



# MULTI ACERO

CATÁLOGO DE PRODUCTOS SIDERÚRGICOS



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# MULTI ACERO



WhatsApp: +54 9 11 5400-4040

# TUBOS

**TABLA DE PESOS TEÓRICOS DE CAÑOS ESTRUCTURALES (en Kgr. por caño de 6m.)**

pulg.	mm	mm	mm	mm	Espesor de pared en mm														
					0.90	1.10	1.25	1.14	1.60	1.80	2.00	2.52	2.85	3.25	4.00	4.85	5.20	6.40	
1/2	12.70	10 x 10			1.573	1.890	2.120	2.358	2.633	2.907	3.170								
5/8	15.87	12x12			1.996	2.407	2.707	3.021	3.385	3.752	4.110								
3/4	19.05	15 x 15	20 x 10		2.420	2.925	3.296	3.685	4.139	4.600	5.052								
13/16	20.63				2.631	3.183	3.589	4.015	4.513	5.021	5.520								
7/8	22.22		20 x 15		2.843	3.442	3.883	4.347	4.890	5.445	5.991								
15/16	23.81				3.055	3.701	4.178	4.679	5.267	5.869	6.462								
1	25.40	20 x 20	25 x 15 - 30 x 10	14 x 30	3.267	3.960	4.472	5.011	5.644	6.293	6.933	8.542	9.521	10.689					
1 1/8	28.57		30 x 15		3.689	4.477	5.059	5.673	6.395	7.139	7.873	9.725	10.860	12.215					
1 1/4	30.16				3.901	4.736	5.354	6.006	6.772	7.563	8.344	10.319	11.531	12.981					
1 1/4	31.75	25 x 25	30 x 20 - 40 x 10		4.113	4.995	5.648	6.338	7.149	7.987	8.815	10.913	12.202	13.746					
1 3/8	34.92			25 x 40	4.536	5.511	6.235	7.000	7.900	8.832	9.754	12.096	13.541	15.273					
1 1/2	38.10	30 x 30	40 x 20	19 x 47	4.960	6.030	6.824	7.664	8.654	9.680	10.696	13.283	14.883	16.804					
1 5/8	41.27				5.383	6.546	7.411	8.326	9.406	10.525	11.636	14.467	16.222	18.330					
1 3/4	44.45	35 x 35	40 x 30 - 50 x 20		5.807	7.064	8.000	8.991	10.159	11.373	12.578	15.654	17.564	19.861					
1 7/8	47.62		50 x 25	24 x 58	6.229	7.581	8.587	9.653	10.911	12.219	13.517	16.837	18.903	21.387					
2	50.80	40 x 40	50 x 30 - 60 x 20	28 x 60	6.653	8.099	9.176	10.317	11.665	13.067	14.459	18.025	20.246	22.919					
2 1/8	53.97						9.763	10.979	12.416	13.912	15.399	19.208	21.584	24.445					
2 1/4	57.15	45 x 45	60 x 30 - 50 x 40				10.352	11.643	13.170	14.760	16.341	20.395	22.927	25.976					
2 3/8	60.32						10.939	12.308	13.921	15.605	17.280	21.579	24.265	27.502					
2 1/2	63.50	50 x 50	60 x 40 - 70 x 30 x 20	80			11.528	12.970	14.675	16.453	18.222	22.766	25.608	29.033	35.259				
2 3/4	69.85						12.704	14.296	16.180	18.147	20.104	25.137	28.289	32.091	39.022				
3	76.20	60 x 60	70 x 50 - 80 x 40 x 30 - 100 x 20	45 x 88			13.880	15.623	17.685	19.840	21.985	27.507	30.970	35.148	42.785	51.338			
3 1/2	88.90	70 x 70	80 x 60 - 90 x 50 x 40	100			16.231	18.276	20.696	23.227	25.748	32.249	36.332	41.263	50.311	60.463	64.480		
3 3/4	95.25	75 x 75	110 x 40 - 100 x 50 x 60 - 80 x 70	90					22.201	24.920	27.630	34.619	39.013	44.320	54.074	65.026	69.372		
4	101.60	80 x 80	100 x 60 - 120 x 40						23.706	26.613	29.511	36.990	41.694	47.378	57.837	69.589	74.264	90.311	
4 1/2	114.30	90 x 90	100 x 80 - 110 x 70 120 x 60 - 140 x 40						26.716	30.000	33.274	41.731	47.057	53.493	65.363	78.714	84.047	102.353	
5	127.00	100 x 100	120 x 80 - 130 x 70 140 x 60 - 150 x 50	140								37.037	46.473	52.419	59.607	72.889	87.839	93.831	114.394
5 1/2	139.70	110 x 110	140 x 80 - 150 x 70 x 100	120											65.722	80.415	96.964	103.615	126.436
6	152.40	120 x 120	140 x 100 - 160 x 80 180 x 60												71.837	87.941	106.089	113.399	138.477
6 1/2	165.10	130 x 130	140 x 120 - 150 x 110 160 x 100 - 180 x 80												77.952	95.467	115.214	123.182	150.519
7	177.80	140 x 140	150 x 130 - 160 x 120 180 x 100												84.067	102.993	124.340	132.966	162.560
7 1/2	190.50	150 x 150	200 x 100 - 180 x 120 160 x 140												90.181	110.519	133.465	142.750	174.601

