

Structural Applications

IS 4923~ASTM A 500~AS 1163

TECHNICAL DATA OF STEEL TUBES & PIPES
CONFORMING TO IS 4923 : 2001
COLD FOLDED RECTANGULAR HOLLOW SECTION

Depth (mm)	Width (mm)	Thickness (mm)	Moment of Inertia (cm ⁴)		Elastic Modulus (cm ³)		Plastic Modulus (cm ³)		Radius of Gyration (cm)		Area (cm ²)	Weight (kg/m)	Mtrs/M.T
			X-X Axis	Y-Y Axis	X-X Axis	Y-Y Axis	X-X Axis	Y-Y Axis	X-X Axis	Y-Y Axis			
40.0	25.0	1.80	4.41	2.11	2.20	1.69	2.75	1.98	1.44	1.00	2.13	1.67	598.97
40.0	25.0	2.00	4.77	2.28	2.39	1.82	2.99	2.16	1.43	0.99	2.34	1.83	545.14
40.0	25.0	2.30	5.27	2.51	2.64	2.00	3.34	2.40	1.41	0.97	2.64	2.07	482.18
40.0	25.0	2.50	5.57	2.64	2.79	2.11	3.56	2.56	1.40	0.96	2.84	2.23	448.75
40.0	25.0	2.80	5.99	2.83	2.99	2.26	3.87	2.77	1.38	0.95	3.12	2.45	407.76
40.0	25.0	3.00	6.24	2.94	3.12	2.35	4.06	2.90	1.37	0.94	3.31	2.60	385.12
40.0	25.0	3.20	6.46	3.04	3.23	2.43	4.24	3.03	1.36	0.93	3.49	2.74	365.41
40.0	25.0	3.60	6.86	3.20	3.43	2.56	4.57	3.26	1.34	0.91	3.83	3.00	332.85
50.0	25.0	1.80	7.72	2.60	3.09	2.08	3.90	2.40	1.76	1.02	2.49	1.95	512.26
50.0	25.0	2.00	8.38	2.81	3.35	2.25	4.26	2.62	1.75	1.01	2.74	2.15	465.47
50.0	25.0	2.30	9.31	3.10	3.72	2.48	4.78	2.92	1.73	1.00	3.10	2.44	410.68
50.0	25.0	2.50	9.89	3.28	3.95	2.62	5.10	3.12	1.72	0.99	3.34	2.62	381.55
50.0	25.0	2.80	10.68	3.52	4.27	2.82	5.57	3.39	1.70	0.98	3.68	2.89	345.78
50.0	25.0	3.00	11.17	3.67	4.47	2.93	5.86	3.56	1.69	0.97	3.91	3.07	325.99
50.0	25.0	3.20	11.63	3.80	4.65	3.04	6.14	3.73	1.68	0.96	4.13	3.24	308.73
50.0	25.0	3.60	12.44	4.04	4.98	3.23	6.66	4.03	1.65	0.94	4.55	3.57	280.15
60.0	40.0	1.80	16.85	9.01	5.62	4.50	6.81	5.15	2.23	1.63	3.39	2.66	376.13
60.0	40.0	2.00	18.41	9.83	6.14	4.92	7.47	5.65	2.22	1.62	3.74	2.93	340.90
60.0	40.0	2.30	20.65	11.00	6.88	5.50	8.43	6.38	2.20	1.61	4.25	3.34	299.60
60.0	40.0	2.50	22.07	11.74	7.36	5.87	9.06	6.84	2.19	1.60	4.59	3.60	277.61
60.0	40.0	2.80	24.10	12.78	8.03	6.39	9.95	7.51	2.18	1.59	5.08	3.99	250.56
60.0	40.0	3.00	25.38	13.44	8.46	6.72	10.53	7.94	2.17	1.58	5.41	4.25	235.56
60.0	40.0	3.20	26.60	14.07	8.87	7.03	11.09	8.36	2.16	1.57	5.73	4.50	222.47
60.0	40.0	3.60	28.90	15.23	9.63	7.62	12.16	9.15	2.13	1.55	6.35	4.98	200.70
66.0	33.0	1.80	18.64	6.33	5.65	3.84	7.04	4.35	2.36	1.37	3.35	2.63	380.17
66.0	33.0	2.00	20.37	6.90	6.17	4.18	7.73	4.77	2.35	1.37	3.70	2.90	344.59
