

ANGULO LADOS IGUALES

DIMENSIONES		PESO		AREA	EJE X-X y EJE Y-Y				EJE Z-Z
pulgadas	mm.	kg/m	lbs/pie		l	r	s	x	r.min
				cm ²	cm ⁴	cm	cm ³	cm	cm
3/4 x 1/8	19.0 x 3.2	0.88	0.60	1.11	0.37	0.58	0.28	0.58	0.38
1 x 1/8	25.4 x 3.2	1.19	0.80	1.52	0.92	0.79	0.51	0.76	0.51
1 x 3/16	25.4 x 4.8	1.73	1.20	2.21	1.25	0.76	0.72	0.81	0.48
1 x 1/4	25.4 x 6.3	2.22	1.50	2.8	1.54	0.74	0.92	0.86	0.48
1 1/4 x 1/8	31.7 x 3.2	1.5	1.00	1.93	1.83	0.97	0.80	0.89	0.64
1 1/4 x 3/16	31.7 x 4.8	2.2	1.50	2.81	2.54	0.97	1.16	0.97	0.61
1 1/4 x 1/4	31.7 x 6.3	2.86	1.90	3.72	3.21	0.94	1.49	1.02	0.61
1 1/2 x 1/8	38.1 x 3.2	1.83	1.20	2.34	3.25	1.17	1.18	1.07	0.76
1 1/2 x 3/16	38.1 x 4.8	2.68	1.80	3.43	4.58	1.17	1.64	1.12	0.74
1 1/2 x 1/4	38.1 x 6.3	3.48	2.30	4.40	5.83	1.14	2.20	1.19	0.74
1 1/2 x 5/16	38.1 x 7.9	4.26	2.90	5.40	6.66	1.12	2.62	1.24	0.74
1 1/2 x 3/8	38.1 x 9.5	4.99	3.40	6.34	7.91	1.12	3.11	1.30	0.74
2 x 1/8	50.8 x 3.2	2.46	1.70	3.10	7.91	1.60	2.13	1.40	1.02
2 x 3/16	50.8 x 4.8	3.63	2.40	4.61	11.45	1.57	3.11	1.45	1.02
2 x 1/4	50.8 x 6.3	4.75	3.20	6.06	14.57	1.55	4.10	1.50	0.99
2 x 5/16	50.8 x 7.9	5.83	3.90	7.42	17.46	1.52	4.92	1.55	0.99
2 x 3/8	50.8 x 9.5	6.99	4.70	8.77	19.98	1.50	5.74	1.63	0.99
2 1/2 x 3/16	63.5 x 4.8	4.61	3.10	5.81	22.89	1.98	4.92	1.75	1.24
2 1/2 x 1/4	63.5 x 6.3	6.1	4.10	7.68	29.14	1.96	6.39	1.83	1.24
2 1/2 x 5/16	63.5 x 7.9	7.44	5.00	9.48	35.38	1.93	7.87	1.88	1.22
2 1/2 x 3/8	63.5 x 9.5	8.78	5.90	11.16	40.79	1.91	9.34	1.93	1.22
3 x 1/4	76.2 x 6.3	7.29	4.90	9.29	51.6	2.36	9.50	2.13	1.59
3 x 5/16	76.2 x 7.9	9.08	6.10	11.48	62.9	2.34	11.60	2.21	1.50
3 x 3/8	76.2 x 9.5	10.72	7.20	13.61	73.3	2.31	13.60	2.26	1.47
3 x 1/2	76.2 x 12.7	13.99	9.40	17.74	92.4	2.29	17.50	2.36	1.47
3 x 5/8	76.2 x 15.9	17.11	11.50	21.68	109.1	2.24	21.30	2.49	1.45
4 x 1/4	101.6 x 6.3	9.82	6.60	12.52	124.9	3.18	17.20	2.77	2.01
4 x 5/16	101.6 x 7.9	12.2	8.20	15.48	154.4	3.15	21.10	2.84	2.01
4 x 3/8	101.6 x 9.5	14.58	9.80	18.45	181.5	3.12	24.90	2.89	2.01
4 x 1/2	101.6 x 12.7	19.05	12.80	24.19	231.4	3.10	32.30	2.99	1.98
4 x 5/8	101.6 x 15.9	23.36	15.70	29.74	277.2	3.05	39.30	3.12	1.95
4 x 3/4	101.6 x 19.0	27.53	18.50	35.10	318.8	3.02	46.00	3.22	1.95
6 x 3/8	152.4 x 9.5	22.17	14.90	28.13	640.6	4.78	57.80	4.16	3.02
6 x 1/2	152.4 x 12.7	29.17	19.60	37.10	828.7	4.72	75.50	4.27	3.00
6 x 5/8	152.4 x 15.9	36.01	24.20	45.87	1005.6	4.67	92.80	4.39	3.00





PERFILES COMERCIALES



SOLERA

Dimensiones		Peso
mm	Pulgadas	Kg/m
3 x 13	1/8 x 1/2	0.32
16	5/8	0.4
19	3/4	0.47
25	1	0.63
32	1 1/4	0.79
38	1 1/2	0.95
51	2	1.27
5 x 13	3/16 x 1/2	0.47
16	5/8	0.59
19	3/4	0.71
25	1	0.95
28	1 1/8	1.07
32	1 1/4	1.19
38	1 1/2	1.42
51	2	1.90
6 x 16	1/4 x 5/8	0.79
19	3/4	0.95
25	1	1.27
32	1 1/4	1.58
38	1 1/2	1.90
51	2	2.53
64	2 1/2	3.17
76	3	3.80
89	3 1/2	4.43
102	4	5.06
8 x 13	5/16 x 1/2	0.79
16	5/8	0.99
19	3/4	1.19
25	1	1.58
32	1 1/4	1.98
38	1 1/2	2.37
51	2	3.17
64	2 1/2	3.96
76	3	4.75
89	3 1/2	5.54
102	4	6.33
10 x 13	3/8 x 1/2	0.95
16	5/8	1.19
19	3/4	1.42
25	1	1.90
32	1 1/4	2.37
38	1 1/2	2.85

Dimensiones		Peso
mm	Pulgadas	Kg/m
10 x 51	3/8 x 2	3.80
64	2 1/2	4.75
76	3	5.70
102	4	7.60
13 x 16	1/2 x 5/8	1.58
19	3/4	1.90
25	1	2.53
32	1 1/4	3.17
38	1 1/2	3.80
51	2	5.06
64	2 1/2	6.33
76	3	7.60
89	3 1/2	8.86
102	4	10.13
16 x 19	5/8 x 3/4	2.37
25	1	3.17
32	1 1/4	3.96
38	1 1/2	4.75
51	2	6.33
64	2 1/2	7.91
76	3	9.50
89	3 1/2	11.08
102	4	12.66
19 x 25	3/4 x 1	3.80
32	1 1/4	4.75
38	1 1/2	5.70
51	2	7.60
64	2 1/2	9.50
76	3	11.40
102	4	15.19
22 x 51	7/8 x 2	8.86
64	2 1/2	11.08
76	3	13.29
102	4	17.73
25 x 38	1 x 1 1/2	7.60
51	2	10.13
64	2 1/2	12.66
76	3	15.19
102	4	20.26





PERFILES COMERCIALES



ZETA Y TEE

ZETA Y TEE ESTRUCTURAL				
	MEDIDA	mm	kg/m	kg/6m
ZETA	1/8 X 1"	3 X 25	1.60	9.60
TEE	1/8 X 3/4	3 X 19	1.00	6.00
TEE	1/8 X 1"	3 X 25	1.40	8.40

REDONDO



DIMENSIÓN		AREA DE LA SELECCIÓN		PESO	
mm	pulg.	mm ²	pulg. ²	kg/m	lb/pie
6.3	1/4	31.7	0.049	0.249	0.167
7.9	5/16		0.077	0.388	0.261
9.5	3/8		0.110	0.559	0.376
12.7	1/2	126.7	0.196	0.994	0.668
15.9	5/8	197.9	0.307	1.552	1.043
19.1	3/4	285.0	0.442	2.235	1.502
22.2	7/8	387.9	0.601	3.045	2.046
25.4	1	506.7	0.785	3.973	2.669
28.6	1 1/8	641.3	0.994	5.022	3.375
31.8	1 1/4	791.7	1.227	6.208	4.172
34.9	1 3/8	958.0	1.485	7.514	5.049
38.1	1 1/2	1140.1	1.767	9.000	6.048
41.3	1 5/8	1338.0	2.074	10.490	7.049
44.5	1 3/4		2.405	12.170	8.178
44.7	1 7/8	1781.3	2.761	13.970	9.388
50.8	2	2026.8	3.142	15.890	10.678