## TUBOS CON COSTURA

Diámetro Nominal	Diámetro Exterior	mm	Espesor de pared Pulg. (mm)																		
			0.126 (3.2)	0.142 (3.6)	0.157 (4.0)	0.173 (4.4)	0.189 (4.8)	0.205 (5.2)	0.209 (5.3)	0.220 (5.6)	0.236 (6.0)	0.252 (6.4)	0.276 (7.0)	0.280 (7.1)	0.307 (7.8)	0.311 (7.9)	0.323 (8.2)	0.331 (8.4)	0.343 (8.7)	0.366 (9.3)	0.374 (9.5)
4	4 1/2	114.3	8.77	9.83	10.88	11.92	12.96	13.99	14.25	15.01	16.02	17.03	18.52	18.77	20.49	20.73	21.45				
6	6 5/8	168.3	13.03	14.62	16.21	17.78	19.35	20.91	21.30	22.47	24.01	25.55	27.84	28.22	30.87	31.25	32.37	33.12	34.24	36.46	37.20
8	8 5/8	219.1	17.04	19.13	21.22	23.30	25.37	27.43	27.94	29.48	31.53	33.57	36.61	37.12	40.64	41.14	42.65	43.65	45.14	48.12	49.10
10	10 3/4	273.1			26.54	29.16	31.76	34.35	34.99	36.94	39.52	42.09	45.93	46.57	51.03	51.66	53.37	54.83	56.72	60.50	61.75
12	12 3/4	323.9				34.67	37.77	40.87	41.64	43.96	47.04	50.11	54.7	55.47	60.80	61.56	63.84	65.35	67.62	72.15	73.65
14	14	355.6					41.52	44.93	45.78	48.33	51.73	55.11	60.18	61.02	66.90	67.74	70.25	71.92	74.42	79.42	81.08
16	16	406.4					47.54	51.45	52.42	55.35	59.24	63.13	68.94	69.91	76.67	77.63	80.52	82.44	85.32	91.07	92.98
18	18	457					53.53	57.94	59.04	62.34	66.73	71.12	77.68	78.77	86.40	87.49	90.75	92.92	96.18	102.67	104.84
20	20	508								69.38	74.28	79.16	86.48	87.70	96.21	97.43	101.07	103.49	107.12	114.37	116.78
22	22	559								76.42	81.82	87.21	95.29	96.63	106.02	107.36	111.38	114.05	118.06	126.06	128.73
24	24	610								83.47	89.37	95.26	104.09	105.56	115.83	117.30	121.69	124.62	129.00	137.76	140.68
26	26	660								90.37	96.77	103.15	112.72	114.31	125.45	127.04	131.80	134.98	139.73	149.23	152.39
28	28	711								97.41	104.31	111.20	121.52	123.24	135.26	136.97	142.11	145.54	150.67	160.93	164.34
30	30	762								104.46	111.86	119.25	130.33	132.17	145.07	146.91	152.43	156.10	161.61	172.62	176.29

# CAÑOS DE CONDUCCION

ASTM A53

Schedule 80

Diámetro nominal pulgada	Diámetro exterior mm	Espesor de pared mm	Peso por metro kg/m
1/2	21.3	3.73	1.62
3/4	26.7	3.91	2.20
1	33.4	4.55	3.24
1 1/4	42.2	4.85	4.47
1 1/2	48.3	5.08	5.41
2	60.3	5.54	7.48
2 1/2	73.0	7.01	11.41
3	88.9	7.62	15.27



ASTM A53

Schedule 40

Grado A  
Negros y  
Galvanizados  
Biselados  
Roscado / Cuplado

Tubos Revestidos  
en Polietileno  
Extruido  
Roscado / Biselado

Diámetro		Espesor	Peso por Metro			Presión de Prueba
Nominal Pulgada	Exterior mm	mm	Negro Frent. Biselado kg/m	Negro Rosca./Cuplado kg/m	Galvanizado Rosca./Cuplado kg/m	Minimo Grado A kg/cm <sup>2</sup>
1/2	21.3	2.77	1.266	1.278	1.360	49
3/4	26.7	2.87	1.687	1.706	1.811	49
1	33.4	3.38	2.502	2.533	2.665	49
1 1/4	42.2	3.56	3.392	3.432	3.604	84
1 1/2	48.3	3.68	4.049	4.104	4.301	84
2	60.3	3.91	5.438	5.522	5.771	162
2 1/2	73.0	5.16	8.633	8.817	9.054	176
3	88.9	5.49	11.293	11.529	11.897	156
4	114.3	6.02	16.076	16.517	16.999	134



NAG 250 Y 251

Tubos Negros (NAG 250)  
Biselado

Tubos Revestidos en Epoxi  
(NAG 251)  
Biselado / Roscado

Espesor:  
300 Micrones Min.

Diámetro		Espesor	Peso	Presión de Prueba
Nominal Pulgada	Exterior mm	Nominal mm	Nominal kg/m	Minimo kg/cm <sup>2</sup>
3/8	17.20	2.35	0.863	50
1/2	21.30	2.35	1.101	50
3/4	26.90	2.35	1.426	50
1	33.70	2.90	2.208	50
1 1/4	42.40	2.90	2.832	50
1 1/2	48.30	2.90	3.255	50
2	60.30	3.25	4.584	50
2 1/2	76.10	3.25	5.854	50
3	88.90	3.65	7.693	50
4	114.30	4.05	11.040	50

IRAM -IAS  
U500 - 2502

Tubos Negros  
Biselado  
Roscado / Cuplado

Tubos Galvanizados  
Roscado / Cuplados  
Capa Zn=450 gr/m<sup>2</sup> mínimo

Tubos Revestidos en  
Polietileno Extruido  
Roscado  
Espesor:  
1400 Micrones Min.

Diámetro			Peso por metro kg/m				
Nominal Pulgada	Exterior mm	Espesor de pared mm	Negro		Galvan Rosca. /cup.	Pol. ext. Rosca. /cup.	Presión hidr. mín. kg/cm <sup>2</sup>
			Frent. / Biselado	Rosca. / cup.			
3/8	17.2	2.00	0.742	0.748			50
1/2	21.3	2.30	1.08	1.09	1.17	1.187	50
3/4	26.9	2.30	1.39	1.40	1.49	1.535	50
1	33.7	2.90	2.20	2.22	2.33	2.344	50
1 1/4	42.4	2.90	2.82	2.85	2.99	2.987	50
1 1/2	48.3	2.90	3.24	3.28	3.44	3.449	50
2	60.3	3.20	4.49	4.56	4.76	4.825	50
2 1/2	76.1	3.20	5.73	5.85	6.11	6.157	50
3	88.9	3.60	7.55	7.72	8.02	8.046	50
4	114.3	4.00	10.80	11.1	11.5	11.490	50



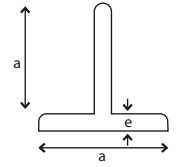
# PERFILES

## PERFILES TREBOL Y LOGO

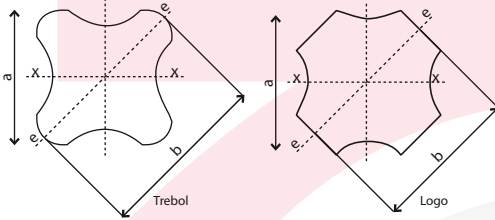
Perfil	Medida	Dimensiones		Sección	Superficie	Peso	x-x	e-e	x-x	e-e
		a	b	cm <sup>2</sup>	cm <sup>2</sup> /cm	kg/m	Jx mm <sup>4</sup>	Je mm <sup>4</sup>	Wx mm <sup>3</sup>	We mm <sup>3</sup>
TREBOL	1/2"	12.2	15.6	1.15	486	0.90	1254	1115	206	143
	9/16"	13.7	17.6	1.46	561	1.14	2277	1984	332	225
	5/8"	15.3	19.5	1.80	623	1.40	2920	2447	382	251
LOGO	1/2"	12.1	13.3	1.19	371	0.93	1278	1260	211	189
	9/16"	13.7	15.0	1.53	473	1.19	2290	2025	334	270
	5/8"	15.2	16.7	1.89	526	1.47	2952	2490	388	298