66.0	33.0	2.30	22.83	7.69	6.92	4.66	8.73	5.37	2.33	1.35	4.21	3.30	302.88
66.0	33.0	2.50	24.39	8.19	7.39	4.97	9.37	5.75	2.32	1.34	4.54	3.56	280.67
66.0	33.0	2.80	26.62	8.90	8.07	5.39	10.29	6.31	2.30	1.33	5.03	3.95	253.35
66.0	33.0	3.00	28.02	9.34	8.49	5.66	10.88	6.66	2.29	1.32	5.35	4.20	238.21
66.0	33.0	3.20	29.36	9.75	8.90	5.91	11.46	7.01	2.28	1.31	5.66	4.44	224.98
66.0	33.0	3.60	31.87	10.52	9.66	6.37	12.56	7.65	2.25	1.29	6.28	4.93	203.00
70.0	30.0	2.50	26.62	6.95	7.60	4.63	9.79	5.36	2.41	1.23	4.59	3.60	277.61
70.0	30.0	2.80	29.04	7.53	8.30	5.02	10.75	5.87	2.39	1.22	5.08	3.99	250.56
70.0	30.0	3.00	30.57	7.90	8.73	5.26	11.37	6.20	2.38	1.21	5.41	4.25	235.56
70.0	30.0	3.20	32.03	8.24	9.15	5.49	11.98	6.51	2.37	1.20	5.73	4.50	222.47
70.0	30.0	3.60	34.76	8.87	9.93	5.91	13.12	7.11	2.34	1.18	6.35	4.98	200.70
70.0	30.0	4.00	37.22	9.42	10.64	6.28	14.19	7.66	2.31	1.16	6.95	5.45	183.37
70.0	30.0	4.30	38.91	9.78	11.12	6.52	14.95	8.04	2.30	1.15	7.38	5.80	172.53
70.0	30.0	4.50	39.95	10.01	11.41	6.67	15.43	8.29	2.28	1.14	7.67	6.02	166.14
75.0	25.0	2.50	28.51	4.87	7.60	3.89	10.06	4.52	2.49	1.03	4.59	3.60	277.61
75.0	25.0	2.80	31.09	5.25	8.29	4.20	11.05	4.95	2.47	1.02	5.08	3.99	250.56
75.0	25.0	3.00	32.71	5.49	8.72	4.39	11.68	5.21	2.46	1.01	5.41	4.25	235.56
75.0	25.0	3.20	34.26	5.72	9.14	4.57	12.30	5.47	2.45	1.00	5.73	4.50	222.47
75.0	25.0	3.60	37.13	6.12	9.90	4.89	13.47	5.95	2.42	0.98	6.35	4.98	200.70
75.0	25.0	4.00	39.72	6.46	10.59	5.17	14.56	6.39	2.39	0.96	6.95	5.45	183.37
75.0	25.0	4.30	41.47	6.68	11.06	5.35	15.33	6.70	2.37	0.95	7.38	5.80	172.53
75.0	25.0	4.50	42.55	6.81	11.35	5.45	15.82	6.89	2.36	0.94	7.67	6.02	166.14
80.0	40.0	2.50	45.10	15.26	11.28	7.63	14.14	8.72	2.84	1.65	5.59	4.39	227.94
80.0	40.0	2.80	49.46	16.66	12.36	8.33	15.60	9.60	2.82	1.64	6.20	4.87	205.33
80.0	40.0	3.00	52.25	17.55	13.06	8.78	16.54	10.16	2.81	1.63	6.61	5.19	192.79
80.0	40.0	3.20	54.94	18.41	13.73	9.21	17.46	10.71	2.80	1.62	7.01	5.50	181.82
80.0	40.0	3.60	60.04	20.02	15.01	10.01	19.23	11.77	2.78	1.60	7.79	6.11	163.59
80.0	40.0	4.00	64.78	21.48	16.20	10.74	20.91	12.77	2.75	1.59	8.55	6.71	149.04
80.0	40.0	4.30	68.11	22.50	17.03	11.25	22.11	13.49	2.74	1.57	9.10	7.15	139.94
80.0	40.0	4.50	70.21	23.14	17.55	11.57	22.89	13.94	2.72	1.56	9.47	7.43	134.55

