.7
152.4	18.6	85.0	9.1	5.8	3.0	114.0	19.0	72.0	13.0	40.0	44.0	15.8
203.2	27.4	102.0	10.8	6.9	4.0	159.0	22.0	76.0	14.0	48.0	56.0	19.0

CANALES

Peralte		Peso		Dimensiones									
				A				B				C	
				Patin		mm		Esp. Patin		mm		Esp. Patin	
pulg	mm	kg/m	kg/pza	pulg	mm	pulg	mm	pulg	mm	pulg	mm	pulg	mm
3"	76.2	5.20	63.44	1.410	35.81	0.254	6.45	0.125	3.18	0.254	6.45	0.125	3.18
3"	76.2	6.10	74.42	1.410	35.80	0.273	6.93	0.170	4.30	0.273	6.93	0.170	4.30
4"	101.6	6.69	81.62	1.580	40.23	0.220	5.60	0.174	4.42	0.220	5.60	0.174	4.42
4"	101.6	8.04	98.09	1.580	40.23	0.296	7.52	0.184	4.67	0.296	7.52	0.184	4.67
5"	127.5	9.97	121.63	1.750	44.45	0.320	8.13	0.190	4.83	0.320	8.13	0.190	4.83
5"	127.5	13.39	163.36	1.885	47.88	0.320	8.13	0.325	8.26	0.320	8.13	0.325	8.26
6"	152.4	12.20	148.84	1.920	48.77	0.343	8.71	0.200	5.08	0.343	8.71	0.200	5.08
6"	152.4	15.63	190.64	2.034	51.66	0.343	8.71	0.314	7.98	0.343	8.71	0.314	7.98
6"	152.4	19.35	236.03	2.157	54.79	0.343	8.71	0.437	11.10	0.343	8.71	0.437	11.10
8"	203.2	17.11	208.74	2.260	57.40	0.390	9.91	0.220	5.59	0.390	9.91	0.220	5.59
8"	203.2	20.46	249.61	2.343	59.51	0.390	9.91	0.303	7.70	0.390	9.91	0.303	7.70
8"	203.2	27.90	340.38	2.527	64.19	0.390	9.91	0.487	12.37	0.390	9.91	0.487	12.37
10"	254.0	22.77	277.79	2.600	66.04	0.436	11.07	0.240	6.10	0.436	11.07	0.240	6.10
10"	254.0	29.76	363.07	2.739	69.57	0.436	11.07	0.379	9.63	0.436	11.07	0.379	9.63
10"	254.0	37.20	453.84	2.886	73.30	0.436	11.07	0.526	13.36	0.436	11.07	0.526	13.36
10"	254.0	44.64	544.61	3.033	77.04	0.436	11.07	0.673	17.09	0.436	11.07	0.673	17.09
12"	304.8	30.80	375.76	2.942	74.73	0.501	12.73	0.282	7.16	0.501	12.73	0.282	7.16
12"	304.8	37.20	453.84	3.047	77.39	0.501	12.73	0.387	9.83	0.501	12.73	0.387	9.83
12"	304.8	44.64	544.61	3.170	80.52	0.501	12.73	0.510	12.95	0.501	12.73	0.510	12.95

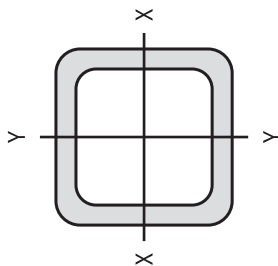
Longitud estándar 12.20 m
cumplen con la Norma ASTM A-36

