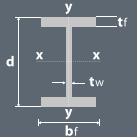


# Plancha Ancha y con Orilla Recortada

IPR

Perfil I Rectangular (IR)



Espesor		Peso teórico		Peso aproximado por hoja				
pulgadas	mm	kg/m2	kp/pie2	5' x 20'	6' x 20'	7' x 20'	8' x 20'	10' x 20'
3/16"	0.188	4.78	37.84	352	422	492	562	703
1/4"	0.250	6.35	50.38	468	562	655	749	936
5/16"	0.313	7.95	62.93	585	702	818	935	1,169
3/8"	0.375	9.53	75.57	702	842	983	1,123	1,404
7/16"	0.438	11.13	88.10	818	982	1,146	1,310	1,637
1/2"	0.500	12.70	100.77	936	1,123	1,311	1,498	1,872
9/16"	0.563	14.30	113.27	1,052	1,263	1,473	1,684	2,105
5/8"	0.625	15.88	125.96	1,170	1,404	1,638	1,872	2,340
11/16"	0.688	17.48	138.44	1,286	1,543	1,801	2,058	2,572
3/4"	0.750	19.05	151.15	1,404	1,685	1,966	2,247	2,808
7/8"	0.875	22.23	176.34	1,638	1,966	2,294	2,621	3,276
1"	1.000	25.40	201.53	1,872	2,247	2,621	2,996	3,745
1 1/8"	1.125	28.58	226.72	2,106	2,528	2,949	3,370	4,213
1 1/4"	1.250	31.75	251.92	2,340	2,808	3,277	3,745	4,681
1 3/8"	1.375	34.93	277.11	2,574	3,089	3,604	4,119	5,149
1 1/2"	1.500	38.10	302.30	2,808	3,370	3,932	4,493	5,617
1 5/8"	1.625	41.28	327.49	3,042	3,651	4,259	4,868	6,085
1 3/4"	1.750	44.45	352.68	3,276	3,932	4,587	5,242	6,553
2"	2.000	50.80	403.07	3,745	4,494	5,242	5,991	7,489
2 1/4"	2.250	57.15	453.45	4,213	5,055	5,898	6,740	8,425
2 1/2"	2.500	63.50	503.83	4,681	5,617	6,553	7,489	9,361
3"	3.000	76.20	604.60	5,617	6,740	7,864	8,987	11,234

FÓRMULAS PARA CALCULAR EL PESO APROXIMADO DE UNA PLANCHAS EN CUALQUIER DIMENSIÓN

$$P = e \times a \times l \times Pe$$

P = peso en kgs.  
e = espesor en pulgadas  
a = ancho en pulgadas  
l = largo en pulgadas  
Pe = peso específico en kg/pulg3 = 0.130

EJEMPLO

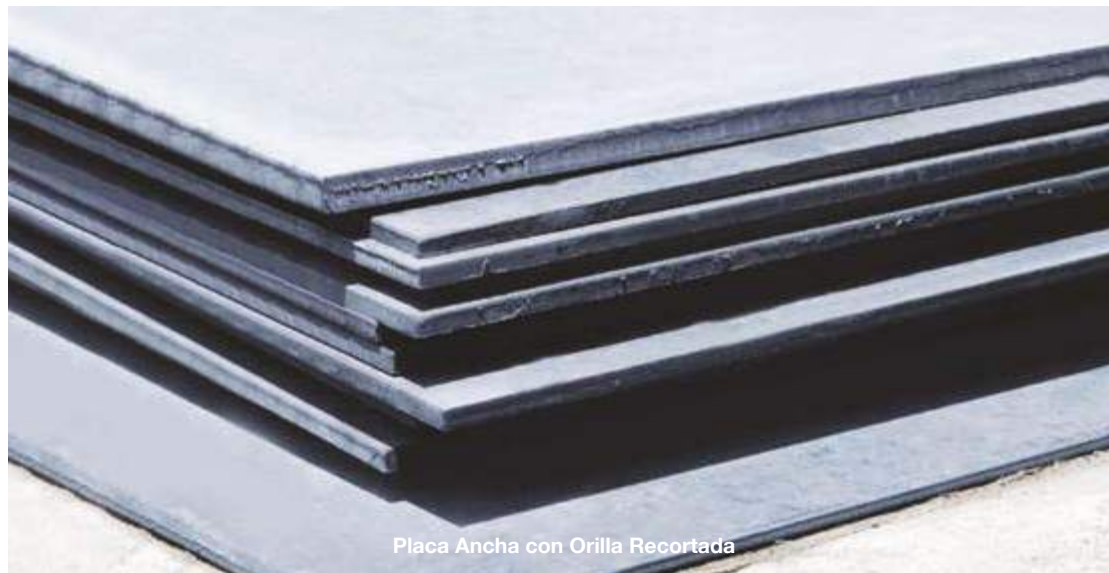
espesor ancho largo  
0.500 72" 240"  
sustituyendo en la fórmula:  
 $P = 0.500 \times 72 \times 240 \times 0.130 = 1,123 \text{ kgs}$

