

PROPERTIES OF APL APOLLO STRUCTURA (RHS)
IS : 4923 : 1997/EN 10219-1 : 2006**/ASTM A-500

RHS	Thickness	See Area	Unit Wt	Moment of Inertia		Radius of Gyration		Elastic Modulus		Torsional Constants		Outer Surface Area per m m ²
				l _{xx} cm ⁴	l _{yy} cm ⁴	r _{xx} cm	r _{yy} cm	z _{xx} cm ³	z _{yy} cm ³	J cm ⁴	B cm ⁴	
D X B mm	l mm	A cm ²	W kg/m	l _{xx} cm ⁴	l _{yy} cm ⁴	r _{xx} cm	r _{yy} cm	z _{xx} cm ³	z _{yy} cm ³	J cm ⁴	B cm ⁴	per m m ²
50 X 25	2.0	2.74	2.15	8.38	2.81	1.75	1.01	3.35	2.25	6.97	3.79	0.142
	2.6	3.46	2.71	10.16	3.36	1.71	0.99	4.06	2.69	8.27	4.53	0.137
	3.2	4.13	3.24	11.63	3.80	1.68	0.96	4.35	3.04	9.52	5.12	0.134
	4.0	4.95	3.88	13.13	4.23	1.63	0.92	5.25	3.38	10.86	5.69	1.29
60 X 40	2.6	4.76	3.73	22.76	12.09	2.19	1.59	7.59	6.05	25.59	9.83	0.187
	2.9	5.25	4.12	24.74	13.11	2.17	1.59	8.25	6.56	28.02	10.66	0.185
	3.6	6.35	4.98	28.90	15.23	2.13	1.55	9.63	7.62	33.30	12.41	0.181
	4.5	7.67	6.02	33.31	17.44	2.08	1.51	11.10	8.72	39.34	14.29	0.177
66 X 33	2.6	4.70	3.69	25.15	8.43	2.31	1.34	7.62	5.11	20.75	8.71	0.185
	2.9	5.19	4.07	27.33	9.12	2.29	1.33	8.28	5.53	22.65	9.43	0.183
	3.6	6.28	4.93	31.87	10.52	2.25	1.29	9.66	6.37	26.71	10.90	0.179
	4.5	7.58	5.95	36.64	11.93	2.20	1.25	11.10	7.23	31.21	12.43	0.175
80 X 40	2.6	5.80	4.55	46.58	15.74	2.84	1.65	11.65	7.87	38.50	13.46	0.227
	2.9	6.41	5.03	50.87	17.11	2.82	1.63	12.72	8.56	42.23	14.66	0.225
	3.2	7.01	5.50	54.94	18.41	2.80	1.62	13.74	9.21	45.83	15.78	0.224
	4.0	8.55	6.71	64.79	21.49	2.75	1.59	16.20	10.74	54.77	18.49	0.219
96 X 48	4.8	10.01	7.85	73.22	24.03	2.71	1.55	18.30	12.02	62.81	20.79	0.215
	3.2	8.54	6.71	98.61	33.28	3.40	1.97	20.54	13.87	82.13	23.82	0.272
	4.0	10.47	8.22	117.54	39.32	3.35	1.94	24.49	16.38	99.11	28.24	0.267
	4.8	12.31	9.66	134.35	44.55	3.30	1.90	27.99	18.56	114.80	32.14	0.263
100 X 50	3.6	9.95	7.81	123.50	41.56	35.24	2.04	24.70	16.63	-	-	0.300
	4.5	12.17	9.55	146.59	48.87	34.71	2.00	29.32	19.55	-	-	0.300
	5.4	14.28	11.21	166.21	55.09	34.18	1.96	33.36	22.04	-	-	0.300
	6	15.63	12.27	178.73	58.67	33.81	1.94	35.75	23.47	-	-	0.300
115 X 60	3.6	11.75	9.22	198.45	71.90	41.10	2.47	34.51	23.97	-	-	0.350
	4.5	14.42	11.32	237.50	85.40	40.69	2.43	41.31	28.47	-	-	0.350
	5.4	16.98	13.33	272.61	97.29	40.07	2.39	47.41	32.43	-	-	0.350
	6.0	18.63	14.63	293.88	104.37	39.72	2.37	51.11	34.79	-	-	0.350
160 X 80	4.8	21.52	16.90	697.62	236.29	56.93	3.31	87.20	59.07	-	-	0.480
	5.4	24.00	18.84	768.50	259.25	56.59	3.29	96.06	64.81	-	-	0.480
	6	26.43	20.75	835.93	280.87	56.24	3.26	104.49	70.22	-	-	0.480
	8	34.19	26.84	1036.36	343.75	55.06	3.17	129.57	85.94	-	-	0.480
180 X 70	4.8	22.48	17.65	864.47	194.71	62.01	2.94	96.05	55.63	-	-	0.500
	5.4	25.08	19.69	952.78	213.30	61.63	2.92	105.86	60.94	-	-	0.500
	6	27.63	21.69	1036.91	230.73	61.26	2.89	115.21	65.92	-	-	0.500
	8	35.79	28.09	1287.92	280.89	59.99	2.80	143.10	80.25	-	-	0.500
122 X 61	3.6	12.32	9.67	232.61	78.83	4.34	2.53	38.13	25.84	193.91	44.50	0.347
	4.5	15.14	11.88	278.94	93.78	4.29	2.49	45.73	30.75	235.39	53.13	0.343
	5.4	17.85	14.01	320.83	107.03	4.24	2.45	52.60	35.09	347.29	60.89	0.338
120 X 60	3.2	10.85	8.51	199.88	67.95	4.29	2.50	33.31	22.65	165.83	28.95	0.344