ÁNGULOS

Dimensiones		Peso			
pulgadas	mm	kg/m	largo	kg/pza	lbs/pie
1/8" x 3/4"	3.2 x 19.0	0.88	6.10	5.37	0.60
1/8" x 1"	3.2 x 25.4	1.19	6.10	7.26	0.80
1/8" x 1 1/4"	3.2 x 31.7	1.50	6.10	9.15	1.00
1/8" x 1 1/2"	3.2 x 38.1	1.83	6.10	11.16	1.20
1/8" x 1 3/4"	3.2 x 44.5	2.14	6.10	13.05	1.44
1/8" x 2"	3.2 x 50.8	2.46	6.10	15.01	1.70
5/32" x 1 1/2"	4.06 x 38.1	2.28	6.10	13.908	1.53
5/32" x 2"	4.06 x 50.8	3.09	6.10	18.849	2.07
5/32" x 2 1/2"	4.06 x 63.5	3.92	6.10	23.912	2.63
3/16" x 1"	4.8 x 25.4	1.73	6.10	10.55	1.20
3/16" x 1 1/4"	4.8 x 31.7	2.20	6.10	13.42	1.50
3/16" x 1 1/2"	4.8 x 38.1	2.68	6.10	16.35	1.80
3/16" x 1 3/4"	4.8 x 44.5	3.15	6.10	19.215	2.11
3/16" x 2"	4.8 x 50.8	3.63	6.10	22.14	2.40
3/16" x 2 1/2"	4.8 x 63.5	4.61	6.10	28.12	3.10
3/16" x 3"	4.8 x 76.2	5.52	12.20	67.36	3.71
3/16" x 3 1/2"	4.8 x 88.9	6.55	6.10	39.955	4.40
1/4" x 1"	6.3 x 25.4	2.22	6.10	13.54	1.50
1/4" x 1 1/4"	6.3 x 31.7	2.86	6.10	17.45	1.90
1/4" x 1 1/2"	6.3 x 38.1	3.48	6.10	21.23	2.30
1/4" x 1 3/4"	6.3 x 44.5	4.12	6.10	25.13	2.77
1/4" x 2"	6.3 x 50.8	4.75	6.10	28.98	3.20
1/4" x 2 1/2"	6.3 x 63.6	6.10	6.10	37.21	4.09
1/4" x 3"	6.3 x 76.2	7.29	12.20	88.94	4.90
1/4" x 3 1/2"	6.3 x 88.9	8.63	12.20	105.29	5.80
1/4" x 4"	6.3 x 101.6	9.82	12.20	119.8	6.60
5/16" x 2"	7.9 x 50.8	5.83	6.10	35.56	3.91
5/16" x 2 1/2"	7.9 x 63.5	7.44	6.10	45.38	5.00
5/16" x 3"	7.9 x 76.2	9.08	12.20	110.78	6.10
5/16" x 3 1/2"	7.9 x 88.9	10.71	12.20	130.66	7.20
5/16" x 4"	7.9 x 101.6	12.20	12.20	148.84	8.20
5/16" x 5"	7.9 x 127	15.47	6.10	94.367	10.39
3/8" x 2"	9.5 x 50.8	6.99	6.10	42.64	4.69
3/8" x 2 1/2"	9.5 x 63.5	8.78	6.10	53.56	5.90
3/8" x 3"	9.5 x 76.1	10.72	12.20	130.78	7.20
3/8" x 3 1/2"	9.5 x 88.9	12.64	12.20	154.33	8.50
3/8" x 4"	9.5 x 101.6	14.58	12.20	177.88	9.80
3/8" x 5"	9.5 x 127	18.30	6.10	111.63	12.28
3/8" x 6"	9.5 x 152.4	22.17	12.20	270.47	14.90
3/8" x 6" x 4"	9.5 x 152.4 x 101.6	18.30	12.20	223.26	12.30
7/16" x 3 1/2"	11.11 x 88.9	14.58	12.20	177.88	9.80
7/16" x 4"	11.11 x 101.6	16.81	12.20	205.08	11.30
7/16" x 5"	11.11 x 127	21.28	6.10	129.808	14.29
7/16" x 6"	11.11 x 152.4	25.59	12.20	312.32	17.20
1/2" x 2 1/2"	12.7 x 63.5	11.83	6.10	72.16	7.95
1/2" x 3"	12.7 x 76.2	13.99	12.20	170.68	9.40
1/2" x 3 1/2"	12.7 x 88.9	16.51	12.20	201.42	11.10
1/2" x 4"	12.7 x 101.6	19.05	12.20	232.41	12.80
1/2" x 5"	12.7 x 127	24.11	6.10	147.071	16.19
1/2" x 6"	12.7 x 152.4	29.17	12.20	355.87	19.60
1/2" x 6" x 4"	12.7 x 152.4 x 101.6	24.11	12.20	294.14	16.20
5/8" x 4"	15.9 x 101.6	23.38	12.20	285.24	15.71
5/8" x 6"	15.9 x 152.4	36.01	12.20	439.32	24.20
5/8" x 6" x 4"	15.9 x 152.4 x 101.6	29.76	12.20	363.07	20.00
3/4" x 4"	19.0 x 101.6	27.53	12.20	335.87	18.50
3/4" x 6"	19.0 x 152.4	42.71	12.20	521.06	28.70
3/4" x 6" x 4"	19.0 x 152.4 x 101.6	35.12	12.20	428.46	23.60