CUADRADO



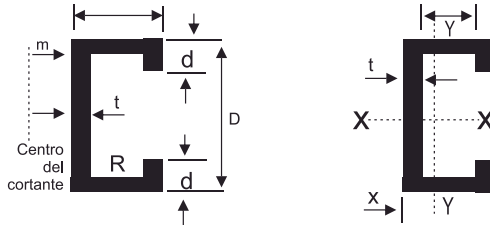
DIMENSIÓN		AREA DE LA SELECCIÓN		PESO	
mm	pulg.	mm ²	pulg. ²	kg/m	lb/pie
9.5	3/8	90.73	0.141	0.712	0.478
12.7	1/2	161.29	0.25	1.266	0.851
15.9	5/8	252.02	0.391	1.978	1.329
19.1	3/4	362.9	0.563	2.849	1.915
22.2	7/8	493.95	0.766	3.877	2.605
25.4	1	645.2	1.000	5.065	3.404
28.6	1 1/8	816.53	1.266	6.410	4.308
31.8	1 1/4	1008.07	1.563	7.913	5.318
34.9	1 3/8	1219.77	1.891	9.575	6.434
38.1	1 1/2	1451.62	2.250	11.395	7.657
44.5	1 3/4	1975.8	3.063	15.510	10.423
50.8	2	2580.65	4.000	20.258	13.613





EN

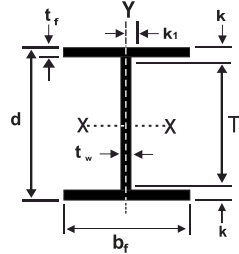
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CANALES MON-T

PERFIL	PULGADAS	CAL.	PESO	AREA	DIMENSIONES EN (mm)					EJE X-X			EJE Y-Y			- x	FAC. COL. Q fb=2100
										Sx	Ix	rx	Iy	Sy	ry		
TIPO	D X B		(kg/ml)	cm ²	D	B	d	t	R	cm ³	cm ⁴	cm	cm ⁴	cm ³	cm	cm	kg/cm
12 MT 10	12" X 3 1/2"	10	13.74	17.12	305	89	25	3.42	9.5	149.31	2,275.53	11.53	159.38	24.18	3.06	2.28	0.72
12 MT 12	12" X 3 1/2"	12	10.64	13.24	305	89	22	2.66	9.5	116.01	1,769.21	11.56	121.29	18.16	3.06	2.21	0.66
12 MT 14	12" X 3 1/2"	14	7.55	9.41	305	89	19	1.90	9.5	79.54	1,262.27	11.58	84.19	12.42	2.99	2.11	0.58
10 MT 10	10" X 3 1/2"	10	12.37	15.38	254	89	25	3.42	9.5	115.62	1,468.42	9.77	151.37	23.74	3.14	2.51	0.78
10 MT 12	10" X 3 1/2"	12	9.55	11.89	254	89	22	2.66	9.5	90.04	1,144.29	9.81	114.92	17.83	3.11	2.45	0.73
10 MT 14	10" X 3 1/2"	14	6.78	8.44	254	89	19	1.90	9.5	61.62	817.71	9.84	79.86	12.17	3.08	2.33	0.64
9 MT 10	9" X 3 1/4"	10	11.13	13.86	229	83	22	3.42	9.5	93.83	1,072.43	8.80	114.58	19.35	2.88	2.33	0.82
9 MT 12	9" X 3 1/4"	12	8.59	10.71	229	83	19	2.66	9.5	73.06	835.12	8.83	86.59	14.41	2.84	2.24	0.75
9 MT 14	9" X 3 1/4"	14	6.20	7.72	229	83	19	1.90	9.5	51.81	607.91	8.88	64.15	10.67	2.88	2.24	0.67
8 MT 10	8" X 3"	10	9.91	12.34	203	76	19	3.42	9.5	74.25	754.37	7.82	84.07	15.35	2.61	2.14	0.85
8 MT 12	8" X 3"	12	7.78	9.69	203	76	19	2.66	9.5	58.98	599.26	7.86	68.06	12.43	2.65	2.14	0.79
8 MT 14	8" X 3"	14	5.62	6.99	203	76	19	1.90	9.5	42.41	437.08	7.91	50.56	9.23	2.69	2.14	0.71
7 MT 10	7" X 2 3/4"	10	8.87	11.03	178	70	19	3.42	9.5	58.20	517.39	6.85	64.44	13.07	2.42	2.06	0.89
7 MT 12	7" X 2 3/4"	12	6.97	8.68	178	70	19	2.66	9.5	46.35	412.04	6.89	52.35	10.62	2.46	2.06	0.83
7 MT 14	7" X 2 3/4"	14	5.03	6.27	178	70	19	1.90	9.5	33.84	301.27	6.93	39.03	7.92	2.50	2.06	0.76
6 MT 10	6" X 2 1/2"	10	7.82	9.73	152	64	19	3.42	9.5	43.99	335.23	5.87	47.94	10.94	2.22	1.97	0.94
6 MT 12	6" X 2 1/2"	12	6.16	7.67	152	64	19	2.66	9.5	35.15	267.85	5.91	39.12	8.93	2.26	1.97	0.88
6 MT 14	6" X 2 1/2"	14	4.46	5.55	152	64	19	1.90	9.5	25.77	196.35	5.95	29.26	6.68	2.30	1.97	0.79
5 MT 10	5" X 2"	10	6.42	7.99	127	51	19	3.42	9.5	29.03	184.32	4.80	25.42	7.39	1.78	1.64	0.98
5 MT 12	5" X 2"	12	5.07	6.31	127	51	19	2.66	9.5	23.33	148.17	4.85	20.96	6.09	1.82	1.64	0.93
5 MT 14	5" X 2"	14	3.68	4.58	127	51	19	1.90	9.5	17.22	109.33	4.89	15.86	4.61	1.86	1.64	0.86
4 MT 10	4" X 2"	10	5.73	7.12	102	51	19	3.42	9.5	21.14	107.39	3.88	23.32	7.15	1.81	1.82	1.00
4 MT 12	4" X 2"	12	4.53	5.64	102	51	19	2.66	9.5	17.08	86.74	3.92	19.25	5.9	1.85	1.82	0.99
4 MT 14	4" X 2"	14	3.29	4.10	102	51	19	1.90	9.5	12.66	64.3	3.96	14.58	4.47	1.89	1.82	0.93
3 MT 12	3" X 1 3/4"	12	3.84	4.80	76	44	18	2.66	4.8	11.11	42.30	2.97	13.30	4.94	2.32	1.76	0.99
3 MT 14	3" X 1 3/4"	14	2.77	3.47	76	44	17	1.90	4.8	8.27	31.50	3.01	10.15	3.78	2.38	1.76	0.96