## PERFILES TEE

	Dimensiones		Peso
	a mm	e mm	por m kg/m
3/4" x 1/8"	19.1	3.2	0.9
7/8" x 1/8"	22.2	3.2	1.0
1" x 1/8"	25.4	3.2	1.2
1 1/4" x 1/8"	31.8	3.2	1.5
1 1/4" x 3/16"	31.8	4.8	2.2
1 1/2" x 1/8"	38.1	3.2	1.8
1 1/2" x 3/16"	38.1	4.8	2.7
1 3/4" x 3/16"	44.5	4.8	3.1
2" x 3/16"	50.8	4.8	3.6
2" x 1/4"	50.8	6.4	4.8
2 1/2" x 1/4"	63.5	6.4	6.0



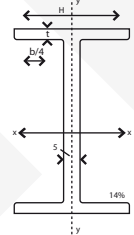
Medidas y propiedades de la sección	
Formas de suministro	Long.: 6m / Lingada: 100 kg
Calidades de Acero	IRAM - IAS U 500-503 grados F24 y F26
Estado de Entrega	Normal de Laminación



Normas de cumplimiento	
Dimensiones y tolerancia	IRAM - IAS U 500-558/85
Material	IRAM - IAS U 500-503/89 grado F26
Largos	6 m

## PERFILES DOBLE T - IPN

I.P.N	Dimensiones				Sección	Peso	Valores estáticos						
	h	b	s	t	F	g	Jx	Jy	Wx	Wy	ix	iy=il	
	mm	mm	mm	mm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm	cm	
80	80	42	3.9	5.9	7.5	5.9	78	6.3	19.5	3.0	3.22	0.92	
100	100	50	4.5	6.8	10.6	8.3	171	12.2	34.2	4.9	4.02	1.07	
120	120	58	5.1	7.7	14.2	11.1	328	21.5	54.7	7.4	4.81	1.23	
140	140	66	5.7	8.6	18.2	14.3	573	35.2	81.9	10.7	5.61	1.39	
160	160	74	6.3	9.5	22.8	17.9	935	54.7	116.9	14.8	6.40	1.55	
180	180	82	6.9	10.4	27.9	21.9	1450	81.3	161.1	19.8	7.21	1.71	
200	200	90	7.5	11.3	33.4	26.2	2140	117	214.0	26.0	8.00	1.87	
220	220	98	8.1	12.2	39.5	30.9	3060	162	278.0	33.1	8.80	2.03	
240	240	106	8.7	13.1	46.1	36.1	4250	221	354.2	41.7	9.60	2.19	
260	260	113	9.4	14.1	53.3	41.8	5740	288	441.5	51.0	10.38	2.32	
280	280	119	10.1	15.2	61.0	47.8	7590	364	542.1	61.2	11.15	2.44	
300	300	125	10.8	16.2	69.0	54.1	9800	451	653.3	72.2	11.92	2.56	
320	320	131	11.5	17.3	77.7	60.9	12510	455	781.9	84.7	12.69	2.67	
340	340	137	12.2	18.3	86.7	67.9	15700	674	923.5	98.4	13.46	2.79	
360	360	143	13.0	19.5	97.0	76.0	19610	818	1089.4	114.4	14.22	2.90	
380	380	149	13.7	20.5	107.0	83.8	24010	975	1263.7	130.9	14.98	3.02	
400	400	155	14.4	21.6	118.0	92.4	29210	1160	1460.5	149.7	15.73	3.14	
425	425	163	15.3	23.0	132.0	103.4	36970	1440	1739.8	176.7	16.74	3.30	
450	450	170	16.2	24.3	147.0	115.2	45850	1730	2037.8	203.5	17.66	3.43	
475	475	178	17.1	25.6	163.0	127.7	56480	2090	2378.1	234.8	18.61	3.58	
500	500	185	18.0	27.0	179.0	140.2	68740	2480	2749.6	268.1	19.60	3.72	
550	550	200	19.0	30.0	212.0	166.1	99180	3490	3606.5	349.0	21.63	4.06	
600	600	215	21.6	32.4	254.0	199.0	139000	4670	4633.3	434.4	23.39	4.29	

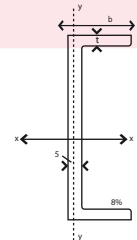


Normas de cumplimiento	
Dimensiones	IRAM - IAS U 500-511/87
Material	IRAM - IAS U 500-503/89 grado F26
Tolerancias dimensionales	IRAM - IAS U 500-511/87
Largos	12 m

Perfiles de fabricación discontinua. Consultar Stock y entrega

## PERFILES U - UPN

U.P.N.	Dimensiones					Sección	Peso	Valores estáticos					
	h	b	t	s	xg	F	g	Jx	Jy	Wx	Wy	ix	iy=il
	mm	mm	mm	mm	cm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm	cm
80	80	45	8.0	6.0	1.45	11.0	8.6	106	19.4	26.5	6.3	3.10	1.33
100	100	50	8.5	6.0	1.55	13.5	10.6	206	29.3	41.2	8.5	3.91	1.47
120	120	55	9.0	7.0	1.60	17.0	13.3	364	43.2	60.7	11.1	4.63	1.59
140	140	60	10.0	7.0	1.75	20.4	16.0	605	62.7	86.4	14.8	5.45	1.75
160	160	65	10.5	7.5	1.84	24.0	18.8	925	85.3	115.6	18.3	6.21	1.89
180	180	70	11.0	8.0	1.92	28.0	21.9	1350	114.0	150.0	22.4	6.94	2.02
200	200	75	11.5	8.5	2.01	32.2	25.2	1910	148.0	191.0	27.0	7.70	2.14
220	220	80	12.5	9.0	2.14	37.4	29.3	2690	197.0	244.5	33.6	8.48	2.30
240	240	85	13.0	9.5	2.23	42.3	33.1	3600	248.0	300.0	39.6	9.23	2.42
260	260	90	14.0	10.0	2.36	48.3	37.8	4820	317.0	370.8	47.7	9.99	2.56
280	280	95	15.0	10.0	2.53	53.3	41.8	6280	399.0	448.6	57.2	10.85	2.74
300	300	100	16.0	10.0	2.70	58.8	46.1	8030	495.0	535.3	67.8	11.69	2.90
320	320	100	17.5	14.0	2.60	75.8	59.4	10870	597.0	679.4	80.6	11.98	2.81
350	350	100	16.0	14.0	2.40	77.3	60.6	12840	570.0	733.7	75.0	12.89	2.72
380	380	102	16.0	13.5	2.38	80.4	63.0	15760	615.0	829.5	78.7	14.00	2.77
400	400	110	18.0	14.0	2.65	91.5	71.7	20350	864.0	1017.5	102.0	14.91	3.07



