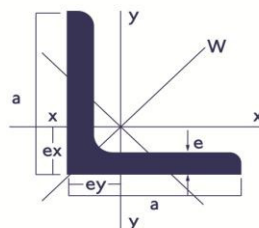


# ÁNGULOS ALAS IGUALES

MEDIDAS Y PROPIEDADES DE LA SECCIÓN  
Serie en pulgadas



COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 =

Descripción	Dimensiones		Radios de acuerdo		Área de la Sección	Peso	Distancia al centro de gravedad			Momento de Inercia			Módulos resistentes		Radios de giro		
	a	e	r	r1	S	G	ex=ey	W	V1	Ix=ly	Iv	Iw	Wx=Wv/y	Wv	Ix=ly	Iz	Iv
	mm	mm	mm	mm	cm <sup>2</sup>	kg/m	cm	cm	cm	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm	cm	cm
1/2" x 1/8"	12.7	3.2	4	2	0.71	<b>0.56</b>	0.42	0.95	0.62	0.19	0.08	0.29	0.10	0.08	0.35	0.45	0.24
5/8" x 1/8"	15.9	3.2	4	2	0.94	<b>0.74</b>	0.50	1.13	0.71	0.20	0.08	0.31	0.18	0.12	0.46	0.57	0.30
3/4" x 1/8"	19	3.2	4	2	1.13	<b>0.89</b>	0.58	1.34	0.82	0.35	0.14	0.55	0.26	0.18	0.55	0.70	0.36
7/8" x 1/8"	22.2	3.2	4	2	1.32	<b>1.04</b>	0.65	1.56	0.92	0.56	0.23	0.89	0.36	0.25	0.65	0.82	0.42
1" x 1/8"	25.4	3.2	4	2	1.51	<b>1.19</b>	0.73	1.77	1.03	0.84	0.34	1.34	0.48	0.34	0.75	0.94	0.48
1" x 3/16"	25.4	4.8	4	2	2.19	<b>1.72</b>	0.79	1.77	1.11	1.17	0.50	1.84	0.68	0.45	0.73	0.92	0.48
1 1/4" x 1/8"	31.7	3.2	5	2.5	1.97	<b>1.55</b>	0.89	2.26	1.26	1.83	0.72	2.93	0.79	0.57	0.96	1.22	0.61
1 1/4" x 3/16"	31.7	4.8	5	2.5	2.87	<b>2.25</b>	0.96	2.26	1.35	2.58	1.06	4.10	1.15	0.78	0.95	1.20	0.61
1 1/2" x 1/8"	38.1	3.2	6	3	2.37	<b>1.86</b>	1.03	2.69	1.46	3.11	1.20	5.02	1.12	0.82	1.15	1.46	0.71
1 1/2" x 3/16"	38.1	4.8	6	3	3.46	<b>2.71</b>	1.10	2.69	1.56	4.45	1.78	7.12	1.65	1.14	1.13	1.44	0.72
1 1/2" x 1/4"	38.1	6.4	6	3	4.49	<b>3.53</b>	1.17	2.69	1.65	5.63	2.33	8.93	2.14	1.42	1.12	1.41	0.72
1 3/4" x 3/16"	44.4	4.8	7	3.5	4.14	<b>3.25</b>	1.27	3.18	1.79	7.57	2.97	12.17	2.34	1.66	1.35	1.71	0.85
2" x 1/8"	50.8	3.2	7	3.5	3.21	<b>2.52</b>	1.34	3.16	1.89	7.76	2.95	12.58	2.07	1.56	1.55	1.98	0.96
2" x 3/16"	50.8	4.8	7	3.5	4.72	<b>3.70</b>	1.42	3.61	2.00	11.26	4.41	18.12	3.06	2.20	1.54	1.96	0.97