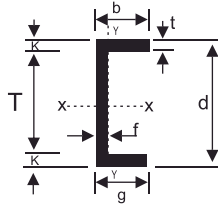
IPR PERFIL RECTANGULAR

PERFIL " IPR "	PESO kg/m	AREA cm ²	PERALTE d mm	PATIN b		ESPESOR DEL ALMA mm	EJE - XX			EJE - YY		
				Ancho mm	Espesor mm		I cm ⁴	S cm ³	r cm	I cm ⁴	S cm ³	r cm
6" x 4"	13.4	17.29	149.86	100.07	5.46	4.31	682.61	91.11	6.27	91.57	18.18	2.29
152.4 x 101.6	17.9	22.7	152.00	102.00	7.10	5.80	903.00	119.00	6.30	120.20	23.00	2.30
	23.8	30.45	159.00	102.00	10.30	6.60	1,319.00	165.00	6.58	179.80	35.00	2.43
8" x 4"	14.9	19.03	201.00	100.00	5.20	4.30	1,282.00	127.00	8.20	82.80	16.00	2.08
	19.4	24.71	203.00	102.00	6.50	5.80	1,644.00	162.00	8.15	109.00	21.00	2.10
203.2 x 101.6	22.4	28.58	206.00	102.00	8.00	6.20	1,998.00	193.00	8.35	137.30	27.00	2.19
8" x 5 1/4"	26.9	33.93	206.75	133.35	8.38	5.84	2,576.47	249.08	8.71	331.73	49.81	3.12
203.2 x 133.4	31.3	39.74	210.31	133.85	10.16	6.35	3,134.22	298.24	8.86	406.65	60.79	3.20
10" x 4"	17.9	21.87	251.00	100.00	5.20	4.60	2,160.00	172.00	9.96	83.60	17.00	1.95
	22.4	28.38	254.00	102.00	6.80	5.80	2,864.00	226.00	10.03	116.10	23.00	2.02
	25.5	32.13	257.00	102.00	8.40	6.10	3,405.00	265.00	10.28	143.60	28.00	2.11
254.0 x 101.6	28.3	36.19	260.00	102.00	10.00	6.40	4,004.00	308.00	10.52	174.40	34.00	2.19
10" x 5 3/4"	32.8	41.87	258.31	146.05	9.14	6.09	4,911.53	380.18	10.84	474.50	65.05	3.37
	38.7	49.09	262.38	146.55	11.17	6.60	5,993.73	457.20	11.04	586.88	80.13	3.45
254.0 x 146.0	44.7	57.03	265.93	147.57	12.95	7.62	7,075.93	530.94	11.12	695.10	94.22	3.47
12" x 4"	20.9	26.71	302.00	100.00	5.70	5.10	3,671.00	243.00	11.71	93.60	18.00	1.87
	23.8	30.38	304.54	101.34	6.73	5.58	4,287.18	280.22	11.86	117.37	23.10	1.96
	28.3	36.25	309.00	102.00	8.90	6.10	5,415.00	350.00	12.22	152.70	30.00	2.05
304.8 x 101.6	32.8	41.74	313.00	102.00	10.80	6.60	6,481.00	414.00	12.47	189.30	37.00	2.13
12 x 6 1/2"	38.7	49.35	310.38	164.84	9.65	5.84	8,491.12	547.33	13.13	720.08	87.50	3.83
	44.7	56.70	313.43	165.60	11.17	6.60	9,906.30	632.54	13.23	844.94	102.25	3.86
304.8 x 165.1	52.2	66.45	317.50	166.62	13.20	7.62	11,862.59	747.25	13.33	1,019.75	122.41	3.91
12" x 8"	59.6	75.94	303.00	203.00	13.10	7.50	12,907.00	850.00	13.03	1,835.00	180.00	4.92
	67.1	85.42	306.00	204.00	14.60	8.50	14,600.00	953.00	13.08	2,081.00	203.00	4.92
304.8 x 203.20	74.5	94.90	309.00	205.00	16.30	9.40	16,420.00	1,060.00	13.15	2,347.00	229.00	4.97
14" x 6 3/4"	44.7	56.84	352.00	171.00	9.70	6.90	12,053.00	685.00	14.50	728.00	85.00	3.58
	50.7	64.52	356.00	171.00	11.50	7.30	14,117.00	795.00	14.80	886.00	103.00	3.70
355.6 x 171.4	56.6	72.06	359.00	172.00	13.00	7.90	16,036.00	895.00	14.90	1,023.00	120.00	3.78
14" x 8"	64.1	81.61	347.00	203.00	13.40	7.80	17,856.00	1,027.00	14.78	1,877.00	185.00	4.80
	71.5	91.03	351.00	204.00	15.10	8.60	20,183.00	1,150.00	14.88	2,135.00	209.00	4.85
355.6 x 203.2	79	100.58	354.00	205.00	16.70	9.40	22,562.00	1,275.00	14.98	2,403.00	234.00	4.87
16" x 7"	53.6	68.32	403.00	177.00	10.90	7.60	18,576.00	923.00	16.48	920.00	103.00	3.68
	59.6	75.94	406.00	178.00	12.70	7.80	21,457.00	1,055.00	16.81	1,103.00	125.00	3.61
	67.1	85.42	409.00	179.00	14.30	8.80	24,279.00	1,186.00	16.87	1,270.00	143.00	3.86
406.4 x 177.8	74.5	94.84	413.00	180.00	15.90	9.60	27,280.00	1,322.00	16.97	1,448.00	161.00	3.91
18" x 7 1/2"	96.9	123.22	466.09	192.78	19.50	11.43	44,536.76	1,917.29	19.02	2,280.94	235.97	4.29
457.2 x 190.5	105.6	134.19	469.13	193.92	20.57	12.57	48,699.07	2,081.16	19.05	2,509.87	258.91	4.31
18" x 11"	113.2	143.87	462.53	280.29	17.27	10.79	55,358.78	2,392.52	19.63	6,326.71	452.28	6.62
	128.1	163.22	467.10	281.68	19.55	12.19	63,683.40	2,720.26	19.73	7,284.05	517.83	6.68
	144.3	183.87	472.18	283.08	22.09	13.58	72,840.50	3,080.78	19.86	8,366.25	591.57	6.73
	157.7	200.64	475.74	284.48	23.87	14.98	79,500.20	3,342.98	19.91	9,157.09	645.65	6.75
457.2 x 279.4	177.3	226.45	481.83	286.13	26.92	16.63	91,154.68	3,785.43	20.06	10,530.65	735.78	6.83



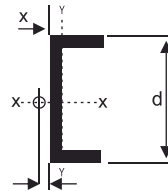


CANALES



DIMENSIONES

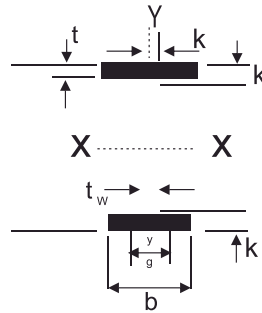
PEARLITE		PESO	DIMENSIONES						
d			b	a	tw	k	tf	GRAMIL g	TORNILLO Ø MAX.
mm	pulg.	kg/m.	mm	mm	mm	mm	mm	mm	mm
76.20	3	6.10	35.80	31.50	4.30	16.00	7	24	10
101.60	4	8.04	40.20	35.80	4.80	16.00	8	25	13
152.40	6	12.20	48.70	43.60	5.10	19.00	9	29	16
152.40	6	15.63	52.00	43.60	8.00	19.00	9	29	16
152.40	6	19.63	55.00	43.60	11.00	19.00	9	35	16
203.20	8	17.11	57.40	51.80	5.60	21.00	10	35	19
203.20	8	20.46	60.00	51.80	8.00	21.00	10	35	19
203.20	8	27.90	64.00	51.80	12.00	21.00	10	38	19
254.00	10	22.80	66.04	60.00	6.10	22.00	11	38	19
254.00	10	37.20	73.30	60.00	13.36	22.00	11	40	19
254.00	10	44.70	77.04	60.00	17.09	22.00	11	40	19
304.80	12	30.80	74.73	67.57	7.16	25.50	13	44	19
304.80	12	37.20	77.39	67.60	9.83	25.50	13	50	19
304.80	12	44.70	80.52	67.60	12.95	25.50	13	50	19



PROPIEDADES

PERALTE		PESO	AREA	EJE X-X			EJE Y-Y			DISTANCIA x
d				l	r	S	l	r	S	
mm	pulg.	kg/m	cm ²	cm ⁴	cm	cm ³	cm ⁴	cm	cm ³	cm
76.20	3	6.10	7.68	68.10	2.97	17.90	8.30	1.04	3.40	1.11
101.60	4	8.04	10.00	157.90	3.97	31.30	13.30	1.15	4.70	1.16
152.40	6	12.20	15.35	541.00	5.94	71.00	29.10	1.38	8.20	1.32
152.40	6	15.63	19.81	628.50	5.64	82.50	36.21	1.35	9.34	1.27
152.40	6	19.63	24.58	720.10	5.41	94.50	45.79	1.35	10.65	1.32
203.20	8	17.11	21.61	1,344.5	7.89	132.30	55.40	1.60	13.00	1.47
203.20	8	20.46	25.94	1,490.1	7.59	146.60	62.43	1.57	14.09	1.42
203.20	8	27.90	35.42	1,818.9	7.16	179.00	83.25	1.52	16.39	1.45
254.00	10	22.80	28.97	2,805.4	9.83	221.20	94.90	1.81	19.01	1.61
254.00	10	37.20	47.42	3,796.0	8.94	298.20	139.85	1.72	24.25	1.57
254.00	10	44.70	56.90	4,287.2	8.69	339.20	163.99	1.70	27.04	1.65
304.80	12	30.80	39.29	5,369.4	11.71	352.30	161.50	2.03	28.35	1.77
304.80	12	37.20	47.42	5,993.7	11.25	394.90	186.05	1.98	30.81	1.71
304.80	12	44.70	56.90	6,742.9	10.89	442.40	213.94	1.98	33.76	1.71





VIGA IPS PROPIEDADES

PERALTE d		PESO kg/m	AREA cm ²	EJE X-X			EJE Y-Y		
mm	pulg.			I cm ⁴	r cm	S cm ³	I cm ⁴	r cm	S cm ³
76.2	3	8.48	10.52	103.30	3.12	27.10	19.10	1.35	6.50
101.6	4	11.46	14.26	248.30	4.17	48.90	32.10	1.50	9.50
127.0	5	14.88	18.52	503.30	5.21	79.30	51.20	1.65	13.40
152.4	6	18.60	23.29	906.80	6.25	119.00	77.00	1.83	18.20
203.2	8	27.38	34.39	2,367.20	8.31	233.00	157.30	2.13	31.00

PERALTE d	PESO kg/m	PATIN		ALMA			DISTANCIAS			A	G	DIAMETRO REMACHES TORNILLOS
		ANCHO b	ESPEJOR D	ESPEJOR ALMA C	ESP. MED. c/2	TANGENTE T	k	gf	k			
76.2	8.48	59	6.6	4.3	2.0	45	15.5	38	12	27	36	9.5
101.6	11.46	68	7.4	4.8	3.0	70	16.0	50	13	32	38	12.7
127.0	14.88	76	8.3	5.3	3.0	89	19.0	64	13	35	40	12.7
152.4	18.60	85	9.1	5.8	3.0	114	19.0	76	13	40	44	15.8
203.2	27.38	102	10.8	6.9	4.0	159	22.0	72	14	48	56	19.0