Normas de cumplimiento	
Dimensiones	IRAM - IAS U 500-509/87
Material	IRAM - IAS U 500-503/89 grado F26
Tolerancia dimensionales	IRAM - IAS U 500-509/87
Largos	12 m

Perfiles de fabricación discontinua. Consultar Stock y entrega

# PERFILES

## PERFILES IPE

I.P.E.	Dimensiones				Sección	Peso	Valores estáticos				
	h	b	t	s			F	g	Jx	Jy	Wx
	mm	mm	mm	mm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>3</sup>	cm <sup>3</sup>	
100	100	55	4.1	5.7	10.3	8.1	171	15.9	34.2	5.79	
120	120	64	4.4	6.3	13.2	10.4	318	27.7	53.0	8.65	
140	140	73	4.7	6.9	16.4	12.9	541	44.9	77.3	12.3	
160	160	82	5	7.4	20.1	15.8	869	68.3	109.0	16.7	
180	180	91	5.3	8.0	23.9	18.8	1320	101.0	146.0	22.2	
200	200	100	5.6	8.5	28.5	22.4	1940	142.0	194.0	28.5	
220	220	110	5.9	9.2	33.4	26.2	2770	205.0	252.0	37.3	
240	240	120	6.2	9.8	39.1	30.7	3890	284.0	324.0	47.3	
270	270	135	6.6	10.2	45.9	36.1	5790	420.0	429.0	62.2	
300	300	150	7.1	10.7	53.8	42.2	8360	604.0	557.0	80.5	
330	330	160	7.5	11.5	62.6	49.1	11770	788.0	713.0	98.5	
360	360	170	8.0	12.7	72.7	57.1	16270	1040.0	904.0	123.0	
400	400	180	8.6	13.5	84.5	66.3	23130	1320.0	1160.0	146.0	
450	450	190	9.4	14.6	98.8	77.6	33740	1680.0	1500.0	176.0	
500	500	200	10.2	16.0	116.0	90.7	48200	2140.0	1930.0	214.0	
550	550	210	11.1	17.2	134.0	106.0	67120	2670.0	2440.0	254.0	
600	600	220	12.0	19.0	156.0	122.0	92080	3390.0	3070.0	308.0	



## Perfiles HEB

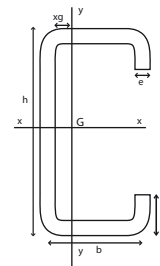
H.E.B.	Dimensiones				Sección	Peso	Valores estáticos				
	h	b	t	s			F	g	Jx	Jy	Wx
	mm	mm	mm	mm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>3</sup>	cm <sup>3</sup>	
100	100	100	6.0	10.0	26.0	20.4	450	167.0	89.9	33.5	
120	120	120	6.5	11.0	34.0	26.7	864	318.0	144.0	52.9	
140	140	140	7.0	12.0	43.0	33.7	1510	550.0	216.0	78.5	
160	160	160	8.0	13.0	54.3	42.6	2490	889.0	311.0	111.0	
180	180	180	8.5	14.0	65.3	51.2	3830	1360.0	426.0	151.0	
200	200	200	9.0	15.0	78	61.3	3900	2000.0	570.0	200.0	
220	220	220	9.5	16.0	91.0	71.5	8090	2840.0	736.0	258.0	
240	240	240	10.0	17.0	106.0	83.2	11260	3920.0	938.0	327.0	
260	260	260	10.0	17.5	118.0	93.0	14920	5130.0	1150.0	395.0	
280	280	280	10.5	18.0	131.0	103.0	19270	6590.0	1380.0	471.0	
300	300	300	11.0	19.0	149.0	117.0	25170	8560.0	1680.0	571.0	
320	320	300	11.5	20.5	161.0	127.0	30820	9240.0	1930.0	616.0	
340	340	300	12.0	21.5	171.0	134.0	36650	9690.0	2160.0	646.0	
360	360	300	12.5	22.5	181.0	142.0	43190	10140.0	2400.0	676.0	
400	400	300	13.5	24.0	198.0	155.0	57680	10820.0	2880.0	721.0	
450	450	300	14.0	26.0	218.0	171.0	79890	11720.0	3550.0	781.0	
500	500	300	14.5	28.0	239.0	187.0	107200	12620.0	4290.0	842.0	
550	550	300	15.0	29.0	254.0	199.0	136700	13080.0	4970.0	827.0	



## PERFILES CONFORMADOS EN FRIO

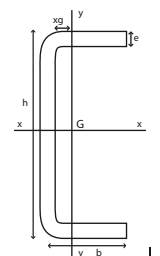
### PERFILES SECCION C

P.C.F	Dimensiones					Sección	Peso	Valores estáticos relativos a los ejes XX-YY						Centro de corte	Torsión	
	h	b	s	t	xg			F	g	Jx	Jy	Wx	Wy		ix	iy=il
	mm	mm	mm	mm	cm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm	cm	cm	cm <sup>4</sup>	cm <sup>6</sup>
80	80	40	15	1.6	1.47	2.872	2.254	29.031	6.734	7.258	2.657	3.18	1.53	2.872	0.02450	108.655
80	80	40	15	2.0	1.46	3.537	2.776	35.246	8.070	8.811	3.181	3.16	1.51	3.537	0.04716	129.181
100	100	50	15	2.0	1.73	4.337	3.404	69.229	14.980	13.846	4.574	4.00	1.86	4.337	0.05782	33.547
120	120	50	15	2.0	1.59	4.737	3.718	105.802	15.948	17.634	4.674	4.73	1.83	4.737	0.06316	488.889
140	140	60	20	2.0	1.99	5.737	4.503	176.409	29.346	25.201	7.316	5.55	2.26	5.737	0.07649	1287.515
140	140	60	20	2.5	1.99	7.089	5.565	215.617	35.408	30.802	8.821	5.52	2.23	7.089	0.14768	1546.042
160	160	60	20	2.0	1.87	6.137	4.817	240.949	30.681	30.119	7.421	6.23	2.24	6.137	0.08182	1691.716
160	160	60	20	2.5	1.86	7.589	5.957	294.932	37.025	36.867	8.951	6.23	2.21	7.589	0.15810	2034.747
180	180	70	25	2.0	2.26	7.137	5.602	358.563	50.556	39.840	10.669	7.09	2.66	7.137	0.09516	3662.516
180	180	70	25	2.5	2.26	8.839	6.938	440.204	61.673	48.912	12.945	7.06	2.64	8.839	0.18414	4430.166
180	180	70	25	3.2	2.26	11.166	8.765	549.239	75.347	61.027	15.882	7.01	2.60	11.166	0.38114	5413.082
200	200	70	25	2.0	2.15	7.537	5.916	458.870	52.325	45.887	10.781	7.80	2.63	7.537	0.10049	4541.756
200	200	70	25	2.5	2.14	9.339	7.331	563.874	63.528	54.337	13.084	7.77	2.61	9.339	0.19456	5499.398
200	200	70	25	3.2	2.14	11.806	9.268	704.478	78.006	70.448	16.057	7.72	2.57	11.806	0.40299	6729.451