2" x 1/4"	50.8	6.4	7	3.5	6.17	<b>4.84</b>	1.49	3.61	2.10	14.45	5.80	23.10	4.00	2.77	1.53	1.93	0.97
2 x 5/16"	50.8	7.9	7	3.5	7.49	<b>5.88</b>	1.54	3.61	2.18	17.19	7.06	27.32	4.83	3.24	1.52	1.91	0.97
2" 1/4 x 3/16"	57.1	4.8	8	4	5.31	<b>4.17</b>	1.56	4.03	2.20	15.88	6.13	25.64	3.84	2.79	1.73	2.20	1.07
2" 1/4 x 1/4"	57.1	6.4	8	4	6.96	<b>5.46</b>	1.63	4.03	2.30	20.49	8.10	32.87	5.03	3.53	1.72	2.17	1.08
2" 1/2 x 3/16"	63.5	4.8	9	4.5	6.00	<b>4.71</b>	1.72	4.53	2.43	22.70	8.65	36.76	4.85	3.56	1.95	2.48	1.20
2" 1/2 x 1/4"	63.5	6.4	9	4.5	7.87	<b>6.18</b>	1.80	4.53	2.53	29.43	11.49	47.37	6.39	4.54	1.93	2.45	1.21
3" x 3/16"	76.2	4.8	8	4	7.03	<b>5.52</b>	2.08	5.37	2.94	40.04	16.03	64.05	7.23	5.45	2.39	3.02	1.51
3" x 1/4"	76.2	6.4	10	5	9.43	<b>7.40</b>	2.09	5.37	2.94	50.39	19.47	81.30	9.14	6.62	2.31	9.94	1.44
3" x 5/16"	76.2	7.9	10	5	11.49	<b>9.02</b>	2.15	5.37	3.03	60.74	23.89	97.59	11.15	7.88	2.30	2.91	1.44
3" x 3/8"	76.2	9.5	10	5	13.64	<b>10.71</b>	2.22	5.37	3.12	71.15	28.47	113.82	13.21	9.11	2.28	2.89	1.44
3" 1/2 x 1/4"	88.9	6.4	11	5.5	11.11	<b>8.72</b>	2.40	6.29	3.38	82.34	31.58	133.09	12.67	9.34	2.72	3.46	1.69
3" 1/2 x 5/16"	88.9	7.9	11	5.5	13.57	<b>10.65</b>	2.47	6.29	3.48	99.66	38.85	160.47	15.49	11.17	2.71	3.44	1.69
3" 1/2" x 3/8"	88.9	9.5	11	5.5	16.14	<b>12.67</b>	2.53	6.29	3.57	117.20	46.37	188.04	18.41	12.98	2.69	3.41	1.70
4" x 1/4"	101.6	6.4	12	6	12.80	<b>10.05</b>	2.71	7.21	3.82	125.53	47.85	203.21	16.76	12.52	3.13	3.98	1.93
4" x 5/16"	101.6	7.9	12	6	15.65	<b>12.28</b>	2.78	7.21	3.92	152.41	59.00	245.82	20.54	15.04	3.12	3.96	1.94
4" x 3/8"	101.6	9.5	12	6	18.63	<b>14.63</b>	2.85	7.21	4.02	179.81	70.56	289.07	24.47	17.51	3.11	3.94	1.95
4" x 1/2"	101.6	12.7	12	6	24.45	<b>19.19</b>	2.98	7.21	4.20	230.95	92.84	269.07	31.99	22.09	3.07	3.89	1.95
5" x 3/8"	127.0	9.5	14	7	23.44	<b>18.40</b>	3.46	8.98	4.87	355.91	138.04	573.78	38.51	28.32	3.90	4.95	2.43
5" x 1/2"	127.0	12.7	14	7	30.86	<b>24.22</b>	3.59	8.98	5.07	461.04	182.49	739.60	50.62	36.03	3.87	4.90	2.43