PERFIL P.T.R.					
PERFIL TUBULAR RECTANGULAR					
DIMENSIONES		COLOR DE IDENTIFICACION	ESPESOR		PESO kg/m
pulg.	mm.		pulg.	mm.	
1" X 1"	25 x 25	Verde	0.095	2.4	1.62
		Rojo	0.133	3.4	2.10
1 1/2 X 1 1/2	38 x 38	Blanco	0.110	2.8	2.95
		Verde	0.125	3.2	3.29
		Rojo	0.154	4.0	3.91
2" x 2"	51 x 51	Blanco	0.110	2.8	4.00
		Verde	0.125	3.2	4.54
		Rojo	0.156	4.0	5.45
2 1/2 x 2 1/2	64 x 64	Blanco	0.125	3.2	5.84
		Verde	0.141	3.6	6.47
		Rojo	0.188	4.8	8.32
3" x 3"	76 x 76	Blanco	0.125	3.2	7.12
		Verde	0.156	3.6	8.62
		Rojo	0.188	4.8	10.20
3 1/2 x 3 1/2	89 x 89	Blanco	0.125	3.2	8.39
		Verde	0.156	4.0	10.20
		Rojo	0.188	4.8	12.10
		Azul	0.250	6.4	15.60
3" x 2"	76 x 51	Blanco	0.125	3.2	5.84
		Verde	0.141	3.6	6.47
		Rojo	0.188	4.8	8.32
4" x 2"	102 x 51	Blanco	0.125	3.2	7.12
		Verde	0.156	4	8.62
		Rojo	0.188	4.8	10.20
4" x 3"	102 x 76	Blanco	0.125	3.2	8.39
		Verde	0.156	4.0	10.20
		Rojo	0.188	4.8	12.10
		Azul	0.250	6.4	15.60
4" x 4"	102 x 102	Blanco	0.125	3.2	9.61
		Verde	0.156	4.0	11.83
		Rojo	0.188	4.8	14.10
		Azul	0.250	6.4	18.20
4 1/2 x 4 1/2	114 x 114	Blanco	0.125	3.2	10.88
		Verde	0.156	4.0	13.41
		Rojo	0.188	4.8	15.92
		Azul	0.250	6.4	20.70
5" x 5"	127 x 127	Blanco	0.125	3.2	12.14
		Verde	0.156	4.0	14.99
		Rojo	0.188	4.8	17.90
		Azul	0.250	6.4	23.20
5" x 3"	127 x 76	Blanco	0.125	3.2	9.61
		Verde	0.156	4.0	11.83
		Rojo	0.188	4.8	14.10
		Azul	0.250	6.4	18.20
6" x 3"	152 x 76	Blanco	0.125	3.2	10.88
		Verde	0.156	4.0	13.41
		Rojo	0.188	4.8	15.92
		Azul	0.250	6.4	20.70
6" x 4"	152 x 102	Blanco	0.125	3.2	12.14
		Verde	0.156	4.0	14.99
		Rojo	0.188	4.8	17.90
		Azul	0.250	6.4	23.20





PERFILES: ESTRUCTURALES ACERO A-50 EN SECCIONES HUECAS

TABLA DE PESOS PERFIL HSS KGS. X METRO

MEDIDA CUADRADA	MEDIDA RECTANGULAR	ESPESOR PARED						
		1/8	3/16	1/4	5/16	3/8	1/2	5/8
4 X 4		9.61	14.02	18.17	22.07	25.70	32.19	37.59
	2 X 6	9.61	14.02	18.17				
	3 X 5	9.61	14.02	18.17	22.07	25.70	32.19	37.59
4 1/2 X 4 1/2		10.63	15.92	20.70				
	3 X 6	10.63	15.92	20.70	25.24	29.49		
5 X 5		11.85	17.81	23.24	28.39	33.29	42.30	50.23
	2 X 8	11.85	17.81	23.24				
	3 X 7		17.81	23.24	28.39	33.29		
	4 X 6	11.85	17.81	23.24	28.39	33.29	42.30	50.23
5 1/2 X 5 1/2	3 X 8	12.94	19.72	25.77	31.56	37.10		
6 X 6	4 X 8	14.42	21.62	28.30	34.73	40.89	52.44	62.88
	5 X 7	14.42	21.62	28.30	34.73	40.89	52.44	62.88
	2 X 10		21.62	28.30				
7 X 7	3 X 10		23.51	30.83	37.90			
	4 X 10		25.42	33.36	41.05	48.48	62.57	75.53
	6 X 8		25.42	33.36	41.05	48.48	62.57	75.53
	2 X 12		25.42	33.36				
	3 X 12		27.30	35.89	44.22			
8 X 8	5 X 10		27.30	35.89	44.22	52.59		
			29.21	38.42	47.38	56.08	72.69	88.27
	4 X 2		29.21	38.42	47.38	56.08	72.69	
	6 X 10		29.21	38.42	47.38	56.08	72.69	
	4 X 14			43.49	53.72	63.67	82.82	
	8 X 10		33.00	43.49	53.72	63.67	82.82	
10 X 10	6 X 12		33.00	43.49	53.72	63.67	82.82	
			36.80	48.55	60.04	71.28	92.94	113.58
	4 X 16			48.55	60.04	71.28	92.94	
	6 X 14			48.55	60.04	71.28	92.94	
	8 X 12			48.55	60.04	71.28	92.94	
12 X 12	10 X 12			53.61	66.36	78.86	103.06	
				58.67	72.70	86.45	113.19	138.76
	6 X 18			58.67	72.70	86.45	113.19	
	8 X 16			58.67	72.70	86.45	113.19	
	10 X 14			58.67	72.70	86.45	113.19	

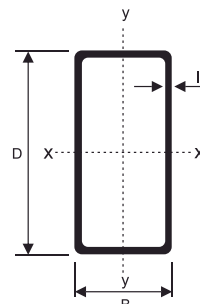
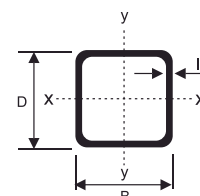




PERFILES: ESTRUCTURALES ACERO A-50 EN SECCIONES HUECAS

DESCRIPCION TAMAÑO Y ESPESOR					PESO		AREA	EJE X-X			
								I	S	r	
mm	mm	in.	in.		kg/m	lb/ft.m	cm ²	cm ⁴	cm ³	cm	
102	x	3.0	4"	x	0.120	9.62	6.46	12.26	195.63	38.36	3.99
102	x	6.4	4"	x	0.250	18.17	12.21	23.16	342.14	67.35	3.84
102	x	9.5	4"	x	0.375	25.70	17.27	32.77	445.37	86.67	3.69
127	x	6.4	5"	x	0.250	23.25	15.62	29.61	703.43	111.10	4.87
127	x	9.5	5"	x	0.375	33.29	22.37	42.45	949.00	149.29	4.73
152	x	6.4	6"	x	0.250	28.30	19.02	36.10	1261.18	165.51	5.91
152	x	9.5	6"	x	0.375	40.89	27.48	52.13	1,731.52	227.78	5.76
152	x	12.7	6"	x	0.500	52.44	35.24	67.10	2,101.97	275.30	5.60
203	x	6.4	8"	x	0.250	38.42	25.82	48.97	3,125.90	308.10	7.99
203	x	9.5	8"	x	0.375	56.10	37.69	71.61	4,412.10	432.62	7.85
203	x	12.7	8"	x	0.500	72.70	48.85	92.90	5,452.63	539.13	7.66
254	x	9.5	10"	x	0.375	71.28	47.90	90.97	8,907.00	703.00	9.90
254	x	12.7	10"	x	0.500	95.92	62.46	118.71	11,280.00	881.18	9.75
305	x	9.5	12"	x	0.375	86.46	58.10	110.32	15,817.00	1,039.00	11.97
305	x	12.7	12"	x	0.500	113.20	76.07	144.52	20,187.00	1,325.71	11.82

H.S.S.