$$P = e \times a \times l \times fc$$

P = peso en kgs.  
e = espesor en pulgadas  
a = ancho en metros  
l = largo en metros  
fc = factor de conversión = 201.2

EJEMPLO:

espesor ancho largo  
0.500 1.83 6.10  
sustituyendo en la fórmula:  
 $P = 0.500 \times 1.83 \times 6.10 \times 201.2 = 1,123 \text{ kgs}$

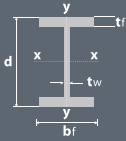


Placa Ancha con Orilla Recortada

Designación	lb/pie	kg/m	Área cm2	Peralte mm	Espesor del alma mm	Patín		Eje X - X			Eje Y - Y		
						ancho mm	espesor mm	I cm4	S cm3	r cm	I cm4	S cm3	r cm
6" x 4"	9	13.4	17.29	150	4.32	100	5.5	683	91	6.3	91	18	2.3
	12	17.9	22.90	153	5.84	102	7.1	920	120	6.3	124	25	2.3
	16	23.8	30.58	160	6.60	102	10.3	1,336	167	6.6	184	36	2.5
6" x 6"	15	22.3	28.58	152	5.84	152	6.6	1,220	160	6.6	388	51	3.7
	20	29.8	37.87	157	6.60	153	9.3	1,727	220	6.8	554	72	3.8
	25	37.2	47.35	162	8.13	154	11.6	2,231	275	6.9	712	92	3.9
8" x 4"	10	14.9	19.10	200	4.32	24	5.2	1,282	128	8.2	503	17	2.1
	13	19.3	24.77	203	5.84	102	6.5	1,648	162	8.2	114	22	2.1
	15	22.3	28.65	206	6.22	102	8.0	1,998	193	8.4	142	28	2.2
8" x 5 1/4"	18	26.8	33.94	207	5.84	133	8.4	2,576	249	8.7	332	50	3.1
	21	31.3	39.74	210	6.35	134	10.2	3,134	298	8.9	407	61	3.2
	24	35.7	45.68	201	6.22	165	10.2	3,442	342	8.7	762	92	4.1
8" x 6 1/2"	28	41.7	53.23	205	7.24	166	11.8	4,079	398	8.8	903	109	4.1
	31	46.1	58.90	203	7.24	203	11.0	4,579	451	8.8	1,544	152	5.1
	35	52.1	66.45	206	7.87	204	12.6	5,286	511	8.9	1,773	174	5.2
8" x 8"	40	59.5	75.48	210	9.14	205	14.2	6,077	582	9.0	2,044	200	5.2
	48	71.4	90.97	216	10.16	206	17.4	7,659	708	9.2	2,535	246	5.3
	58	86.3	110.32	222	12.95	209	20.6	9,490	852	9.3	3,126	300	5.3
10" x 4"	67	99.7	127.10	229	14.48	210	23.7	11,321	990	9.4	3,688	351	5.4
	12	17.9	22.84	251	4.83	101	5.3	2,239	179	9.9	91	18	2.0
	15	22.3	28.45	254	5.84	102	6.9	2,868	226	10.0	120	24	2.1
10" x 5 3/4"	17	25.3	32.19	257	6.10	102	8.4	3,409	265	10.3	148	29	2.1
	19	28.3	36.26	260	6.35	102	10.0	4,008	308	10.5	179	35	2.2
	22	32.7	41.87	258	6.10	146	9.1	4,912	380	10.8	475	65	3.4
10" x 8"	26	38.7	49.10	262	6.60	147	11.2	5,994	457	11.0	587	80	3.5
	30	44.6	57.03	266	7.62	148	13.0	7,076	531	11.1	695	94	3.5
	33	49.1	62.65	247	7.37	202	11.0	7,118	574	10.6	1,523	151	4.9
10" x 10"	39	58.0	74.19	252	8.00	203	13.5	8,699	690	10.8	1,873	185	5.0
	45	67.0	85.81	257	8.89	204	15.7	10,323	805	11.0	2,223	218	5.1
	49	72.9	92.90	253	8.64	254	14.2	11,321	895	11.0	3,888	306	6.5
12" x 4"	54	80.4	97.29	256	9.40	255	15.6	12,612	983	11.1	4,287	338	6.5
	60	89.3	113.55	260	10.67	256	17.3	14,193	1,093	11.2	4,828	377	6.5
	68	101.2	129.03	264	11.94	257	19.6	16,400	1,241	11.3	5,578	433	6.6
12" x 6 1/2"	77	114.6	145.81	269	13.46	259	22.1	18,939	1,408	11.4	6,410	493	6.6
	88	131.0	167.10	275	15.37	261	25.1	22,227	1,614	11.5	7,451	570	6.7
	100	148.8	189.68	282	17.27	263	28.4	25,931	1,835	11.7	8,616	655	6.7
12" x 8"	112	166.7	212.26	289	19.18	265	31.8	29,802	2,065	11.8	9,823	742	6.8
	14	20.8	26.84	303	5.08	101	5.7	3,688	244	11.7	98	20	1.9
	16	23.8	30.39	305	5.59	101	6.7	4,287	280	11.9	117	23	2.0
12" x 10"	19	28.3	35.94	309	5.97	102	8.9	5,411	349	12.2	157	31	2.1
	22	32.7	41.81	313	6.60	102	10.8	6,493	416	12.5	194	38	2.2
	26	38.7	49.35	310	5.84	165	9.7	8,491	547	13.1	720	88	3.8
12" x 6 1/2"	30	44.6	56.71	313	6.60	166	11.2	9,906	633	13.2	845	102	3.9
	35	52.1	66.45	318	7.62	167	13.2	11,863	747	13.3	1,020	122	3.9
	40	59.5	76.13	303	7.49	203	13.1	12,778	844	13.0	1,836	180	4.9
12" x 8"	45	67.0	85.16	306	8.51	204	14.6	14,485	946	13.1	2,081	203	5.0
	50	74.4	94.84	310	9.40	205	16.3	16,275	1,052	13.2	2,343	228	5.0
	53	78.9	100.64	306	8.76	254	14.6	17,690	1,157	13.3	3,987	315	6.3
12" x 10"	58	86.3	109.68	310	9.14	254	16.3	19,771	1,278	13.4	4,454	351	6.4