HSS CUADRADO

Dimensiones		Peso (kg/m)							
pulg (A X B)	mm (A X B)	Espesor							
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	
4" X 4"	101.6 X 101.6	9.61	14.02	18.17	22.07	25.7	32.19		
4 1/2" X 4 1/2"	114.3 X 114.3	10.86	15.92	20.7	25.24	29.5	37.25		
5" X 5"	127.0 X 127.0	12.13	17.81	23.25	28.39	33.29	42.31		
5 1/2" X 5 1/2"	139.7 X 139.7		19.72	25.77	31.56	37.1			
6" X 6"	152.4 X 152.4		21.62	28.3	34.73	40.89	52.44	63.1	
7" X 7"	177.8 X 177.8		25.42	33.36	41.06	48.48	62.58		
7 1/2" X 7 1/2"	190.5 X 190.5		27.31	35.89	44.23	52.28	67.64		
8" X 8"	203.2 X 203.2		29.21	38.42	47.38	56.09	72.7	88.4	
9" X 9"	228.6 X 228.6		33.01	43.5	53.72	63.68	82.83		
10" X 10"	254.0 X 254.0		36.8	48.56	60.05	71.28	92.95	113.8	
12" X 12"	304.8 X 304.8		44.41	58.68	72.71	86.46	113.2	139.1	
14" X 14"	355.6 X 355.6				85.36	101.66	133.46	166.82	
16" X 16"	406.4 X 406.4				98.03	116.85	153.73	189.01	