DESCRIPCION TAMAÑO Y ESPESOR					PESO		AREA	EJE X-X			EJE Y-Y					
								I	S	r	I	S	r			
mm	mm	mm	in.	in.	kg/m	lb/ft.m	cm ²	cm ⁴	cm ³	cm	cm ⁴	cm ³	cm			
127	x	76	x	3.0	5 x 3"	x	0.120	9.61	6.46	12.26	268.05	42.21	4.68	121.96	32.09	3.15
127	x	76	x	6.4	5 x 3"	x	0.250	18.17	12.21	23.16	470.34	74.10	4.51	210.20	55.22	3.01
152	x	102	x	3.0	6 x 4"	x	0.120	12.14	8.16	15.48	507.80	66.82	5.73	273.46	53.62	4.20
152	x	102	x	6.4	6 x 4"	x	0.250	23.24	15.62	29.61	919.87	120.61	5.57	487.00	96.19	4.06
203	x	102	x	3.0	8 x 4"	x	0.120	14.67	9.86	18.71	1,023.93	100.88	7.40	351.71	68.96	4.34
203	x	102	x	6.4	8 x 4"	x	0.250	28.30	19.02	36.60	1,877.20	185.17	7.22	636.83	126.00	4.20
203	x	102	x	9.5	8 x 4"	x	0.375	40.89	27.48	52.13	2,576.47	254.00	7.03	857.44	168.79	4.06
254	x	102	x	4.8	10 x 4"	x	0.188	25.42	17.08	32.39	2,586.15	201.56	8.94	616.02	121.10	4.36
406	x	203	x	9.5	16 x 4"	x	0.375	71.28	47.90	90.97	15,900.00	783.30	13.22	1,681.38	331.00	4.30





L A M I N A



TABLA DE PESOS Y ESPESORES									
ESPESORES				PESO POR HOJA					
Calibre	m.m.	ms. De pulg.	Límite	kg/m ²	3 x 6	3 x 8	3 x 10	4 x 8	4 x 10
10	3.42	0.1345	0.1405 0.1285	27.471	45.92	61.23	76.54	81.65	102.06
11	3.01	0.1196	0.1256 0.1136	24.42	40.82	54.43	68.04	72.57	90.72
12	2.66	0.1046	0.1106 0.0987	21.365	35.3	47.06	58.78	62.70	78.31
13	2.28	0.0897	0.0947 0.0847	18.315	30.62	40.82	51.03	54.43	68.04
14	1.9	0.0747	0.0797 0.0697	15.262	25.52	34.020	42.525	45.36	56.7
16	1.52	0.0598	0.0648 0.0548	12.210	20.41	27.216	34.020	36.29	45.36
18	1.21	0.0478	0.0518 0.0438	9.768	16.330	21.773	27.216	29.03	36.29
20	0.91	0.0359	0.0389 0.0329	7.326	12.25	16.330	20.412	21.77	27.22
22	0.76	0.0299	0.0329 0.0269	6.105	10.21	13.608	17.010	18.14	22.68
24	0.61	0.0239	0.0269 0.0209	4.884	8.165	10.886	13.608	14.54	18.17
26	0.45	0.0179	0.0199 0.0159	3.663	6.124	8.165	10.206	10.9	13.61
28	0.38	0.0149	0.0169 0.0129	3.052	5.103	6.804	8.505	9.085	11.34
30	0.30	0.012	0.0140 0.0100	2.442	4.082	5.443	6.804	7.269	9.087





PLACA



PESO APROXIMADO DE PLACA DE ACERO EN MEDIDAS ESTÁNDAR								
MEDIDAS		1"	15/16"	7/8"	13/16"	3/4"	11/16"	5/8"
pies	metros	25.4 mm.	23.8 mm.	22.2 mm.	20.6 mm.	19.1 mm.	17.5 mm.	15.9 mm.
3' X 6'	(.914 X 1.83)	333	312	291	271	250	229	208
3' X 8'	(.914 X 2.44)	444	416	389	361	333	305	278
3' X 10'	(.914 X 3.05)	555	521	486	451	416	382	347
4' X 8'	(1.22 X 2.44)	592	555	518	481	444	407	370
4' X 10'	(1.22 X 3.05)	740	694	648	601	555	509	463
4' X 12'	(1.22 X 3.66)	888	833	777	722	666	611	555
5' X 10'	(1.52 X 3.05)	925	868	810	752	694	636	578
5' X 15'	(1.52 X 4.57)	1388	1301	1215	1128	1011	954	868
5' X 20'	(1.52 X 6.10)	1851	1735	1619	1504	1388	1272	1157
6' X 12'	(1.83 X 3.66)	1333	1249	1166	1083	999	916	833
6' X 18'	(1.83 X 5.49)	1999	1874	1749	1624	1499	1374	1249
6' X 20'	(1.83 X 6.10)	2221	2082	1943	1804	1666	1527	1388
Kilos por m ²		199.21	186.75	174.31	161.85	149.41	136.96	124.51
kilos por pie ²		18.507	17.350	16.194	15.037	13.880	12.724	11.567

MEDIDAS		9/16"	1/2"	7/16"	3/8"	5/16"	1/4"	3/16"
pies	metros	14.3 mm.	12.7 mm.	11.1 mm.	8.5 mm.	7.9 mm.	6.4 mm.	4.8 mm.
3' X 6'	(.914 X 1.83)	187	167	146	125	104	83	62
3' X 8'	(.914 X 2.44)	250	222	194	167	139	111	83
3' X 10'	(.914 X 3.05)	312	278	243	208	173	139	104
4' X 8'	(1.22 X 2.44)	333	296	259	222	185	148	111
4' X 10'	(1.22 X 3.05)	416	370	324	278	231	185	139
4' X 12'	(1.22 X 3.66)	500	444	389	333	278	222	167
5' X 10'	(1.52 X 3.05)	521	463	405	347	289	231	174
5' X 15'	(1.52 X 4.57)	781	694	607	521	434	347	260
5' X 20'	(1.52 X 6.10)	1041	925	810	694	578	463	347
6' X 12'	(1.83 X 3.66)	750	666	583	500	416	333	250
6' X 18'	(1.83 X 5.49)	1124	999	874	750	625	500	375
6' X 20'	(1.83 X 6.10)	1249	1110	972	833	694	555	416
Kilos por m ²		112.06	99.61	87.15	74.70	62.25	49.80	37.35
kilos por pie ²		10.41	9.253	8.097	6.940	5.793	4.627	3.47





LAMINA ANTIDERRAPANTE FUNDIDA

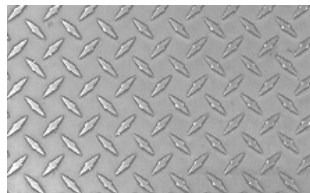
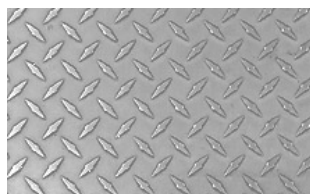


TABLA DE ESPECIFICACIONES								
CALIBRE	ESPESOR		MEDIDAS STANDAR				kg/m ²	kg/hoja
			ANCHO		LARGO			
	mm.	pulg.	mts.	pies	mts.	pies		
12	2.66	0.1046	0.915	3'	2.438	8'	21.967	49.003
			0.915	3'	3.048	10'	21.967	61.264
			0.915	3'	4.572	15'	21.967	91.896
1/8"	3.17	0.1250	0.915	3'	2.438	8'	30.514	68.07
			0.915	3'	3.048	10'	30.514	85.101
10	3.42	0.1345	0.915	3'	2.438	8'	32.352	72.17
			0.915	3'	3.048	10'	32.352	90.227
3/16"	4.76	0.1875	0.915	3'	3.048	10'	43.274	120.688
			0.915	3'	4.572	15'	43.274	181.032
			0.915	3'	6.096	20'	43.274	241.375
1/4"	6.35	0.2500	0.915	3'	3.048	10'	56.034	156.274
			0.915	3'	4.572	15'	56.034	234.412
			0.915	3'	6.096	20'	56.034	312.549



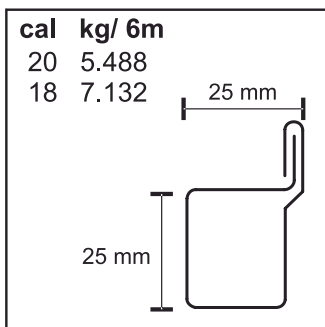
LAMINA ANTIDERRAPANTE ZARPA

TABLA DE ESPECIFICACIONES								
CALIBRE	ESPESOR		MEDIDAS STANDAR				kg/m ²	kg/hoja
			ANCHO		LARGO			
	mm.	pulg.	mts.	pies	mts.	pies		
20	0.91	0.0359	0.915	3'	3.050	10'	7.326	20.412
18	1.21	0.0478	0.915	3'	3.050	10'	9.768	27.216
16	1.52	0.0598	0.915	3'	3.050	10'	12.21	34.020
14	1.90	0.0747	0.915	3'	3.050	10'	15.262	42.525

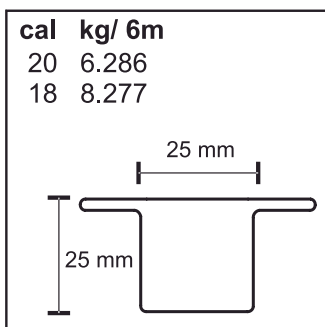




PERFILES TUBULARES GALVANIZADOS

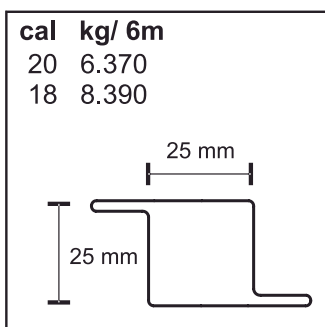
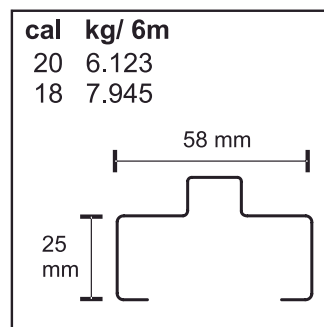


ZV-101
Angulo liso, este perfil es el que forma la hoja de la ventana, la cual es la que tiene movimiento, sea corredizo o abatible y su ceja sostiene el vidrio corredizo.