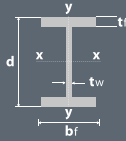


IPR Perfil I rectangular (IR)



# IPR

## Perfil I Rectangular (IR)

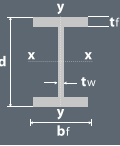


# IPR

## Perfil I Rectangular (IR)

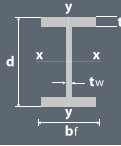
Designación	lb/pie	kg/m	Área cm <sup>2</sup>	Peralte mm	Espesor del alma mm	Patín		Eje X - X			Eje Y - Y		
						ancho mm	espesor mm	I cm <sup>4</sup>	S cm <sup>3</sup>	r cm	I cm <sup>4</sup>	S cm <sup>3</sup>	r cm
12" x 12"	65	96.7	123.23	308	9.91	305	15.4	22,185	1,440	13.4	7,242	477	7.7
	72	107.1	136.13	311	10.92	306	17.0	24,849	1,596	13.5	8,117	531	7.7
	79	117.6	149.68	314	11.94	307	18.7	27,555	1,753	13.6	8,991	587	7.7
	87	129.5	165.16	318	13.08	308	20.6	30,801	1,934	13.7	10,031	651	7.8
	96	142.9	181.94	323	13.97	309	22.9	34,672	2,147	13.8	11,238	728	7.8
	106	157.7	201.29	327	15.49	310	25.1	38,834	2,376	13.9	12,529	808	7.9
	120	178.6	227.74	333	18.03	313	28.1	44,537	2,671	14.0	14,360	918	8.0
136	202.4	257.42	341	20.07	315	31.8	51,613	3,048	14.2	16,566	1,052	8.0	
12" x 12 1/2"	152	226.2	288.39	348	22.10	317	35.6	59,521	3,425	14.4	18,897	1,193	8.1
	170	253.0	322.58	356	24.38	319	39.6	68,678	3,851	14.6	21,519	1,349	8.2
	190	282.8	360.00	365	26.92	322	44.1	78,668	4,310	14.8	24,516	1,524	8.3
	210	312.5	398.71	374	29.97	325	48.3	89,074	4,785	15.0	27,638	1,704	8.3
	230	342.3	436.77	382	32.64	328	52.6	100,728	5,260	15.2	30,884	1,885	8.4
	252	375.0	478.06	391	35.43	330	57.2	113,215	5,785	15.4	34,464	2,081	8.5
	279	415.2	528.39	403	38.86	334	62.7	129,448	6,440	15.6	39,001	2,343	8.6
305	453.9	578.06	415	41.28	336	68.7	147,762	7,128	16.0	43,704	2,606	8.7	
336	500.0	637.42	427	45.09	340	75.1	168,990	7,915	16.3	49,532	2,901	8.8	
14" x 5"	22	32.7	41.87	349	5.84	127	8.5	8,283	475	14.1	291	46	2.6
	26	38.7	49.61	353	6.48	128	10.7	10,198	578	14.4	371	58	2.7
14" x 6 3/4"	30	44.6	57.10	352	6.86	171	9.8	12,112	688	14.6	816	95	3.8
	34	50.6	64.52	355	7.24	171	11.6	14,152	796	14.8	970	113	3.9
	38	56.6	72.26	358	7.87	172	13.1	16,025	895	14.9	1,111	129	3.9
14" x 8"	43	64.0	81.29	347	7.75	203	13.5	17,815	1,026	14.8	1,881	185	4.8
	48	71.4	90.97	350	8.64	204	15.1	20,146	1,150	14.9	2,139	210	4.9