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			X-X Axis	Y-Y Axis	X-X Axis	Y-Y Axis	X-X Axis	Y-Y Axis	X-X Axis	Y-Y Axis			
96.0	48.0	3.20	98.60	33.28	20.54	13.87	25.85	15.91	3.40	1.97	8.54	6.71	149.13
96.0	48.0	3.60	108.34	36.40	22.57	15.17	28.58	17.56	3.37	1.96	9.52	7.47	133.88
96.0	48.0	4.00	117.53	39.32	24.49	16.38	31.20	19.14	3.35	1.94	10.47	8.22	121.70
96.0	48.0	4.30	124.08	41.37	25.85	17.24	33.10	20.27	3.33	1.92	11.17	8.77	114.07
96.0	48.0	4.50	128.28	42.68	26.73	17.78	34.33	21.01	3.32	1.92	11.63	9.13	109.56
100.0	50.0	3.50	120.75	40.68	24.15	16.27	30.46	18.74	3.53	2.05	9.69	7.61	131.41
100.0	50.0	3.60	123.50	41.56	24.70	16.63	31.20	19.19	3.52	2.04	9.95	7.81	128.06
100.0	50.0	4.00	134.12	44.95	26.82	17.98	34.10	20.93	3.50	2.03	10.95	8.59	116.37
100.0	50.0	4.30	141.71	47.34	28.34	18.94	36.19	22.18	3.48	2.01	11.68	9.17	109.03
100.0	50.0	4.50	146.59	48.87	29.32	19.55	37.55	23.00	3.47	2.00	12.17	9.55	104.70
122.0	61.0	3.50	227.16	77.05	37.24	25.26	46.54	28.71	4.35	2.53	12.00	9.42	106.12
122.0	61.0	3.60	232.59	78.82	38.13	25.84	47.71	29.42	4.34	2.53	12.32	9.67	103.37
122.0	61.0	4.00	253.74	85.69	41.60	28.09	52.30	32.21	4.32	2.51	13.59	10.67	93.76
122.0	61.0	4.30	269.01	90.61	44.10	29.71	55.65	34.23	4.30	2.50	14.52	11.40	87.72
122.0	61.0	4.50	278.91	93.78	45.72	30.75	57.84	35.55	4.29	2.49	15.14	11.88	84.15
122.0	61.0	3.50	227.16	77.05	37.24	25.26	46.54	28.71	4.35	2.53	12.00	9.42	106.12
122.0	61.0	3.60	232.59	78.82	38.13	25.84	47.71	29.42	4.34	2.53	12.32	9.67	103.37
122.0	61.0	4.00	253.74	85.69	41.60	28.09	52.30	32.21	4.32	2.51	13.59	10.67	93.76
122.0	61.0	4.30	269.01	90.61	44.10	29.71	55.65	34.23	4.30	2.50	14.52	11.40	87.72
122.0	61.0	4.50	278.91	93.78	45.72	30.75	57.84	35.55	4.29	2.49	15.14	11.88	84.15
122.0	61.0	5.00	302.72	101.34	49.63	33.23	63.17	38.76	4.26	2.47	16.66	13.07	76.49
145.0	82.0	3.50	424.38	175.94	58.53	42.91	71.67	48.41	5.30	3.42	15.08	11.84	84.45
145.0	82.0	3.60	434.93	180.22	59.99	43.96	73.52	49.65	5.30	3.41	15.49	12.16	82.23
145.0	82.0	4.00	476.32	196.93	65.70	48.03	80.82	54.53	5.28	3.39	17.11	13.43	74.46
145.0	82.0	4.30	506.49	209.05	69.86	50.99	86.19	58.11	5.26	3.38	18.31	14.37	69.59
145.0	82.0	4.50	526.19	216.94	72.58	52.91	89.72	60.46	5.25	3.37	19.10	14.99	66.70
145.0	82.0	5.00	574.00	236.00	79.17	57.56	98.35	66.20	5.22	3.35	21.06	16.53	60.50
172.0	92.0	3.50	696.21	265.21	80.95	57.65	99.20	64.49	6.28	3.87	17.67	13.87	72.08
172.0	92.0	3.60	713.91	271.80	83.01	59.09	101.81	66.17	6.27	3.87	18.16	14.25	70.17
172.0	92.0	4.00	783.50	297.65	91.10	64.71	112.10	72.79	6.25	3.85	20.07	15.75	63.48
172.0	92.0	4.30	834.46	316.50	97.03	68.80	119.68	77.66	6.23	3.84	21.49	16.87	59.29
172.0	92.0	4.50	867.85	328.81	100.91	71.48	124.68	80.87	6.22	3.83	22.43	17.61	56.80
172.0	92.0	5.00	949.30	358.70	110.38	77.98	136.94	88.72	6.19	3.81	24.76	19.43	51.46