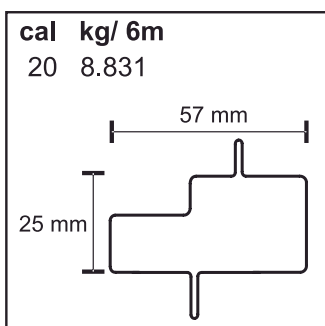
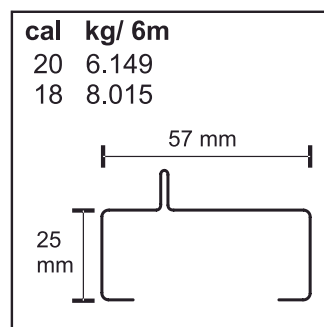
ZV-103
La "T" sencilla va en la parte central de la ventana corrediza o abatible y sus cejas sirven para sostener el vidrio y también el mosquitero.

ZV-120
Chambrana estructural tiene la misma función que el perfil ZV-121 pero para ventanas más estructurales u otros usos que requieran mayor resistencia.



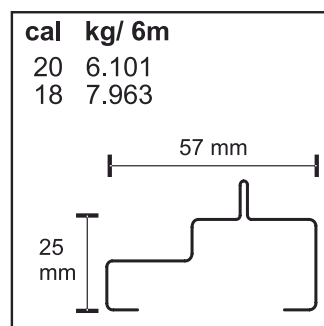
ZV-106
La "Z" se puede utilizar como perfil ZV-103 con la diferencia que al tener la ceja en desigual posición facilita otros usos (ventana abatible con movimiento de la hoja interior, exterior, etc).

ZV-121
La chambrana se utiliza como marco de ventana (superior y lateral en la corrediza y en la abatible los cuatro lados) y en su ceja sostiene el vidrio y/o mosquitero.



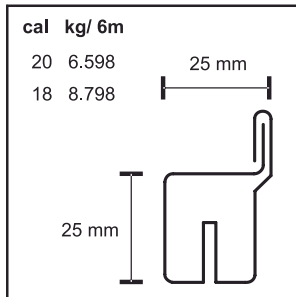
ZV-116
Perfil escalonado con doble ceja se usa en la parte inferior, exclusivamente para ventana corrediza donde la hoja que tiene movimiento va montada sobre la ceja superior y en la ceja inferior se colocan los vidrios cuando existan fijados.

ZV-122
Escalonado con una ceja se usa en la parte inferior exclusivamente para ventana corrediza y en su ceja va montada la hoja que tiene el movimiento.

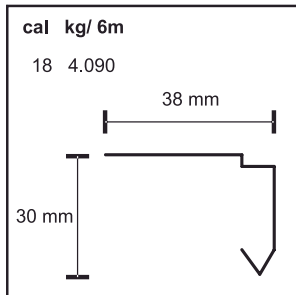




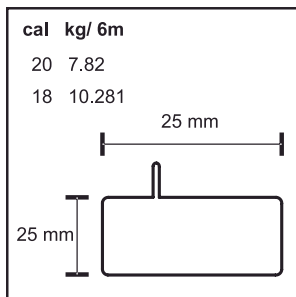
PERFILES TUBULARES GALVANIZADOS



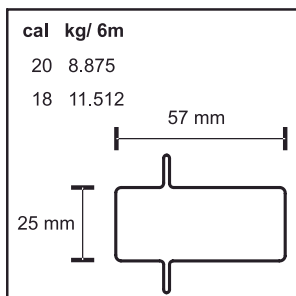
ZV-123
Angulo ranurado ya en la parte inferior de la hoja que tiene el movimiento en la ventana corrediza en su ceja se coloca el vidrio y su ranura va montada en la ceja del perfil ZV-122.



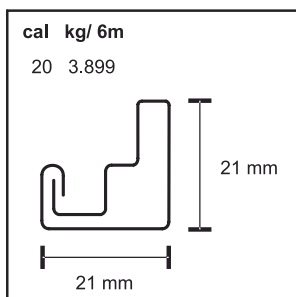
ZV-124
Riel este perfil va soldado al marco superior (chambrana) de la ventana corrediza y en el gancho va montada la hoja que tiene el movimiento.



ZV-126
Chambrana cerrada. se utiliza como marco de la ventana igual que el perfil ZV-121. pero con la diferencia de ser más resistente estructuralmente por ser un perfil cerrado.

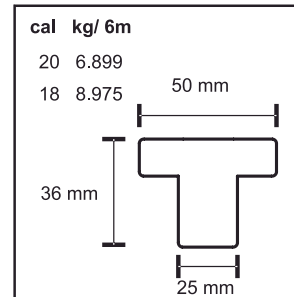


ZV-127
"T" doble. este perfil va en ventanas con fijos en la parte superior como inferior. se colocan los vidrios y/o mosquiteros.

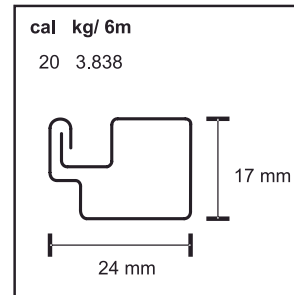


ZV-131
Mosquitero. va de marco en ventanas, puertas y ventilas.

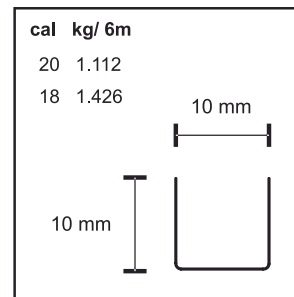
ZV-144
"T" de caja tiene la misma funcion que el perfil ZV-103 para ventanas más estructurales u otros usos con mayor resistencia.



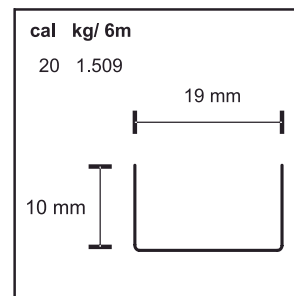
ZV-145
Mosquitero. va de marco en ventanas, puertas y ventilas.



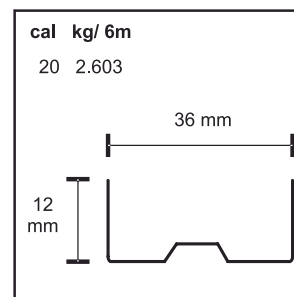
ZV-154
Canaleta se usa como porta-vidrio de la ventana en algunas partes del país como marco o sujetador de la tela mosquitero.



ZV-155
Canaleta se usa como porta-vidrio de la ventana en algunas partes del país como marco o sujetador de la tela mosquitero.