### PERFILES SECCION U

P.C.F	Dimensiones				Sección	Peso	Valores estáticos relativos a los ejes XX-YY						Centro de corte	Torsión		
	h	b	e	xg			F	g	Jx	Jy	Wx	Wy		ix	iy=il	xc
	mm	mm	mm	cm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm	cm	cm	cm	cm <sup>4</sup>	cm <sup>6</sup>
80	83.2	40	1.6	1.05	2.527	1.984	27.566	4.031	6.626	1.368	3.30	1.26	2.46	0.02156	47.401	
80	84.0	40	2.0	1.07	3.148	2.471	34.525	4.965	8.220	1.693	3.31	1.26	2.45	0.04198	59.114	
100	105.0	50	2.5	1.33	4.919	3.862	84.290	12.123	16.055	3.307	4.14	1.57	3.06	0.10249	225.502	
120	125.0	50	2.5	1.22	5.419	4.254	126.657	12.786	20.265	3.384	4.83	1.54	2.86	0.11290	341.477	
140	146.4	60	3.2	1.49	8.188	6.428	262.999	27.918	35.929	6.196	5.67	1.85	3.46	0.27948	1018.554	
160	166.4	60	3.2	1.40	8.828	6.930	355.820	28.975	42.767	6.295	6.35	1.81	3.28	0.30133	1381.593	
180	186.4	70	3.2	1.64	10.108	7.935	519.997	46.066	55.794	8.595	7.17	2.13	3.90	0.34502	2757.949	
200	206.4	70	3.2	1.55	10.748	8.437	661.775	47.388	64.125	8.701	7.85	2.10	3.73	0.36686	3512.097	



Dimensiones y tolerancias	IRAM - IAS U 500-206
Material	IRAM - IAS U 503/89 grado F26
Largos	12 m

# ALAMBRES - ANGULOS - CLAVOS - CHAPAS

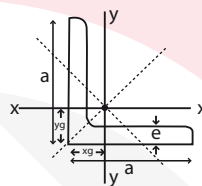
## LISOS Y ACERO DUREZA NATURAL

Diám. nom.	Peso nom.	Peso barra	Secciones nominales número de barras										Ø mandril doblado
			12 m	1	2	3	4	5	6	7	8	9	
mm	kg/m	kg	cm <sup>2</sup>										minimo
4 (1)	0.10	1.2	0.126	0.25	0.38	0.50	0.63	0.76	0.88	1.01	1.134	1.26	2.0 (5ø)
4,2 (1)	0.11	1.3	0.139	0.28	0.42	0.56	0.70	0.83	0.97	1.11	1.25	1.39	2.1 (5ø)
6	0.22	2.6	0.28	0.57	0.85	1.13	1.41	1.70	1.98	2.26	2.54	2.83	2.4 (4ø)
8	0.40	4.8	0.50	1.01	1.51	2.01	2.51	3.02	3.52	4.02	4.52	5.03	3.2 (4ø)
10	0.62	7.4	0.79	1.57	2.36	3.14	3.93	4.71	5.50	6.28	7.07	7.85	4 (4ø)
12	0.89	10.7	1.13	2.26	3.39	4.52	5.65	6.79	7.92	9.05	10.18	11.31	4.8 (4ø)
16	4.58	19.0	2.01	4.02	6.03	8.04	10.05	12.06	14.07	16.8	18.10	20.11	6.4 (4ø)
20	2.47	29.6	3.14	6.28	9.42	12.57	15.71	18.85	21.99	25.113	28.27	31.42	14 (7ø)
25	3.85	46.2	4.91	9.82	14.73	19.64	24.54	29.45	34.36	39.27	44.18	49.09	17.5 (7ø)
32	6.31	75.7	8.04	16.8	24.13	32.17	40.21	48.25	56.30	64.34	72.38	80.42	22.4 (7ø)

(1) Alambre T-500, fabricado según norma IRAM-IAS U 500-26

## ANGULOS DE ALAS IGUALES

Angulos	Dimensiones			Sección	Peso	Valores estáticos		
	a	e	xg=yg			F	por m	Jx=Jy
	mm	mm	mm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>4</sup>
5/8" x 1/8"	15.9	3.2	0.51	0.91	0.7	0.20	0.09	0.31
3/4" x 1/8"	19.1	3.2	0.58	1.11	0.9	0.37	0.17	0.57
7/8" x 1/8"	22.2	3.2	0.66	1.31	1.0	0.58	0.31	0.94
1" x 1/8"	25.4	3.2	0.75	1.51	1.2	0.91	0.38	1.44
1" x 3/16"	25.4	4.8	0.81	2.19	1.7	1.26	0.55	1.96
1 1/4" x 1/8"	31.8	3.2	0.91	1.92	1.5	1.84	0.74	2.93
1 1/4" x 3/16"	31.8	4.8	0.97	2.80	2.2	2.58	1.08	4.07
1 1/2" x 1/8"	38.1	3.2	1.07	2.32	1.8	3.24	1.30	5.17
1 1/2" x 3/16"	38.1	4.8	1.13	3.40	2.7	4.56	1.86	7.26
1 1/2" x 1/4"	38.1	6.4	1.18	4.44	3.5	5.76	2.43	9.09
1 3/4" x 1/8"	44.5	3.2	1.23	2.73	2.1	5.23	2.11	8.35
1 3/4" x 3/16"	44.5	4.8	1.29	4.00	3.1	7.44	3.03	11.84
2" x 1/8"	50.8	3.2	1.39	3.13	2.5	7.91	3.18	12.64
2" x 3/16"	50.8	4.8	1.45	4.61	3.6	11.33	4.61	18.05
2" x 1/4"	50.8	6.4	1.50	6.05	4.8	14.45	5.93	22.96
2 1/4" x 3/16"	57.2	4.8	1.60	5.21	4.1	16.32	6.52	26.12
2 1/4" x 1/4"	57.2	6.4	1.68	6.85	5.4	21.01	8.62	33.40
2 1/2" x 3/16"	63.5	4.8	1.76	5.82	4.6	22.75	9.22	36.28
2 1/2" x 1/4"	63.5	6.4	1.82	7.66	6.0	29.30	12.00	46.59
3" x 1/4"	76.2	6.4	2.14	9.27	7.3	51.74	20.90	82.58
3" x 5/16"	76.2	7.9	2.20	11.47	9.0	62.93	25.83	100.03
3" x 3/8"	76.2	9.5	2.26	13.60	10.7	73.21	30.21	116.21
3 1/2" x 1/4"	88.9	6.4	2.46	10.89	8.6	83.62	33.76	133.47
3 1/2" x 5/16"	88.9	7.9	2.51	13.49	10.6	101.85	41.28	162.42
3 1/2" x 3/8"	88.9	9.5	2.57	16.02	12.6	119.00	48.44	189.55
4" x 1/4"	101.6	6.4	2.75	12.48	9.8	124.24	50.03	198.44
4" x 5/16"	101.6	7.9	2.84	15.50	12.2	154.61	62.54	246.68
4" x 3/8"	101.6	9.5	2.90	18.44	14.5	181.12	73.80	288.43
4" x 1/2"	101.6	12.7	3.00	24.19	19.0	231.61	95.79	367.43



