

J109 Shoal Keel Offsets (Ref. J109 Shoal Keel Drawing)
R.A.Johnstone
28-Mar-02
Offsets in Millimeters

	Top of Lead Sec 1	OD Offsets for Section @ 75mm Rebate on Hull Sump	Sec 2	Sec 3	Sec 4	Sec 5	Sec 6	Sec 7	Sec 8	Sec 9	Offsets Below Tip
Chord Length	1238	1234.7	1227.1	1217.3	1259.9	1386.4	1728.5	1870.1	1924.5	2010	2010
Distance Below Sec 1	0	75	231	444.5	506	567.5	690.5	752	813.5	998	*****
LE Radius	10.4	10.2	9.7	9.0	9.1	10.5	13.9	15.9	18.7	28.9	*****
Max Designed 1/2 Width	66	65.1	63.3	60.7	62.3	70	90	100	110	140	
% Thickness	0.107	0.105	0.103	0.100	0.099	0.101	0.104	0.107	0.114	0.139	
Yc half widths at Xc Stations											
0.005 x	10.8	10.6	10.3	9.9	10.2	11.4	14.7	16.3	18.0	22.8	3.3
0.0075 x	13.0	12.8	12.4	11.9	12.2	13.8	17.7	19.7	21.6	27.5	3.9
0.0125 x	16.5	16.3	15.8	15.2	15.6	17.5	22.5	25.0	27.5	35.0	5.0
0.025 x	22.9	22.6	22.0	21.1	21.6	24.3	31.3	34.7	38.2	48.6	7.0
0.050 x	31.8	31.4	30.5	29.3	30.1	33.8	43.4	48.2	53.1	67.5	9.7
0.075 x	38.5	38.0	36.9	35.4	36.3	40.8	52.5	58.3	64.2	81.7	11.7
0.10 x	43.9	43.3	42.1	40.4	41.4	46.5	59.8	66.5	73.1	93.1	13.3
0.15 x	52.1	51.4	50.0	48.0	49.2	55.3	71.1	79.0	86.9	110.6	15.8
0.20 x	58.1	57.3	55.7	53.4	54.8	61.6	79.2	88.0	96.8	123.2	17.6
0.25 x	62.2	61.4	59.7	57.2	58.7	66.0	84.9	94.3	103.7	132.0	18.9
0.30 x	64.9	64.0	62.2	59.6	61.2	68.8	88.4	98.3	108.1	137.6	19.7
0.35 x	65.9	65.0	63.2	60.6	62.2	69.9	89.9	99.9	109.9	139.9	20.0
0.40 x	65.6	64.7	62.9	60.3	61.9	69.6	89.4	99.4	109.3	139.1	19.9
0.45 x	63.8	63.0	61.2	58.7	60.3	67.7	87.1	96.7	106.4	135.4	19.4
0.50 x	60.9	60.1	58.4	56.0	57.5	64.6	83.0	92.3	101.5	129.2	18.5
0.55 x	56.9	56.1	54.6	52.3	53.7	60.4	77.6	86.2	94.8	120.7	17.3
0.60 x	52.0	51.3	49.9	47.9	49.1	55.2	71.0	78.9	86.7	110.4	15.8
0.65 x	46.4	45.8	44.5	42.7	43.8	49.2	63.3	70.3	77.4	98.5	14.1
0.70 x	40.2	39.6	38.5	37.0	37.9	42.6	54.8	60.9	67.0	85.2	12.2
0.75 x	33.8	33.3	32.4	31.1	31.9	35.8	46.1	51.2	56.3	71.7	10.2
0.80 x	27.2	26.9	26.1	25.0	25.7	28.9	37.1	41.3	45.4	57.8	8.3
0.85 x	20.7	20.4	19.8	19.0	19.5	21.9	28.2	31.3	34.4	43.8	6.3
0.90 x	14.1	13.9	13.5	13.0	13.3	15.0	19.2	21.4	23.5	29.9	4.3
0.95 x	7.5	7.4	7.2	6.9	7.1	8.0	10.3	11.4	12.6	16.0	2.3
1.00 x	1.0	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.1

Notes:

- 1) Leading edge sweep-back is 12.5 degrees below top of lead.
- 2) Leading edge profile below top of lead is straight line.
- 3) Tip sections below Section 9 are elliptical with maximum depth determined by offset below tip and maximum width offset same as offsets for Section 9.
- 4) 3.8mm Rabbett for GRP wrap at top of lead shall be 75mm in height.