14" x 10"	53	78.9	100.64	354	9.40	205	16.8	22,518	1,275	15.0	2,402	234	4.9
	61	90.8	115.48	353	9.53	254	16.4	26,639	1,509	15.2	4,454	352	6.2
14" x 10 1/2"	68	101.2	129.03	357	10.54	255	18.3	30,052	1,688	15.3	5,036	397	6.2
	82	122.0	155.48	363	12.95	257	21.7	36,670	2,016	15.4	6,160	480	6.3
14" x 14 1/2"	90	133.9	170.97	356	11.18	369	18.0	41,582	2,343	15.6	15,068	818	9.4
	99	147.3	187.74	360	12.32	370	19.8	46,202	2,573	15.7	16,733	905	9.4
14" x 16"	109	162.2	206.45	364	13.34	371	21.8	51,613	2,835	15.8	18,606	1,003	9.5
	120	178.6	227.74	368	14.99	373	23.9	57,440	3,114	15.8	20,603	1,106	9.5
14" x 16 1/2"	132	196.4	250.32	372	16.38	374	26.2	63,683	3,425	16.0	22,809	1,221	9.6
	145	215.8	275.48	375	17.27	394	27.7	71,176	3,802	16.1	28,179	1,431	10.1
14" x 16 1/2"	159	236.6	301.29	380	18.92	395	30.2	79,084	4,162	16.2	31,134	1,576	10.2
	176	261.9	334.19	387	21.08	398	33.3	89,074	4,605	16.3	34,880	1,753	10.2
14" x 16"	193	287.2	366.45	393	22.61	399	36.6	99,896	5,080	16.5	38,751	1,950	10.3
	211	314.0	400.00	399	24.89	401	39.6	110,718	5,539	16.6	42,872	2,130	10.3
14" x 16"	233	346.7	441.93	407	27.18	404	43.7	125,286	6,145	16.8	47,867	2,376	10.4
	257	382.5	487.74	416	29.85	406	48.0	141,519	6,801	17.0	53,694	2,638	10.5
14" x 16"	283	421.1	537.42	425	32.77	409	52.6	159,833	7,522	17.2	59,937	2,933	10.6
	311	462.8	589.68	435	35.81	412	57.4	180,228	8,292	17.5	67,013	3,261	10.7
14" x 16"	342	509.0	651.61	446	39.12	416	62.7	203,953	9,144	17.7	75,338	3,622	10.8
	370	550.6	703.22	455	42.04	418	67.6	226,430	9,947	18.0	82,830	3,949	10.8
14" x 16"	398	592.3	754.84	465	44.96	421	72.3	249,739	10,750	18.2	90,322	4,293	10.9
	426	634.0	806.45	474	47.63	424	77.1	274,713	11,569	18.4	98,231	4,638	11.0
16" x 5 1/2"	26	38.7	49.55	399	6.35	140	8.8	12,529	629	15.9	399	57	2.8
	31	46.1	58.84	403	6.99	140	11.2	15,609	773	16.3	516	74	3.0
16" x 7"	36	53.6	68.39	403	7.49	177	10.9	18,647	926	16.5	1,020	115	3.9
	40	59.5	76.13	407	7.75	178	12.8	21,561	1,060	16.8	1,203	135	4.0
16" x 7"	45	67.0	85.81	410	8.76	179	14.4	24,391	1,191	16.9	1,365	153	4.0
	50	74.4	94.84	413	9.65	180	16.0	27,430	1,327	17.0	1,548	172	4.0
57	84.8	108.39	417	10.92	181	18.2	31,550	1,511	17.1	1,794	198	4.1	