Normas de cumplimiento	
Dimensiones y tolerancia	IRAM - IAS U 500-558/85
Material	IRAM - IAS U 500-503/89 grado F26
Largos	6 mt para alas menores o iguales a 63.5mm (2 1/2") 12 mt para alas mayores o iguales a 76.2 mm (3")

## CLAVOS PUNTA PARIS

Medida	Diámetro	Longitud	Unidades x kg aprox.		
mm	pulg.	mm	Nº		
25.4	1	2.11	14	25.4	1353
38.1	1 1/2	2.51	12 1/2	38.1	687
50.8	2	2.87	11 1/2	50.8	404
63.5	2 1/2	3.33	10 1/4	63.5	216
76.2	3	3.76	9	76.2	119
88.9	3 1/2	4.11	8	88.9	85
101.6	4	4.88	6	101.6	75
127.0	5	5.74	4	127.0	47
152.4	6	6.65	2	152.4	34
177.8	7	6.65	2	177.8	25
203.2	8	6.65	2	203.2	18

Presentación: A granel en cajones de 30 kg  
Bolsas individuales 1 kg.  
En cajas de 20 bolsas de 1 kg (Sólo para medidas de 1, 1 1/2 2")

Perfiles de fabricación discontinua  
Consultar stock y entrega antes de realizar las compras

## CHAPAS

Nº de calibre	LAMINADO FRIO						LAMINADO CALIENTE		
	mm.	BWG		BG		mm.	ESPESOR	PESO	
	1 x 2 m.	4' x 8'	1 x 2 m.	4' x 8'	1 x 2 m.	Nº de calibre	x mt2		
	Kg. c/chapa	Kg. c/chapa	Kg. c/chapa	Kg. c/chapa	Kg. c/chapa				
12	2.77	41.490	64.645	2.51	39.405	58.575	1.6	16	12.60
*13	2.41	37.835	56.240	2.24	35.170	52.280	1.8	15	
14	2.11	33.125	49.240	1.99	31.245	46.445	2	14	15.84
16	1.65	25.905	38.505	1.59	25.965	37.110	2.5	12	19.80
*17	1.47	23.080	34.305	1.41	22.135	32.900	2.85	11	22.17
18	1.25	19.625	29.170	1.26	19.780	29.400	3.2	1/8"	25.12
*19	1.07	16.800	24.970	1.12	17.585	26.140	4.7	3/16"	37.70
20	0.89	13.975	20.775	1.00	15.700	23.335	6.3	1/4"	50.24
*21	0.81	12.715	18.900	0.89	13.975	20.775	8	5/16"	62.80
22	0.71	11.145	16.565	0.80	12.560	18.670	9.5	3/8"	75.36
*23	0.63	9.890	14.700	0.70	10.990	16.335	12.7	1/2"	100.50
24	0.56	8.790	13.065	0.63	9.890	14.700	16	5/8"	125.60
*25	0.51	8.005	11.900	0.56	8.790	13.065	19	3/4"	150.70
26	0.46	7.220	10.730	0.50	7.850	11.670	22	7/8"	175.85
*27	0.41	6.435	9.565	0.44	6.910	10.270	25.4	1"	201.00
*28	0.36	5.650	8.400	0.40	6.280	9.335	31.7	1 1/4"	251.20
*29	0.33	5.180	7.700	0.35	5.495	8.170	38.1	1 1/2"	301.44
30	0.30	4.710	7.000	0.31	4.865	7.230	44.4	1 3/4"	351.44

\*Medidas de fabricación discontinua.

Consultar stock antes de realizar los pedidos.

- Semilla de Melón
- Rayada
- Galvanizada
- Prepaintada
- Electrozinada
- Aluminizada
- Apto Loza
- Línea Blanca

# ACEROS - MALLAS - ALAMBRES

## LAMINADOS Y TREFILADOS

Laminados	
Tipo de Sección	mm
Barras Redondas	14 a 130
Barras Hexagonales	14 a 103.2
Barras cuadradas Canto Vivo	25.4 a 101.6
Palanquillas	50 a 100
Planchuelas	44.4 =< ancho =< 254 6=< espesor =< 50.8 Se fabrican previa consulta indicando tipo de canto

Barras trefiladas	
Sección	Dn (mm)
Redondas	4 a 60
Hexagonales	4.76 a 50.8
Cuadradas	6 a 44.4

## ACEROS - COMPOSICION QUIMICA DE COLADA

Aceros Aleados								
Grado de Acero	Composición Química de colada (%)							
SAE / AISI	Carbono (C)	Manganeso (Mn)	Fósforo (P) máx.	Azufre (S) máx.	Silicio (Si)	Níquel (Ni)	Cromo (Cr)	Molibdeno (Mo)
4140	0.38 / 0.43	0.75 / 1.00	0.035	0.040	0.15 / 0.35	-	0.80 / 1.10	0.15 / 0.25
4142	0.40 / 0.45	0.75 / 1.00	0.035	0.040	0.15 / 0.35	-	0.80 / 1.10	0.15 / 0.25
5160	0.56 / 0.64	0.75 / 1.00	0.035	0.040	0.15 / 0.35	-	0.70 / 0.90	-
8620	0.18 / 0.23	0.70 / 0.90	0.035	0.040	0.15 / 0.35	0.40 / 0.70	0.40 / 0.60	0.15 / 0.25
9254	0.51 / 0.59	0.60 / 0.80	0.035	0.040	1.20 / 1.60	-	0.60 / 0.80	-
9259	0.56 / 0.64	0.75 / 1.00	0.035	0.040	0.70 / 1.10	-	0.45 / 0.65	-
9260	0.56 / 0.64	0.75 / 1.00	0.035	0.040	1.80 / 2.20	-	-	-
9262	0.55 / 0.65	0.75 / 1.00	0.040	0.040	1.80 / 2.20	-	0.25 / 0.40	-