	3.6	12.11	9.5	220.75	74.77	4.27	2.48	36.79	24.92	184.10	42.91	0.341
	4.5	14.87	11.67	264.52	88.88	4.22	2.44	44.09	29.63	223.34	51.19	0.337
145 X 82	4.8	20.28	15.92	555.16	228.50	5.23	3.36	76.57	55.73	534.27	94.45	0.429
	5.4	22.60	17.74	610.85	250.59	5.20	3.33	84.26	61.12	592.70	103.81	0.426
172 X 92	4.8	23.83	18.71	917.13	346.91	6.20	3.82	105.64	75.41	826.04	128.85	0.503
	5.4	26.59	20.88	1012.47	381.74	6.17	3.79	117.73	82.99	918.10	142.04	0.500
200 x 100	4.0	22.95	18.01	1199.71	410.78	7.23	4.23	119.97	82.16	991.47	141.46	0.579
	5.0	28.36	22.26	1459.25	496.94	7.17	4.19	145.93	99.39	1216.96	171.53	0.574
	6.0	33.63	26.40	1703.31	576.91	7.12	4.14	170.33	115.38	1434.03	199.68	0.569
	7.0	38.78	30.44	1932.19	650.93	7.06	4.10	193.22	130.19	1642.92	226.04	0.564
	8.0	43.79	34.38	2146.21	719.19	7.00	4.05	214.62	143.84	1843.86	250.68	0.559
220 x 140	4.0	27.75	21.78	1892.55	947.64	8.26	5.84	172.05	135.38	2000.01	223.99	0.699
	5.0	34.36	26.97	2313.36	1155.23	8.21	5.80	210.31	165.03	2467.63	273.47	0.694
	6.0	40.83	32.05	2713.37	1351.66	8.15	5.75	246.72	193.09	2922.95	320.55	0.689
	7.0	47.18	37.03	3094.76	1537.22	8.10	5.71	281.34	219.60	3366.29	365.35	0.684
240 X 120	4.0	27.75	21.78	2110.72	725.35	8.72	5.11	175.89	120.89	1736.39	208.03	0.699
	5.0	34.36	26.97	2579.67	882.47	8.67	5.07	214.97	147.08	2138.48	253.55	0.694
	6.0	44.83	32.05	3025.91	1030.45	8.61	5.02	252.16	174.74	2528.39	296.70	0.689
	7.0	47.18	37.03	3449.84	1169.52	8.55	4.98	287.49	194.92	2906.43	337.58	0.684
	8.0	53.39	41.91	3851.84	1299.95	8.49	4.93	320.99	216.66	3272.90	376.29	0.679
	9.0	59.47	46.69	4232.30	1422.00	8.44	4.89	352.69	237.00	3628.08	412.93	0.674
	10.0	65.42	51.36	4591.59	1535.91	8.38	4.85	382.63	255.99	3972.25	447.57	0.688
260 X 180*	4.0	37.15	26.81	3357.53	1917.45	9.92	4.49	258.27	213.05	3822.78	346.87	0.859
	5.0	42.36	33.25	4121.36	2349.53	9.86	7.45	317.03	261.06	4730.34	425.47	0.854
	6.0	50.43	39.59	4855.87	2763.43	9.81	7.40	373.53	307.05	5619.50	501.05	0.849
	7.0	58.38	45.83	5561.50	3159.50	9.76	7.36	427.81	351.06	6490.62	573.71	0.844
300 X 150*	4.0	34.95	27.43	4196.67	1147.46	10.96	6.44	279.78	192.99	3435.43	331.89	0.879
	5.0	43.36	34.03	5153.13	1770.87	10.90	6.39	343.54	236.12	4244.57	406.58	0.874
	6.0	51.63	40.53	6073.51	2079.57	10.85	6.35	404.90	277.28	5034.64	478.20	0.869
	7.0	59.78	46.93	6959.28	2373.87	10.79	6.30	463.89	316.52	5806.60	546.85	0.864
	8.0	67.79	53.22	7807.95	2654.12	10.73	6.26	520.53	353.88	6559.05	612.64	0.859
	9.0	75.67	59.40	8623.00	2920.63	10.67	6.21	574.87	389.42	7294.15	675.66	0.854
	10.0	83.42	65.49	9403.90	3173.71	10.62	6.17	626.93	423.16	8011.67	736.01	0.848
300 X 200*	4.0	38.95	30.57	5072.88	2736.54	11.41	8.38	338.19	273.66	5555.71	448.64	0.979
	5.0	48.36	37.96	6241.05	33.6092	11.36	8.34	416.07	336.09	6882.77	551.49	0.974
	6.0	57.63	45.24	7370.23	3962.19	11.31	8.29	491.35	336.22	8186.02	650.85	0.969
	7.0	66.78	52.42	8460.93	4540.76	11.26	8.25	564.06	454.08	9465.89	746.83	0.964
	8.0	75.79	59.50	9513.66	5097.04	11.20	8.20	634.24	509.70	10722.83	839.51	0.959
	9.0	84.67	66.47	10528.93	5631.42	11.15	8.16	701.93	563.14	11975.29	929.01	0.954
	10.0	93.42	73.34	11507.24	6144.30	11.10	8.11	767.15	614.43	13169.70	1015.43	0.948