HSS RECTANGULAR

Dimensiones		Peso (kg/m)					
pulg (A X B)	mm (A X B)	Espesor					
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
5" X 3"	127.0 X 76.2	9.61	14.02	18.17	22.07	25.7	32.19
6" X 2"	152.4 X 50.8	9.61	14.02	18.17	22.07	25.7	32.19
5" X 4"	127.0 X 101.6	10.86	15.92	20.7	25.24	29.5	37.25
6" X 3"	152.4 X 76.2	10.86	15.92	20.7	25.24	29.5	37.25
7" X 2"	177.8 X 50.8	10.86	15.92	20.7	25.24	29.5	37.25
6" X 4"	152.4 X 101.6	12.13	17.81	23.25	28.39	33.29	42.31
7" X 3"	177.8 X 76.2	12.13	17.81	23.25	28.39	33.29	42.31
8" X 2"	203.2 X 50.8	12.13	17.81	23.25	28.39	33.29	42.31
6" X 5"	152.4 X 127.0		19.72	25.77	31.56	37.1	52.44
7" X 4"	177.8 X 101.6		19.72	25.77	31.56	37.1	52.44
8" X 3"	203.2 X 76.2		19.72	25.77	31.56	37.1	52.44
7" X 5"	177.8 X 127.0		21.62	28.3	34.73	40.89	52.44
8" X 4"	203.2 X 101.6		21.62	28.3	34.73	40.89	62.58
9" X 3"	228.6 X 76.2		21.62	28.3	34.73	40.89	62.58
10" X 2"	254.0 X 50.8		21.62	28.3	34.73	40.89	62.58
8" X 6"	203.2 X 152.4		25.42	33.36	41.06	48.48	62.58
9" X 5"	228.6 X 127.0		25.42	33.36	41.06	48.48	67.64
10" X 4"	254.0 X 101.6		25.42	33.36	41.06	48.48	67.64
12" X 2"	304.8 X 50.8		25.42	33.36	41.06	48.48	67.64
8" X 7"	203.2 X 177.8		27.31	35.89	44.23	52.28	67.64
9" X 6"	228.6 X 152.4		27.31	35.89	44.23	52.28	72.7
10" X 5"	254.0 X 127.0		27.31	35.89	44.23	52.28	72.7
12" X 3"	304.8 X 76.2		27.31	35.89	44.23	52.28	72.7
9" X 7"	228.6 X 177.8		29.21	38.42	47.38	56.09	82.83
10" X 6"	254.0 X 152.4		29.21	38.42	47.38	56.09	82.83
12" X 4"	304.8 X 101.6		29.21	38.42	47.38	56.09	82.83
10" X 8"	254.0 X 203.2		33.01	43.5	53.72	63.68	92.95
12" X 6"	304.8 X 152.4		33.01	43.5	53.72	63.68	92.95
14" X 4"	355.6 X 101.6		33.01	43.5	53.72	63.68	92.95
12" X 8"	304.8 X 203.2		36.8	48.56	60.05	71.28	113.2
14" X 6"	355.6 X 152.4		36.8	48.56	60.05	71.28	113.2
16" X 4"	406.4 X 101.6		36.8	48.56	60.05	71.28	113.2
14" X 10"	355.6 X 254.0		44.41	58.68	72.71	86.46	113.2
16" X 8"	406.4 X 203.2		44.41	58.68	72.71	86.46	133.46
18" X 6"	457.2 X 152.4		44.41	58.68	72.71	86.46	133.46
20" X 4"	508.0 X 101.6		44.41	58.68	72.71	86.46	153.73
16" x 12"	406.4 X 304.8				85.36	101.66	
20" x 8"	508.0 X 203.2				85.36	101.66	
20" x 12"	508.0 X 304.8				98.03	116.85	