Designación	lb/pie	kg/m	Área cm <sup>2</sup>	Peralte mm	Espesor del alma mm	Patín		Eje X - X			Eje Y - Y		
						ancho mm	espesor mm	I cm <sup>4</sup>	S cm <sup>3</sup>	r cm	I cm <sup>4</sup>	S cm <sup>3</sup>	r cm
16" x 10 1/4"	67	99.7	127.10	415	10.03	260	16.9	40,374	1,950	17.7	4,953	380	6.2
	77	114.6	145.81	420	11.56	261	19.3	46,618	2,229	17.8	5,744	441	6.2
	89	132.4	169.03	425	13.34	263	22.2	54,526	2,573	17.9	6,785	515	6.3
	100	148.8	189.68	431	14.86	265	25.0	62,435	2,901	18.0	7,742	585	6.4
	110	165.2	210.74	437	16.53	267	27.8	71,344	3,214	18.1	8,815	660	6.4
18" x 6"	35	52.1	66.45	450	7.62	152	10.8	21,228	944	17.9	637	84	3.1
	40	59.5	76.13	455	8.00	153	13.3	25,473	1,121	18.3	795	104	3.2
18" x 6"	46	68.5	87.10	459	9.14	154	15.4	29,636	1,291	18.4	937	122	3.3
	50	74.4	94.84	457	9.02	190	14.5	33,299	1,457	18.7	1,669	175	4.2
18" x 7 1/2"	55	81.8	104.52	460	9.91	191	16.0	37,045	1,611	18.8	1,869	195	4.2
	60	89.3	113.55	463	10.54	192	17.7	40,957	1,770	19.0	2,085	218	4.3
	65	96.7	123.23	466	11.43	193	19.1	44,537	1,917	19.0	2,281	236	4.3
	71	105.7	134.19	469	12.57	194	20.6	48,699	2,081	19.1	2,510	259	4.3
	76	113.1	143.87	463	10.80	280	17.3	55,359	2,393	19.6	6,327	452	6.6
18" x 11"	86	128.0	163.23	467	12.19	282	19.6	63,683	2,720	19.7	7,284	518	6.7
	97	144.4	183.87	472	13.59	283	22.1	72,840	3,081	19.9	8,366	592	6.7
18" x 11"	106	157.7	200.64	476	14.99	284	23.9	79,500	3,343	19.9	9,157	646	6.8
	119	177.1	226.45	482	16.64	286	26.9	91,155	3,785	20.1	10,531	736	6.8
18" x 11"	130	193.5	246.45	489	17.02	283	30.5	102,393	4,195	20.4	11,571	818	6.9
	143	212.8	271.61	495	18.54	285	33.5	114,464	4,621	20.5	12,945	909	6.9
18" x 11"	158	235.1	298.71	501	20.57	287	36.6	127,367	5,080	20.6	14,443	1,006	7.0
	175	260.4	330.97	509	22.61	289	40.4	143,600	5,637	20.8	16,275	1,127	7.0
18" x 11"	192	285.7	363.87	517	24.38	291	44.5	161,914	6,260	21.1	18,314	1,259	7.1
	211	314.0	400.64	525	26.92	293	48.5	181,061	6,899	21.3	20,520	1,398	7.2
18" x 11"	234	348.2	443.87	535	29.46	296	53.6	204,786	7,669	21.5	23,226	1,572	7.2
	258	383.9	489.68	545	32.51	299	58.4	230,176	8,456	21.7	26,139	1,753	7.3
18" x 11"	283	421.1	536.77	555	35.56	302	63.5	257,231	9,275	21.9	29,344	1,950	7.4
	311	462.8	590.32	567	38.61	305	69.6	290,530	10,258	22.2	33,090	2,179	7.5
21" x 6 1/2"	44	65.5	83.87	525	8.89	165	11.4	35,088	1,337	20.5	862	104	3.2
	50	74.4	94.84	529	9.65	166	13.6	40,957	1,549	20.8	1,036	125	3.3
21" x 6 1/2"	57	84.8	107.74	535	10.29	169	16.5	48,699	1,819	21.2	1,274	153	3.4
	62	92.3	118.06	533	10.16	209	15.6	55,359	2,081	21.7	2,393	229	4.5
21" x 8 1/4"	68	101.2	129.03	537	10.92	210	17.4	61,602	2,294	21.8	2,693	257	4.6
	73	108.6	138.71	539	11.56	211	18.8	66,597	2,474	21.9	2,939	279	4.6
21" x 8 1/4"	83</												