Aceros a Carbono				
Grado de Acero	Composición Química de colada (%)			
SAE / AISI	Carbono (C)	Manganeso (Mn)	Fósforo (P) máx.	Azufre (S) máx.
1008	0.04 / 0.11	0.25 / 0.50	0.040	0.050
1010	0.08 / 0.13	0.30 / 0.60	0.040	0.050
1020	0.18 / 0.23	0.30 / 0.60	0.040	0.050
1026	0.22 / 0.28	0.60 / 0.90	0.040	0.050
1035	0.32 / 0.38	0.60 / 0.90	0.040	0.050
1038	0.35 / 0.42	0.60 / 0.90	0.040	0.050
1040	0.37 / 0.44	0.60 / 0.90	0.040	0.050
1045	0.43 / 0.50	0.60 / 0.90	0.0440	0.050

Aceros de corte libre						
Grado de acero (1)	Composición Química de colada (%)					
Carbono (C)	Manganeso (Mn)	Fósforo (P) máx.	Azufre (S) máx.	Silicio (Si)	Plomo (Pb)	
1212	0.05 / 0.13	0.90 / 1.50	0.05 / 0.09	0.26 / 0.35	0.05	-
12L14	0.06 / 0.10	0.90 / 1.15	0.05 / 0.09	0.26 / 0.35	0.02	Bi: 0.05 / 0.15
11L17	0.14 / 0.20	1.00 / 1.30	0.040 / máx	0.08 / 0.13	0.10	0.15 / 0.3
10L38	0.35 / 0.42	0.60 / 0.90	0.040	0.050	0.15 / 0.35	0.15 / 0.35

## MALLA SIMA

Tamaño del panel	Modelo	Cuantía			Separación		Diámetro		Salientes		Peso	
		long. cm <sup>2</sup> /m.	long. cm.	trans. cm.	long. mm.	trans. mm.	A1=A2 cm.	A3=A4 cm.	por panel kg.	por m <sup>2</sup> kg/m <sup>2</sup>		
Cuadrícula Línea Máxi 2.15 x 6 m (12.9 m <sup>2</sup> )	Cuadrícula cuadrada											
	Q 50	0.5	25	25	4.0	4.0	12.5	7.5	10.45	0.81		
	Q 84	0.84	15	15	4.0	4.0	7.5	2.5	17.42	1.35		
	Q 92	0.92	15	15	4.2	4.2	7.5	2.5	19.18	1.49		
	Q 126	1.26	10	10	4.0	4.0	5.0	2.5	25.84	2.00		
	Q 188	1.88	15	15	6.0	6.0	7.5	2.5	39.07	3.03		
	Q 335	3.35	15	15	8.0	8.0	7.5	2.5	69.52	5.39		
	Q 524	5.24	15	15	10.0	10.0	7.5	2.5	108.59	8.42		
	Cuadrícula rectangular											
	R 84	0.84	15	25	4.0	4.0	12.5	2.5	14.02	1.09		
	R 92	0.92	15	25	4.2	4.2	12.5	2.5	15.43	1.20		
	R 188	1.88	15	25	4.2	6.0	12.5	2.5	25.60	1.98		
	Cuadrícula cuadrada											
	Q 84	0.84	15	15	4.0	4.0	7.5	2.5	8.12	1.35		
	Q 188	1.88	15	15	6.0	6.0	7.5	2.5	18.20	3.03		
	Cuadrícula rectangular											
	R 84	0.84	15	25	4.0	4.0	12.5	2.5	6.53	1.09		
	R 188	1.88	15	25	6.0	6.0	12.5	2.5	11.94	1.98		

## ALAMBRE RECOCIDO COMERCIO

Diámetro	Sección nominal	Peso nominal
mm	Calibre ISWG	mm <sup>2</sup> / kg/100m
1.42	17	1.58 / 1.24
1.63	16	2.09 / 1.64
1.83	15	2.63 / 2.06
1.93	14 1/2	2.92 / 2.30
2.03	14	3.23 / 2.54
2.19	13 1/2	3.76 / 2.96
2.34	13	4.30 / 3.37
2.49	12 1/2	4.87 / 3.82
2.64	12	5.47 / 4.29
2.94	11	6.79 / 5.33
3.25	10	8.29 / 6.51
3.66	9	10.52 / 8.25
4.06	8	12.94 / 10.16
4.47	7	15.69 / 12.31
4.88	6	18.69 / 14.68
5.38	5	22.72 / 17.84

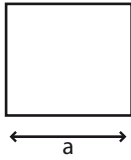
## MALLA PARA USO NO ESTRUCTURAL

Modelo	Cuantía		Separación		Diámetro de alambres		Salientes		Peso	
	longitudinal cm <sup>2</sup> /m	longitudinal mm	transversal mm	longitudinal mm	transversal mm	A1=A2 cm	A3=A4 cm	por panel kg	por m <sup>2</sup> kg/m <sup>2</sup>	
Cuadrícula cuadrada										
Q 141	1.41	50	50	3.0	3.0	2.5	2.5	7.99	2.22	
Q 182	1.82	50	50	3.4	3.4	2.5	2.5	10.27	2.85	
Q 216	2.12	25	25	2.6	2.6	1.3	1.3	12.38	3.44	
Cuadrícula rectangular										
R 85	1.41	50	30	3.0	3.0	1.5	2.5	10.66	2.96	
R 216	2.12	25	38	2.6	2.6	3.7	1.3	10.22	2.84	
R 282	2.83	25	38	3.0	3.0	3.7	1.3	13.19	3.66	

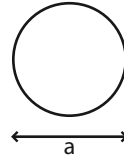
Presentación: En rollos de 2 kg  
En cajas de 20 rollos de 20 kg  
En rollos de 30/60 kg.