Descripción	Cal	Peso		Dimensión			Área (cm ²)	Eje X - X			Eje Y - Y			Factor Columna	
		kg/ml	kg/pz	d mm	t pulg	R mm		lx cm4	Sx cm3	rx cm	ly cm4	Sy cm3	r cm		x mm
3" X 1 1/2"	12	3.60	21.60	19	2.66	9.5	4.54	38.5	10.1	2.9	4.16	9.56	1.45	1.51	*
3" X 1 1/2"	14	2.40	14.40	19	0.0747	6.4	3.23	28	7.22	2.92	7	2.99	1.46	14.99	0.99
3" X 1 1/2"	16	1.99	11.94	19	1.52	9.5									
4" X 2"	10	5.85	23.40	19	0.1345	6.4	7.30	113	22.15	3.93	25	7.66	1.84	18.35	1.00
4" X 2"	12	4.55	18.20	19	0.1046	6.4	5.78	91	17.86	3.96	20	6.3	1.88	18.36	0.97
4" X 2"	14	3.29	13.16	19	0.0747	6.4	4.19	67	13.22	4.00	15	4.76	1.92	18.37	0.91
4" X 2"	16	2.72	16.32	19	1.52	9.5								1.82	
5" X 2"	10	6.56	32.80	19	0.1345	6.4	8.17	192	30.25	4.85	27	7.89	1.82	16.58	0.97
5" X 2"	12	5.08	25.40	19	0.1046	6.4	6.45	154	24.29	4.89	22	6.49	1.86	16.58	0.92
5" X 2"	14	3.68	18.40	19	0.0747	6.4	4.68	114	17.90	4.93	17	4.89	1.89	16.57	0.84
6" X 2"	10	7.38	44.28	19	0.1345	6.4	9.04	298	39.12	5.74	29	8.06	1.78	15.15	0.92
6" X 2"	12	5.82	34.92	19	0.1046	6.4	7.13	239	31.31	5.79	24	6.62	1.82	15.13	0.85
6" X 2"	14	4.21	25.26	19	0.0747	6.4	5.16	175	23.00	5.83	18	4.99	1.86	15.11	0.77
6" X 2 1/2"	10	7.95	47.70	19	0.1345	6.4	9.90	346	45.44	5.91	50	11.54	2.25	19.89	0.93
6" X 2 1/2"	12	6.18	37.08	19	0.1046	6.4	7.80	276	36.27	5.95	41	9.39	2.29	19.90	0.87
6" X 2 1/2"	14	4.46	26.76	19	0.0747	6.4	5.64	203	26.54	5.99	31	7.02	2.33	19.90	0.79
7" X 2 3/4"	10	9.00	63.00	22	0.1345	6.4	11.41	542	60.94	6.89	72	14.89	2.51	21.62	0.88
7" X 2 3/4"	12	6.99	48.93	19	0.1046	6.4	8.81	424	47.64	6.93	55	11.12	2.49	20.76	0.82
7" X 2 3/4"	14	5.04	35.28	19	0.0747	6.4	6.36	309	34.37	6.97	41	8.27	2.53	20.76	0.74
8" X 2 3/4"	10	9.82	78.56	22	0.1345	6.4	12.28	744	73.19	7.78	75	15.11	2.47	20.21	0.83
8" X 2 3/4"	12	7.72	61.76	19	0.1046	6.4	9.49	580	57.10	7.82	57	11.28	2.45	19.38	0.77
8" X 2 3/4"	14	5.57	44.56	19	0.0747	6.4	6.85	423	41.16	7.86	42	8.39	2.49	19.37	0.69

Fabricamos polín a medidas especiales.

Notas:

- * Pesos técnicos calculados según peralte del polín.
- * Polín de 3" calculado a 6 mts.
- * Polín de 4" se surte también en 5 y 6 mts.
- * Polín de 5" se surte también en 6 mts.

POLÍN MON-TEN

Descripción	Cal	Peso		Dimensión			Área (cm ²)	Eje X - X			Eje Y - Y			Factor Columna	
		kg/ml	kg/pz	d mm	t pulg	R mm		lx cm ⁴	Sx cm ³	rx cm	ly cm ⁴	Sy cm ³	r cm		x mm
D X B															
8" X 3"	10	10.14	81.12	22	0.1345	6.4	12.71	787	77.45	7.87	93	17.34	2.71	22.53	0.84
8" X 3"	12	7.89	63.12	22	0.1046	6.4	9.98	625	61.47	7.91	75	14.00	2.74	22.52	0.78
8" X 3"	14	5.63	45.04	19	0.0747	6.4	7.09	448	42.80	7.95	52	9.62	2.72	21.67	0.69
9" X 2 3/4"	10	10.52	94.68	22	0.1345	6.4	13.15	985	86.18	8.66	78	15.29	2.43	18.99	0.79
9" X 2 3/4"	12	8.26	74.34	19	0.1046	6.4	10.16	767	67.14	8.69	59	11.42	2.41	18.18	0.72
9" X 2 3/4"	14	5.96	53.64	19	0.0747	6.4	7.33	559	48.36	8.73	44	8.49	2.45	18.16	0.65
9" X 3 1/2"	10	11.78	106.02	25	0.1345	6.4	14.65	1167	102.10	8.92	150	24.02	3.19	26.65	0.81
9" X 3 1/2"	12	9.12	82.08	22	0.1046	6.4	11.33	911	79.09	8.96	114	18.07	3.17	25.79	0.75
9" X 3 1/2"	14	6.56	59.04	19	0.0747	6.4	8.05	652	53.19	9.00	80	12.45	3.15	24.91	0.63
10" X 2 3/4"	10	11.22	112.20	22	0.1345	6.4	14.01	1269	99.92	9.52	80	15.44	2.39	17.92	0.75
10" X 2 3/4"	12	8.80	88.00	19	0.1046	6.4	10.84	987	77.75	9.55	61	11.53	2.37	17.13	0.68
10" X 2 3/4"	14	6.34	63.40	19	0.0747	6.4	7.81	719	55.97	9.59	45	8.58	2.41	17.09	0.61
10" X 3 1/2"	10	12.37	123.70	25	0.1345	6.4	15.52	1495	117.74	9.82	155	24.29	3.16	25.26	0.77
10" X 3 1/2"	12	9.62	96.20	22	0.1046	6.4	12.01	1165	91.12	9.85	118	18.28	3.13	24.42	0.71
10" X 3 1/2"	14	6.87	68.70	19	0.0747	6.4	8.53	833	61.37	9.88	82	12.59	3.11	23.55	0.60
12" X 3 1/2"	10	13.74	164.88	25	0.1345	6.4	17.26	2308	151.37	11.56	163	24.73	3.08	22.88	0.71
12" X 3 1/2"	12	10.64	127.68	22	0.1046	6.4	13.36	1796	117.02	11.59	124	18.61	3.05	22.07	0.64
12" X 3 1/2"	14	7.57	90.84	19	0.0747	6.4	9.50	1282	79.06	11.62	87	12.82	3.02	21.25	0.54