# IPR

## Perfil I Rectangular (IR)



# IPR

## Perfil I Rectangular (IR)

Designación	lb/pie	kg/m	Área cm <sup>2</sup>	Peralte mm	Espesor del alma mm	Patin		Eje X - X			Eje Y - Y		
						ancho mm	espesor mm	I cm <sup>4</sup>	S cm <sup>3</sup>	r cm	I cm <sup>4</sup>	S cm <sup>3</sup>	r cm
24" x 12 3/4"	104	154.8	197.42	611	12.70	324	19.1	129.032	4.228	26.2	10.822	667	7.4
	117	174.1	221.94	616	13.97	325	21.6	147.346	4.769	25.7	12.404	762	7.5
	131	194.9	248.39	622	15.37	327	24.4	167.325	5.391	25.9	14.193	869	7.5
	146	217.3	277.42	628	16.51	328	27.7	190.634	6.080	26.2	16.275	991	7.7
	162	241.1	307.74	635	17.91	329	31.0	215.192	6.784	26.7	18.439	1.121	7.7
	176	261.9	333.55	641	19.05	327	34.0	236.419	7.374	26.9	19.979	1.218	7.7
	192	285.7	363.23	647	20.57	329	37.1	260.561	8.046	26.7	22.060	1.342	7.8
	207	308.0	391.61	653	22.10	330	39.9	283.870	8.702	27.2	24.058	1.457	7.8
	229	340.8	433.55	661	24.38	333	43.9	318.417	9.636	27.2	27.097	1.631	7.9
	250	372.0	474.19	669	26.42	335	48.0	353.380	10.553	27.2	30.177	1.803	8.0
27" x 10"	279	415.2	529.03	679	29.46	338	53.1	399.582	11.766	27.7	34.256	2.032	8.1
	306	455.4	579.35	689	32.00	340	57.9	449.530	12.929	27.9	38.293	2.245	8.1
	335	498.5	634.84	699	35.05	343	63.0	499.478	14.158	27.9	42.872	2.491	8.2
	370	550.6	696.77	711	38.61	347	69.1	561.912	15.682	28.4	48.283	2.786	8.3
	84	125.0	160.00	678	11.68	253	16.3	118.626	3.490	27.2	4.412	3.49	5.3
	94	139.9	178.71	684	12.45	254	18.9	136.108	3.982	28.2	5.161	4.06	5.4
	102	151.8	193.55	688	13.08	254	21.1	150.676	4.375	28.4	5.827	4.57	5.5
	114	169.7	216.13	693	14.48	256	23.6	169.822	4.900	27.9	6.618	5.18	5.5
	129	192.0	243.87	702	15.49	254	27.9	198.126	5.654	28.4	7.700	6.03	5.6
	146	217.3	276.77	695	15.37	355	24.8	239.749	6.899	29.5	18.439	1.041	8.1
27" x 14"	161	239.6	305.81	701	16.76	356	27.4	266.804	7.620	29.5	20.687	1.162	8.2
	178	264.9	337.42	706	18.42	358	30.2	296.357	8.390	29.7	23.142	1.293	8.3
	194	288.7	367.74	714	19.05	356	34.0	331.320	9.275	30.0	25.765	1.445	8.4