# BARRAS Y PLANCHUELAS

## BARRAS CUADRADAS



Medidas del lado		Sección nominal	Peso nominal
a		F	g
pulg.	mm	cm <sup>2</sup>	kg/m
5/16	7.94	0.63	0.49
3/8	9.53	0.91	0.71
7/16	11.11	1.23	0.97
1/2	12.70	1.61	1.27
9/16	14.29	2.04	1.60
5/8	15.88	2.52	1.98
3/4	19.05	3.63	2.85
7/8	22.23	4.94	3.88
1	25.40	6.45	5.06
1 1/8	28.58	8.17	6.41
1 1/4	31.75	10.08	7.91
1 1/2	38.10	14.52	11.39
2	50.80	25.81	20.26
2 1/2	63.50	40.32	31.65



## BARRAS REDONDAS

Medida del diámetro		Sección nominal	Peso nominal
a		F	g
pulg.	mm	cm <sup>2</sup>	kg/m
1/4	6.35	0.32	0.25
5/16	7.94	0.49	0.39
3/8	9.53	0.71	0.56
7/16	11.11	0.97	0.76
1/2	12.70	1.27	0.99
9/16	14.29	1.60	1.26
5/8	15.88	1.98	1.55
11/16	17.46	2.39	1.88
3/4	19.05	2.85	2.24
13/16	20.64	3.35	2.63
7/8	22.23	3.88	3.05
15/16	23.81	4.45	3.50
1	25.40	5.07	3.98
1 3/64	26.59	5.55	4.36
1 1/16	26.99	5.72	4.49
1 1/8	28.58	6.41	5.03
1 1/4	31.75	7.92	6.21
1 3/8	34.93	9.58	7.52
1 1/2	38.10	11.40	8.95
1 5/8	41.28	13.38	10.50
1 3/4	44.45	15.52	12.18
1 7/8	47.63	17.81	13.98
2	50.80	20.27	15.91
2 1/16	52.39	21.55	16.92
2 1/8	53.98	22.88	17.96
2 1/4	57.15	25.65	20.14
2 1/2	63.50	31.67	24.86

Normas de cumplimiento	
Tolerancias dimensionales	IRAM - IAS U 500.605/89
Material por análisis químico	IRAM - IAS U 500-600/87 grado 1010 y 1016 para medidas de 7,94 a 19,05 mm y 1010, 1040, 1045 para medidas de 25,4 a 63,5 mm
Largos	6 m

## PLANCHUELAS PERFORADAS



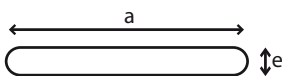
Variedades de productos (se pueden combinar las siguientes alternativas)			
Forma de la perforación	Medida nominal	Espaciamento entre los centros de las perforaciones	Planchuelas Base
Logo Trébol Cuadrado Redondo	12.7 mm (1/2")	a	25.4 x 4.8 (1" x 3/16") 31.8 x 4.8 (1 1/4" x 3/16") 31.8 x 6.4 (1 1/4" x 1/4") 38.1 x 4.8 (1 1/2" x 3/16") 38.1 x 6.4 (1 1/2" x 1/4")
	14.3 mm (9/16")		
		65 mm 130 mm	

Normas de cumplimiento	
Tolerancias dimensionales de la planchuela base	IRAM - IAS U 500-657/85
Material	IRAM - IAS U 500-503/89 grado F26 y ASTM A36/96
Largos	6 m

Normas de cumplimiento	
Tolerancias dimensionales	IRAM - IAS U 500-605/89
Material uso herrero	IRAM - IAS U 500-503/89 grado F26 A36/96 para diámetros de 6,35 a 11,11mm
Material uso mecánico	IRAM - IAS U 500-600/87 grado 1010, 1026 y 1040 para diámetros de 12,7 a 63,5 mm
Largos	6 m

## PLANCHUELAS

Anchos	Espesores e												
	a	3.18 mm 1/8"	4.76 mm 3/16"	6.35 mm 1/4"	7.94 mm 5/16"	9.52 mm 3/8"	12.70 mm 1/2"	15.88 mm 5/8"	19.05 mm 3/4"	25.40 mm 1"	31.75 mm 1 1/4"	38.10 mm 1 1/2"	50.80 mm 2"
pulg.	mm	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m
1/2	12.70	0.32	0.47	0.63									
5/8	15.88	0.40	0.59	0.79									
3/4	19.05	0.47	0.71	0.95	1.19								
7/8	22.22	0.55	0.83	1.11	1.38								
1	25.40	0.63	0.95	1.27	1.58	1.90	2.53						
1 1/4	31.75	0.79	1.19	1.58	1.98	2.37	3.17						
1 1/2	38.10	0.95	1.42	1.90	2.37	2.85	3.80	4.75	5.70	7.60			
1 3/4	44.45	1.11	1.66	2.22	2.77	3.32	4.43	5.54	6.65				
2	50.80	1.27	1.90	2.53	3.17	3.80	5.06	6.33	7.60	10.13	12.66	15.19	
2 1/4	57.15	1.42	2.14	2.85	3.56	4.27	5.70	7.12	8.55	11.40	14.24	17.90	
2 1/2	63.50	1.58	2.37	3.17	3.96	4.75	6.33	7.91	9.50	12.66	15.83	18.99	
2 3/4	69.85			3.48	4.35	5.22	6.96	8.70	10.45	13.93	17.41	20.89	
3	76.20	1.90	2.85	3.80	4.75	5.70	7.60	9.50	11.40	15.19	18.99	22.79	
3 1/4	82.55			4.11	5.14	6.17	8.23	10.29	12.34	16.46	20.57	24.69	
3 1/2	88.90	2.22	3.32	4.43	5.54	6.65	8.86	11.08	13.29	17.73	22.16	26.59	
4	101.60	2.53	3.80	5.06	6.33	7.60	10.13	12.66	15.19	20.26	25.32	30.39	40.52
4 1/4	107.95	2.69	4.04	5.38	6.73	8.07	10.76	13.45	16.14	21.52	26.91	32.29	
4 1/2	114.30	2.85	4.27	5.70	7.12	8.55	11.40	14.24	17.09	22.79	28.49	34.19	
4 3/4	120.65	3.01	4.51	6.01	7.52	9.02	12.03	15.04	18.04	24.06			
5	127.00	3.17	4.75	6.33	7.91	9.50	12.66	15.83	18.99	25.32	31.65	37.98	
6	152.40	3.80	5.70	7.60	9.50	11.40	15.19	18.99	22.79	30.39			



Normas de cumplimiento	
Dimensiones y tolerancias	IRAM - IAS U 500-657/85
Material por análisis químico	IRAM - IAS U 500-600/87 grado 1010, 1016, 1026, 1040, 1065 y 1518
Material por características mecánicas	IRAM - IAS U 500-503/89 grado F26
Largos	6 m para todos anchos menores a 76,2mm (3") 6 u 8 m para anchos mayores o iguales a 76,2mm (3")