Fabricamos polín a medidas especiales.

Notas:

- * Pesos teóricos calculados según peralte del polín.
- * Polín de 3" calculado a 6 mts.
- * Polín de 4" se surte también en 5 y 6 mts.
- * Polín de 5" se surte también en 6 mts.

PLACA

Dimensiones		Peso (kg) Espesor																						
		3"	2 1/2"	2 1/4"	2"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1"	7/8"	3/4"	11/16"	5/8"	9/16"	1/2"	7/16"	3/8"	5/16"	1/4"	3/16"	
pies	metros	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
3x10	0.914 x 3.05																				211	176	141	106
3x20	0.914 x 6.10																				421	351	281	211
4x10	1.22 x 3.05																				281	234	187	141
4x20	1.22 x 6.10																				562	468	375	281
5x10	1.52 x 3.05	2809	2341	2107	1873	1638	1521	1404	1287	1170	1053	936	819	702	643	585	526	468			409	293	294	176
5x20	1.52 x 6.10	5617	4681	4213	3745	3276	3042	2808	2574	2340	2106	1872	1638	1404	1286	1170	1052	936			818	585	4686	352
6x10	1.83 x 3.05	3370	2809	2528	2247	1966	1826	1685	1545	1404	1264	1124	983	843	772	702	632	562			491	351	281	211
6x20	1.83 x 6.10	6740	5617	5055	4494	3932	3651	3370	3089	2808	2528	2247	1966	1685	1543	1404	1263	1123			982	702	562	422
7x10	2.14 x 3.05	3932	3277	2949	2621	2294	2130	1966	1802	1639	1475	1311	1147	983	901	819	737	656			573	409	328	246
7x20	2.14 x 6.10	7864	6553	5898	5242	4587	4259	3932	3604	3277	2949	2621	2294	1966	1801	1638	1473	1311			1146	818	655	492
8x10	2.44 x 3.05	4494	3745	3370	2996	2621	2434	2247	2060	1873	1685	1498	1311	1124	1029	886	842	749			655	468	375	281
8x20	2.44 x 6.10	8987	7489	6740	5991	5242	4868	4493	4119	3745	3370	2996	2621	2247	2058	1872	1684	1498			1310	935	749	562
10x20	3.05 x 6.10	11234	9361	8424	7489	6553	6085	5617	5149	4681	4213	3745	3276	2808	2572	2340	2105	1872			1637	1404	996	703