	217	322.9	411.61	722	21.08	359	38.1	375.024	10.389	30.2	29.344	1.635	8.4
	235	349.7	445.81	728	23.11	360	40.9	407.907	11.209	30.2	32.008	1.770	8.5
	258	383.9	488.39	736	24.89	362	45.0	453.692	12.323	30.5	35.796	1.983	8.5
	307	456.9	581.93	752	29.46	367	53.1	549.425	14.650	30.5	43.704	2.393	8.7
	336	500.0	636.77	762	32.00	370	57.9	611.860	16.043	30.7	49.115	2.655	8.8
	368	547.6	697.42	772	35.05	372	63.0	678.457	17.534	31.2	54.526	2.933	8.8
	90	133.9	170.32	750	11.94	264	15.5	150.260	4.015	29.7	4.787	3.62	5.3
30" x 10 1/2"	99	147.3	187.74	753	13.21	265	17.0	166.076	4.408	29.7	5.328	4.01	5.3
	108	160.7	204.52	758	13.84	266	19.3	186.055	4.900	30.7	6.077	4.57	5.5
	116	172.6	220.64	762	14.35	267	21.6	205.202	5.391	30.5	6.868	5.15	5.6
	124	184.5	235.48	766	14.86	267	23.6	223.100	5.817	30.7	7.534	5.64	5.7
	132	196.4	250.97	770	15.62	268	25.4	240.166	6.227	31.2	8.158	6.11	5.7
	148	220.2	280.64	779	16.51	266	30.0	278.043	7.145	31.8	9.448	7.10	5.8
	173	257.5	327.74	773	16.64	381	27.1	347.969	8.996	32.5	24.891	1.309	8.7
	191	284.2	361.93	779	18.03	382	30.1	388.344	9.963	32.8	28.012	1.467	8.8
	211	314.0	400.00	786	19.69	384	33.4	432.881	11.028	33.0	31.384	1.639	8.9
	235	349.7	445.16	795	21.08	382	38.1	491.153	12.389	33.3	35.588	1.868	9.0
30" x 15"	261	388.4	494.84	803	23.62	385	41.9	549.425	13.716	33.3	39.958	2.081	9.1
	292	434.5	552.90	813	25.91	387	47.0	624.347	15.371	33.5	45.785	2.360	9.1
	326	485.1	617.42	823	28.96	390	52.1	703.431	17.043	33.8	51.613	2.655	9.1
	357	531.3	676.13	833	31.50	393	56.9	782.515	18.845	34.0	57.856	2.933	9.2
	391	581.9	741.93	843	34.54	396	62.0	865.761	20.484	34.3	64.516	3.261	9.3
	118	175.6	223.87	835	13.97	292	18.8	245.577	5.883	33.0	7.784	5.36	5.9
	130	193.5	247.10	840	14.73	292	21.7	279.291	6.653	33.5	9.074	6.21	6.1
	141	209.8	268.39	846	15.37	293	24.4	310.092	7.341	34.3	10.281	7.01	6.2
	152	226.2	288.39	851	16.13	294	26.8	339.645	7.981	34.8	11.363	7.73	6.3
	169	251.5	319.35	859	17.02	292	31.0	386.679	8.996	35.1	12.945	8.85	6.4