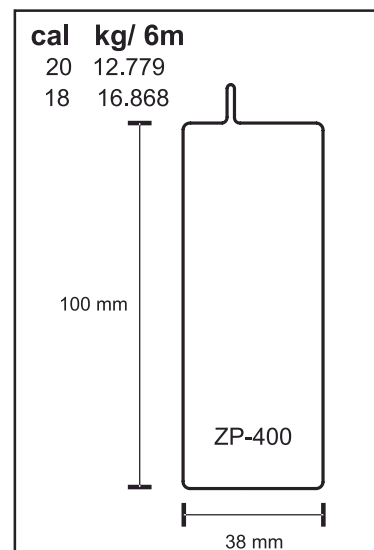
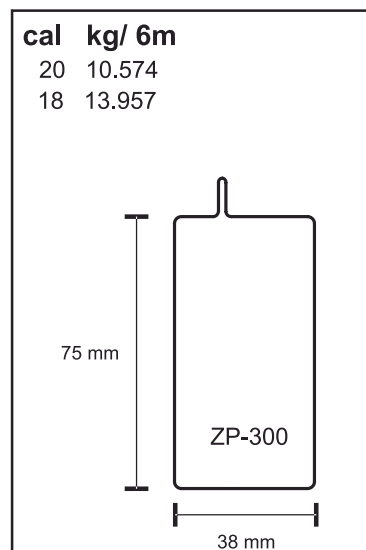
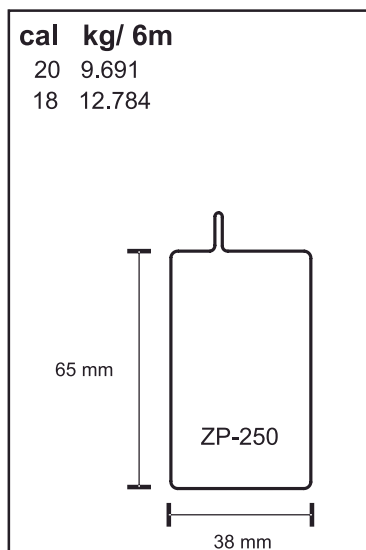
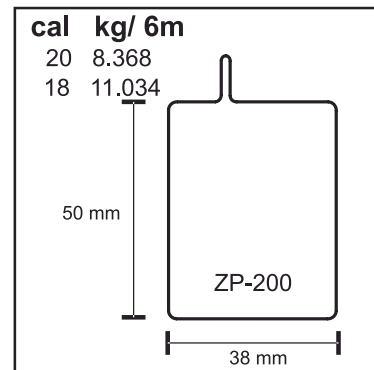
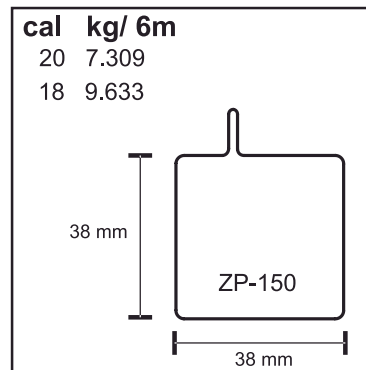
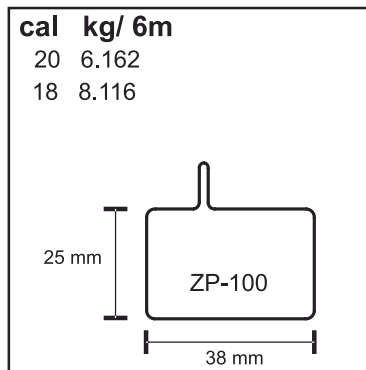
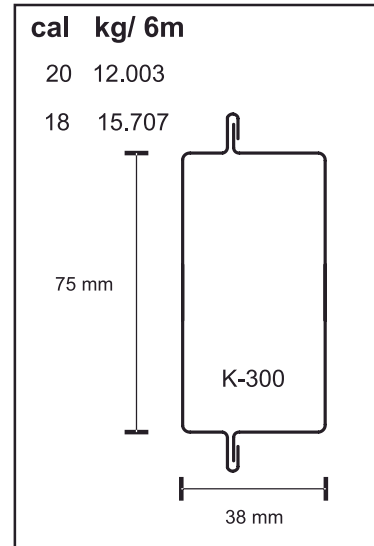
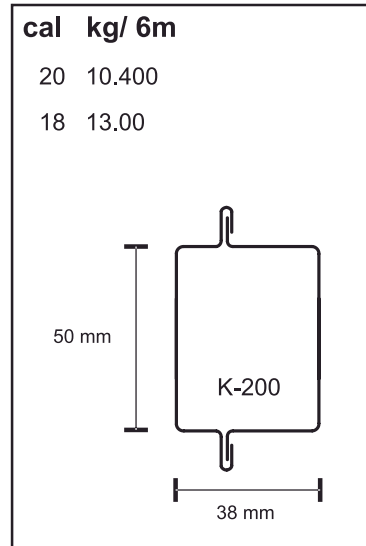
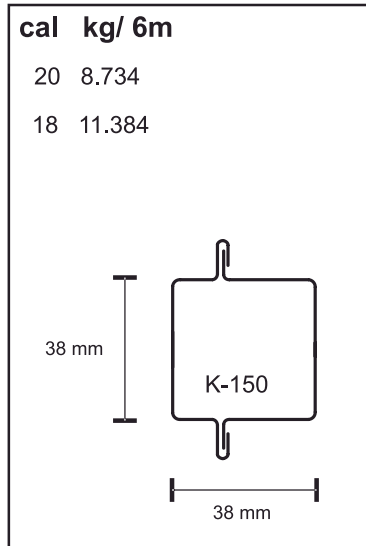


ZV-156
Canaleta se utiliza principalmente para falso plafón.





PERFILES TUBULARES GALVANIZADOS



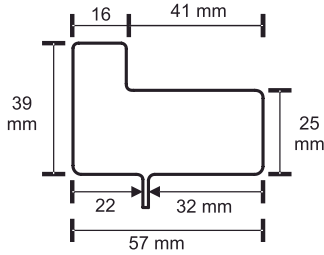


PERFILES TUBULARES GALVANIZADOS



cal kg/ 6m

20 8.933
18 11.775



M-221

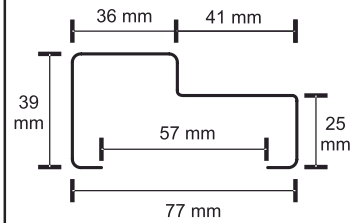
Marco para puerta con tope sencillo y caja que funciona como chambrana por si el marco va junto a una ventana lateral.

M-300

Marco para puerta con tope doble para mayor resistencia.

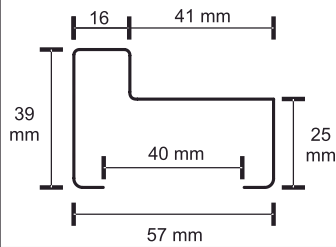
cal kg/ 6m

20 6.615
18 8.552



cal kg/ 6m

20 5.663
18 7.286



M-225

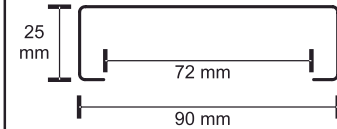
Marco para puerta con tope sencillo..

M-350

Marco para puertas que no requieren topes (vaiven) o bien para closets donde el tope de la puerta es de frente.

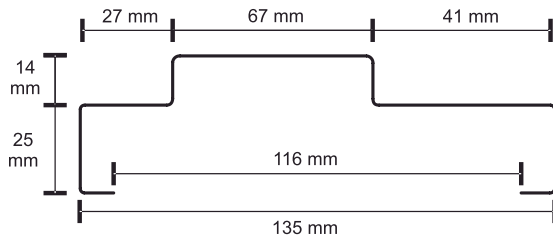
cal kg/ 6m

20 6.041



cal kg/ 6m

20 8.754
18 11.553

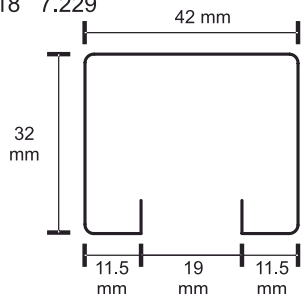


M-600

Marco doble con tope para puerta abatible hacia el interior y puerta mosquitero hacia el exterior una ventana lateral.

cal kg/ 6m

18 7.229



1400

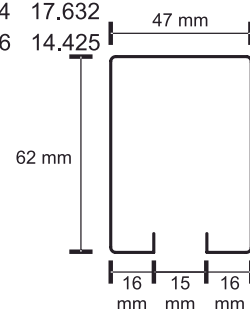
Este perfil se utiliza como riel o guia, colocandolo en la parte superior de los portones, rejas, cancelos, etc., para que estos puedan tener deslizamiento.

1500

Este perfil se utiliza como riel o guia, colocandolo en la parte superior de los portones, rejas, cancelos, etc., para que estos puedan tener deslizamiento.

cal kg/ 6m

14 17.632
16 14.425

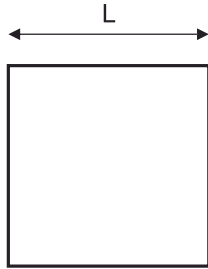




PERFILES TUBULARES GALVANIZADOS

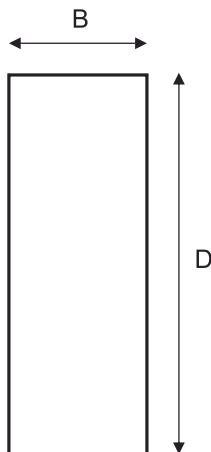


CUADRADO



PERFIL		PESO POR PIEZA DE CMS. DE LARGO EN KG.				
		CALIBRE				
	LADO	20	18	16	14	12
ZC-050	13 mm	2.223	2.894			
ZC-075	19 mm	3.282	4.300			
ZC-100	25 mm	4.341	5.701	7.045	8.685	
ZC-125	32 mm	5.580	7.346	9.103	11.236	
ZC-150	38 mm	6.639	8.741	10.847	13.407	18.481
ZC-200	50 mm		11.547	14.345	17.767	24.565
ZC-250	64 mm			17.552	21.603	29.489

RECTANGULAR



PERFIL		PESO POR PIEZA DE CMS. DE LARGO EN KG.				
B x D		CALIBRE				
	mm	20	18	16	14	12
ZR-100	13 X 25	3.333	4.3			
ZR-125	20 X 32	4.517	5.934			
ZR-175	20 X 45	5.673	7.463			
ZR-200	25 X 50	6.555	8.630	10.702	13.235	
ZR-225	20 X 58	6.815	8.974			
ZR-249	32 X 65	8.500	11.203			
ZR-250	38 X 64	9.125	11.988		18.129	25.070
ZR-300	38 X 75	9.608	12.603	15.573	19.161	
ZR-400	38 X 100	11.813	15.521	19.208	23.684	





TUBERIA INDUSTRIAL TRAMO COMERCIAL 6.00 mts.