# PLANCHUELAS

MEDIDAS Y PROPIEDADES DE LA SECCIÓN  
Serie en pulgadas



COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 =

Designación	Medidas (mm.)		Masa Nominal Kg./m	Momentos de Inercia		Módulos Resistentes		Radios de giro	
	a	e		$J_x$ (Max) Cm <sup>4</sup>	$J_y$ (Min) Cm <sup>4</sup>	$W_x$ (Max) Cm <sup>3</sup>	$W_y$ (Min) Cm <sup>3</sup>	$i_x$ Cm	$i_y$ Cm
1/2" x 1/8"	12.70	3.20	0.32	0.05	0.00	0.09	0.02	0.37	0.09
1/2" x 3/16"	12.70	4.80	0.48	0.08	0.01	0.13	0.05	0.37	0.14
1/2" x 1/4"	12.70	6.40	0.64	0.11	0.03	0.17	0.09	0.37	0.18
5/8" x 1/8"	15.90	3.20	0.40	0.11	0.00	0.13	0.03	0.46	0.09
5/8" x 3/16"	15.90	4.80	0.60	0.16	0.01	0.20	0.06	0.46	0.14
3/4" x 1/8"	19.00	3.20	0.48	0.18	0.01	0.19	0.03	0.55	0.09
3/4" x 3/16"	19.00	4.80	0.72	0.27	0.02	0.29	0.07	0.55	0.14
3/4" x 1/4"	19.00	6.40	0.95	0.37	0.04	0.39	0.13	0.55	0.18
7/8" x 1/8"	22.20	3.20	0.56	0.29	0.01	0.26	0.04	0.64	0.09
7/8" x 3/16"	22.20	4.80	0.84	0.44	0.02	0.39	0.09	0.64	0.14
1" x 1/8"	25.40	3.20	0.64	0.44	0.01	0.34	0.04	0.73	0.09
1" x 3/16"	25.40	4.80	0.96	0.66	0.02	0.52	0.10	0.73	0.14
1" x 1/4"	25.40	6.40	1.28	0.87	0.06	0.69	0.17	0.73	0.18
1 1/4" x 1/8"	31.80	3.20	0.80	0.86	0.01	0.54	0.05	0.92	0.09
1 1/4" x 3/16"	31.80	4.80	1.20	1.29	0.03	0.81	0.12	0.92	0.14
1 1/4" x 1/4"	31.80	6.40	1.60	1.72	0.07	1.08	0.22	0.92	0.18
1 1/2" x 1/8"	38.10	3.20	0.96	1.47	0.01	0.77	0.07	1.10	0.09
1 1/2" x 3/16"	38.10	4.80	1.44	2.21	0.04	1.16	0.15	1.10	0.14
1 1/2" x 1/4"	38.10	6.40	1.91	2.95	0.08	1.55	0.26	1.10	0.18
1 1/2" x 5/16"	38.10	7.90	2.36	3.64	0.16	1.91	0.40	1.10	0.23
1 1/2" x 3/8"	38.10	9.50	2.84	4.38	0.27	2.30	0.57	1.10	0.27
2" x 1/8"	50.80	3.20	1.28	3.50	0.01	1.38	0.09	1.47	0.09
2" x 3/16"	50.80	4.80	1.91	5.24	0.05	2.06	0.20	1.47	0.14
2" x 1/4"	50.80	6.40	2.55	6.99	0.11	2.75	0.35	1.47	0.18
2" x 5/16"	50.80	7.90	3.15	8.63	0.21	3.40	0.53	1.47	0.23
2" x 3/8"	50.80	9.50	3.79	10.38	0.36	4.09	0.76	1.47	0.27
2" x 1/2"	50.80	12.70	5.06	13.87	0.87	5.46	1.37	1.47	0.37
2" x 3/4"	50.80	19.00	7.58	20.76	2.90	8.17	3.06	1.47	0.55
2 1/2" x 1/4"	63.50	6.40	3.19	13.66	0.14	4.30	0.43	1.83	0.18
2 1/2" x 5/16"	63.50	7.90	3.94	16.86	0.26	5.31	0.66	1.83	0.23
2 1/2" x 3/8"	63.50	9.50	4.74	20.27	0.45	6.38	0.96	1.83	0.27
3" x 1/4"	76.20	6.40	3.83	23.60	0.17	6.19	0.52	2.20	0.18
3" x 5/16"	76.20	7.90	4.73	29.13	0.31	7.65	0.79	2.20	0.23
3" x 3/8"	76.20	9.50	5.68	35.03	0.54	9.19	1.15	2.20	0.27
3 1/2" x 1/4"	88.90	6.40	4.47	37.47	0.19	8.43	0.61	2.57	0.18
4" x 1/4"	101.60	6.40	5.10	55.93	0.22	11.01	0.69	2.93	0.18
4" x 1/2"	101.60	12.70	10.13	111.00	1.73	21.85	2.73	2.93	0.37
4" x 5/8"	101.60	15.90	12.68	138.96	3.40	27.35	4.28	2.93	0.46
4" x 3/4"	101.60	19.00	15.15	166.06	5.81	32.69	6.11	2.93	0.55
5" x 1/4"	127.00	6.40	6.38	109.25	0.28	17.20	0.87	3.67	0.18
5" x 3/8"	127.00	9.50	9.47	162.16	0.91	25.54	1.91	3.67	0.27
5" x 1/2"	127.00	12.70	12.66	216.79	2.17	34.14	3.41	3.67	0.37
5" x 5/8"	127.00	15.90	15.85	271.41	4.25	42.74	5.35	3.67	0.46
5" x 3/4"	127.00	19.00	18.94	324.33	7.26	51.08	7.64	3.67	0.55

# BARRAS LAMINADAS EN CALIENTE

MEDIDAS Y PROPIEDADES DE LA SECCIÓN  
Serie en pulgadas



COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 =

## BARRAS REDONDAS



Descripción	Dimensiones	Peso	Area de la Sección	Momento de Inercia	Modulos resistentes	Radio de Giro
	Diametro Ø	G	S	Ix	Wx	Rg
	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>3</sup>	
3/8"	9.53	0.56	0.71	0.040	0.085	0.238
1/2"	12.70	0.99	1.27	0.128	0.201	0.318
9/16"	14.29	1.26	1.60	0.205	0.286	0.357
5/8"	15.88	1.55	1.98	0.312	0.393	0.397
3/4"	19.05	2.24	2.85	0.646	0.679	0.476
7/8"	22.23	3.05	3.88	1.199	1.078	0.556
1"	25.40	3.98	5.07	2.043	1.609	0.635

## BARRAS CUADRADAS



Descripción	Dimensiones	Peso	Area de la Sección	Momento de Inercia	Modulos resistentes	Radio de Giro
	Medida Lado	G	S	Ix	Wx	Rg
	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>3</sup>	
3/8"	9.53	0.71	0.91	0.069	0.144	0.275
1/2"	12.70	1.27	1.61	0.217	0.341	0.367
9/16"	14.29	1.60	2.04	0.347	0.486	0.413
5/8"	15.88	1.98	2.52	0.530	0.667	0.458