Designación	lb/pie	kg/m	Área cm <sup>2</sup>	Peralte mm	Espesor del alma mm	Patin		Eje X - X			Eje Y - Y		
						ancho mm	espesor mm	I cm <sup>4</sup>	S cm <sup>3</sup>	r cm	I cm <sup>4</sup>	S cm <sup>3</sup>	r cm
33" x 15 3/4"	201	299.1	381.29	855	18.16	400	29.2	486.991	11.389	35.8	31.217	1.560	9.0
	221	328.9	419.35	862	19.69	401	32.4	541.101	12.585	36.1	35.005	1.737	9.1
	241	358.6	457.42	868	21.08	403	35.6	599.373	13.765	35.8	38.834	1.934	9.2
	263	391.4	499.35	877	22.10	401	39.9	665.970	15.207	36.6	43.288	2.147	9.3
	291	433.1	552.26	885	24.38	404	43.9	745.054	16.715	36.6	48.283	2.393	9.3
	318	473.2	603.22	893	26.42	406	48.0	819.976	18.354	36.8	53.694	2.638	9.4
	354	526.8	671.61	903	29.46	409	53.1	919.871	20.320	37.1	60.770	2.966	9.5
	387	575.9	735.48	913	32.00	411	57.9	1,019.767	22.286	37.3	67.429	3.277	9.6
	135	200.9	256.13	903	15.24	304	20.1	324.660	7.194	35.6	9.365	6.18	6.0
	150	223.2	285.16	911	15.88	304	23.9	376.273	8.259	36.3	11.238	7.39	6.3
36" x 12"	160	238.1	303.23	915	16.51	305	25.9	406.242	8.882	36.6	12.279	8.05	6.4
	170	253.0	322.58	919	17.27	306	27.9	437.043	9.521	36.8	13.319	8.72	6.4
	182	270.8	345.81	923	18.42	307	30.0	470.341	10.209	36.8	14.443	9.44	6.5
	194	288.7	367.74	927	19.43	308	32.0	503.640	10.881	37.1	15.609	1.014	6.5
	210	312.5	398.71	932	21.08	309	34.5	549.425	11.782	37.1	17.107	1.106	6.6
	232	345.3	439.35	943	22.10	308	39.9	624.347	13.257	37.6	19.480	1.265	6.7
	256	381.0	486.45	951	24.38	310	43.9	699.269	14.666	37.8	21.977	1.417	6.7
	231	343.8	441.93	927	19.30	418	32.0	653.483	14.093	38.4	39.126	1.868	9.4
	247	367.6	470.32	931	20.32	419	34.3	703.431	15.076	38.6	42.039	2.016	9.5
	262	389.9	499.35	936	21.34	420	36.6	749.217	16.059	38.9	45.369	2.163	9.5
36" x 16 1/2"	282	419.7	538.06	943	22.48	422	39.9	819.976	17.370	39.1	49.948	2.360	9.6
	302	449.4	576.13	948	24.00	423	42.7	882.411	18.681	39.1	54.110	2.556	9.7
	330	491.1	628.39	957	25.91	422	47.0	973.981	20.320	39.4	59.105	2.802	9.7
	361	537.2	687.10	965	28.45	425	51.1	1,073.877	22.286	39.6	65.348	3.081	9.8
	395	587.8	757.42	976	30.99	427	55.9	1,190.422	24.417	39.6	72.840	3.409	9.8
	441	656.3	840.00	987	34.54	431	62.0	1,344.427	27.203	39.4	82.830	3.851	9.9
	149	221.7	282.58	970	16.00	300	21.1	407.907	6.407	38.1	9.532	6.36	5.8
	167	248.5	316.77	980	16.51	300	26.0	482.828	9.832	38.9	11.863	7.85	6.1
	183	272.3	346.45	990	16.51	300	30.5	553.588	11.192	39.9	13.985	9.32	6.4
	211	314.0	400.00	1000	19.05	300	35.9	645.159	12.880	40.1	16.233	1.083	6.4
40" x 12"	235	349.7	444.52	1008	21.08	302	40.0	724.243	14.339	40.4	18.481	1.222	6.5
	264	392.9	500.64	1016	24.38	303	43.9	807.489	15.912	40.1	20.520	1.354	6.4
	294	437.5	556.13	1026	26.92	305	49.0	911.547	17.698	40.4	23.392	1.532	6.5
	327	486.6	618.71	1036	29.97	308	54.1	1,019.767	19.664	40.6	26.639	1.721	6.6
	199	296.1	376.77	982	16.51	400	27.1	620.185	12.618	40.6	28.928	1.445	8.8
	215	320.0	408.39	990	16.51	400	31.0	695.106	14.076	41.1	33.132	1.655	9.0
	249	370.6	472.90	1000	19.05	400	36.1	815.814	16.272	41.4	38.543	1.934	9.0
	277	412.2	524										