DIAMETRO EXTERIOR		PESO TEÓRICO		
mm.	pulg.	cal.	kg/m	kg/6 m
12.7	1/2"	18	0.380	2.280
		20	0.294	1.764
15.875	5/8"	14	0.715	4.290
		16	0.600	3.600
		18	0.488	2.928
		20	0.383	2.228
19.05	3/4"	14	0.870	5.220
		16	0.725	4.350
		18	0.593	3.358
		20	0.452	2.712
20.6	13/16"	14	0.960	5.760
		16	0.785	4.710
		18	0.625	3.750
		20	0.504	3.024
22.22	7/8"	14	1.020	6.120
		16	0.830	4.980
		18	0.683	4.098
		20	0.525	3.150
23.8	15/16"	14	1.120	6.720
		16	0.895	5.370
		18	0.735	4.410
		20	0.560	3.360
25.4	1"	14	1.170	7.020
		16	0.960	5.760
		18	0.789	4.734
		20	0.600	3.600
28.57	1 1/8"	14	1.330	7.980
		16	1.071	6.426
		18	0.880	5.280
		20	0.672	4.032
31.75	1 1/4"	14	1.510	9.120
		16	1.210	7.296
		18	0.978	5.868
		20	0.756	4.536

DIAMETRO EXTERIOR		PESO TEÓRICO			
mm.	pulg.	cal.	kg/m	kg/6 m	
33.4	1.315"	14	1.575	9.450	
		16	1.260	7.56	
		18	1.030	6.180	
		20	0.790	4.740	
34.92	1 3/8"	13	1.930	11.500	
		14	1.640	9.840	
		16	1.330	7.980	
		18	1.070	6.420	
38.10	1 1/2"	20	0.810	4.860	
		22	0.686	4.116	
		14	1.827	10.962	
		16	1.450	8.700	
41.3	1 5/8"	18	1.190	7.140	
		20	0.903	5.418	
		14	1.980	11.880	
		16	1.584	9.504	
42.16	1.660"	18	1.267	7.602	
		20	0.950	5.700	
		14	2.050	12.300	
		16	1.670	10.020	
44.45	1 3/4"	18	1.325	7.950	
		20	1.010	6.060	
		14	2.130	12.780	
		16	1.703	10.218	
47.62	1 7/8"	18	1.396	8.376	
		20	1.070	6.420	
		14	2.282	13.692	
		16	1.826	10.956	
48.26	1.900"	18	1.461	8.766	
		20	1.095	6.570	
		14	2.135	12.810	
		16	1.720	10.320	
		18	1.400	8.400	
		20	1.160	6.960	

APLICACIONES Muebles tubulares - Cortineros - Estructuras ligeras - Barras para cortinas metálicas.



TUBERIA INDUSTRIAL

TUBO MECANICO

(CED 30)

Tramo Comercial

6.00 m

DIAMETRO EXTERIOR		PESO TEÓRICO		
mm.	pulg.	cal.	kg/m	kg/6 m
50.8	2"	14	2.48	14.880
		16	1.985	11.910
		18	1.620	9.720
		20	1.234	7.404
57.1	2 1/4"	14	2.814	16.884
		16	2.205	13.230
		18	1.752	10.512
		20	1.344	8.064
60.4	2 3/8"	14	2.864	17.184
		16	2.330	13.980
		18	1.890	11.340
		20	1.407	8.442
63.5	2 1/2"	14	3.100	18.600
		16	2.490	14.940
		18	2.021	12.120
73.03	2 7/8"	14	3.520	21.120
		16	2.835	17.010
		18	2.320	13.920
76.2	3"	14	3.710	22.260
		16	2.960	17.760
		18	2.420	14.520
88.9	3 1/2"	14	4.370	26.220
		16	3.490	20.940
		18	2.850	17.100
101.6	4"	14	4.850	29.100
		16	3.960	23.760
		18	3.185	19.110

REN-GLON	DIAMETRO NOMINAL	DIAMETRO EXTERIOR	ESPESOR DE LA PARED	PESO TEÓRICO	
				kg/m	kg/6 m
O1	13 mm. (1/2")	21.33 mm. (0.840")	1.7094 mm. (.067")	0.900	5.400
O2	19 mm. (3/4")	26.67 mm. (1.050")	1.7094 mm. (.067")	1.125	7.300
O3	25 mm. (1")	33.40 mm. (1.315")	1.8974 mm. (.075")	1.500	9.000
O4	32 mm. (1 1/4")	42.16 mm. (1.660")	2.2784 mm. (.090")	2.3500	14.100
O5	38 mm. (1 1/2")	48.26 mm. (1.900")	2.2784 mm. (.090")	2.700	16.200
O6	51 mm. (2")	60.32 mm. (2.375")	2.6568 mm. (.105")	3.950	23.700
O7	64 mm. (2 1/2")	73.03 mm. (2.875")	2.6568 mm. (.105")	4.800	28.800
O8	76 mm. (3")	88.90 mm. (3.500")	3.0378 mm. (.120")	6.700	40.200
O9	102 mm. (4")	114.30 mm. (4.500")	3.0378 mm. (.120")	8.600	51.600

APLICACIONES Postes - Estructuras - Andamios Tubulares - Escleras
 - Barras para cortinas metalicas - Refuerzo para redilas en camiones -
 Desas (Tumba burros).

DIMENSIONES EXTERIORES		PESO TEÓRICO		
pulg.	(mm)	No.	kg/m	kg/6 m
OVALADO		14	2.480	14.880
3/4"	19.05	16	1.985	11.910
2 3/4"	69.85	18	1.620	9.720



TUBO NEGRO Y GALVANIZADO



Cedula 40

TUBERIA DE ACERO
Cedula 40 ASTM - A 53 GRADO B

APLICACIONES
Conduccion de liquidos, aire, gas
y estructuras para invernaderos

DIAMETRO EXTERIOR				ESPEJOR DE PARED		DIAMETRO INTERIOR		PESO		PRESIÓN HIDROST.	
NOMINAL		REAL									
mm.	pulg.	mm.	pulg.	mm.	pulg.	mm.	pulg.	kg/m	lbs/pie	kg/cm ²	lbs/pulg ²
10	3/8"	17.1	0.675	2.31	0.091	12.52	0.493	0.85	0.57	50	700
13	1/2"	21.3	0.840	2.71	0.109	15.80	0.622	1.27	0.85	50	700
19	3/4"	26.7	1.050	2.87	0.113	20.93	0.824	1.68	1.13	50	700
25	1"	33.4	1.315	3.38	0.133	26.64	1.049	2.50	1.68	50	700
32	1 1/4"	42.2	1.660	3.56	0.140	35.05	1.38	3.39	2.27	70	1000
38	1 1/2"	48.3	1.900	3.68	0.145	40.89	1.61	4.16	2.72	70	1000
50	2"	60.3	2.375	3.91	0.154	52.50	2.010	5.48	3.65	70	1000
64	2 1/2"	73.0	2.875	3.16	0.203	62.71	2.469	8.66	5.79	70	1000
76	3"	88.9	3.500	5.49	0.216	77.92	3.068	11.34	7.58	70	1000
102	4"	114.3	4.500	6.02	0.237	102.3	4.026	16.21	10.79	85	1000

CEDULA 40 NORMA X											
DIAMETRO EXTERIOR				ESPEJOR DE PARED		DIAMETRO INTERIOR		PESO		PRESIÓN HIDROST.	
NOMINAL		REAL									
mm.	pulg.	mm.	pulg.	mm.	pulg.	mm.	pulg.	kg/m	lbs/pie	kg/cm ²	lbs/pulg ²
64	2 1/2"	73.0	2.875	4.06	0.160	64.88	2.555	6.90	4.64	70	1000
74	3"	88.9	3.500	4.32	0.170	80.26	3.160	9.00	6.05	70	1000
102	4"	114.3	4.500	4.66	0.188	104.90	4.130	12.70	8.53	85	1200

CEDULA 80											
DIAMETRO EXTERIOR				ESPEJOR DE PARED		DIAMETRO INTERIOR		PESO		PRESIÓN HIDROST.	
NOMINAL		REAL									
mm.	pulg.	mm.	pulg.	mm.	pulg.	mm.	pulg.	kg/m	lbs/pie	kg/cm ²	lbs/pulg ²
10	3/8"	17.1	0.675	3.21	0.126	10.74	0.423	1.10	0.74	59.5	850
13	1/2"	21.3	0.840	3.74	0.147	13.87	0.546	1.61	1.09	59.5	850
19	3/4"	26.7	1.050	3.92	0.154	18.85	0.742	2.18	1.47	59.5	850
25	1"	33.4	1.315	4.55	0.179	24.31	0.957	3.21	2.17	59.5	850
32	1 1/4"	42.2	1.660	4.86	0.191	32.46	1.278	4.44	3.00	127	1800
38	1 1/2"	48.3	1.900	5.09	0.2	38.1	1.500	5.37	3.63	127	1800
50	2"	60.0	2.373	5.55	0.218	49.25	1.939	7.43	5.02	176	2500

