

SONAR CLASS ASSOCIATION

HULL MEASUREMENT FORM HMF-1 v10.2



CLASS SAIL NO. _____

MEASURER: _____

MEASURED DATE _____

Section 1 — Builder

1.1 Name of Builder: _____

1.3 Hull Serial No: _____

1.5 Hull Color: _____ Waterline Color: _____ Deck Color: _____

Section 2 — Hull Weights (To be entered at builder only)

	Min.	Max.	Actual	Initials
2.1 Hull weight less hull appendages:	488kg		_____	_____
2.2 Keel unattached weight:	404kg	414kg	_____	_____
2.3 Measurer observed hull weight complete (including hull , deck, fittings, hull appendages , and lifting strap):			_____	_____

Section 3 — Rudder

	Min.	Max.	Actual	Initials
3.1 HDP to aft edge of rudder projected to centerline of hull shell :	76	89	_____	_____
3.2 Rudder trailing edge length:	1099	1111	_____	_____
3.3 Rudder leading edge length:	1092	1105	_____	_____
3.4 Length of Rudder top:	431	438	_____	_____
3.5 Length of Rudder bottom:	199	206	_____	_____
3.6 Max. rudder thickness 10mm from top :	63	70	_____	_____
3.7 Max. rudder thickness 10mm from bottom:	24	28	_____	_____
3.8 Rudder trailing edge thickness (Pass/Fail)	3		P / F	_____
3.9 Max space between rudder and hull shell		13	P / F	_____

Section 4 — Keel

	<u>Min.</u>	<u>Max.</u>	<u>Actual</u>	<u>Initials</u>
4.1 B1 = HDP to aft edge of keel at point A1:	2925	2950	_____	_____
4.2 C1 = HDP to aft edge of keel at point A2:	3040	3064	_____	_____
4.3 Depth of keel point A2 to A3	230	245	_____	_____
4.4 Keel upper chord length B2:	1025	1042	_____	_____
4.5 Keel thickness B7 (upper 10%chord):	78	84	_____	_____
4.6 Keel thickness B6 (upper 20% chord):	98	103	_____	_____
4.7 Keel thickness B5 (upper 40%chord):	109	114	_____	_____
4.8 Keel thickness B4 (upper 70%chord):	79	84	_____	_____
4.9 Keel lower chord length C2:	662	678	_____	_____
4.10 Keel thickness C7 (lower 10%chord):	46	53	_____	_____
4.11 Keel thickness C6 (lower 20% chord):	62	67	_____	_____
4.12 Keel thickness C5 (lower 40%chord):	70	75	_____	_____
4.13 Keel thickness C4 (lower 70%chord):	51	56	_____	_____
4.14 Keel trailing edge thickness at A1 (Pass/Fail):	6.5		P / F	_____
4.15 Keel trailing edge thickness at A2	3.0		P / F	_____
4.16 Is the trailing edge straight?			P / F	_____
4.17 Is leading edge straight?			P / F	_____
4.18 Is bottom of keel straight?			P / F	_____
4.19 Is constant keel section maintained?			P / F	_____

Section 5 — Deck

	<u>Min.</u>	<u>Max.</u>	<u>P / F</u>	<u>Initials</u>
5.1 Center of forestay pin hole to bow of hull shell , measured 100mm below the deck.	135	155	P / F	_____
5.2 Center of forestay pin hole to center of outboard shroud hole. Measure between the two hole centers.	2946	2997	P / F	_____
5.3 Center of outboard shroud hole to shearline.	152	178	P / F	_____
5.4 Fore and aft dimension of spar hole.		206	P / F	_____
5.5 Combined mast step thickness from gel coat surface to mast heel point .		17	P / F	_____
5.6 Aft side of mast heel point to centerline of companion opening sill measured at gel coat surface.	717	740	_____	_____

Section 6 — Rig

	<u>Min.</u>	<u>Max.</u>	<u>Actual</u>	<u>Initials</u>
6.1 Mast length:	10275	10315	_____	_____
6.2 Upper band height		10110	P / F	_____
6.3 Upper Spar band width	25		P / F	_____
6.4 Fore and aft Mast spar cross section at 8458mm from the mast heel point	100	103	P / F	_____
6.5 Transverse Mast spar cross section at 8458mm from the mast heel point	66	72	P / F	_____
6.6 Spinnaker hoist height:		8389	_____	_____
6.7 Forestay height:	8223	8236	_____	_____
6.8 Upper Shroud Height::	8223	8236	_____	_____
6.9 Mast spar curvature at 6100mm from the mast heel point		50	P / F	_____
6.10 Spreader height:	4555	4570	_____	_____
6.11 Spreader transverse length measured as the distance between the inner edge of both upper shrouds on the upper edge of each spreader:	1426	1486	_____	_____
6.12 Spreader fore and aft length measured as the distance from the aft face of the spar to a line intersecting the aft edge of both shrouds:	71	135	_____	_____
6.13 Lower Shroud Height::	4438	4451	_____	_____
6.14 Upper Spinnaker pole fitting height:	2432	2445	_____	_____
6.15 Lower Spinnaker pole fitting height:	2042	2064	_____	_____
6.16 Spinnaker pole fitting projection		60	P / F	_____
6.17 Fore and aft spreader cross section	45		P / F	_____
6.18 Vertical spreader cross section	18		P / F	_____
6.19 Lower band height	1727		P / F	_____
6.20 Lower Spar band width	25		P / F	_____
6.21 Forestay length from center of lower rigging link or rigging screw pin to bearing point on T-ball	7848	8001	P / F	_____
6.22 Forestay diameter	3.8		P / F	_____
6.23 Shroud diameter	3.8		P / F	_____
6.24 Backstay diameter	3.0		P / F	_____
6.25 Mast tip weight:	10kg		_____	_____
6.26 Boom spar curvature		25	P / F	_____
6.27 Boom vertical cross section	88	98	P / F	_____
6.28 Boom transverse cross section	55	65	P / F	_____

6.29	Boom spar band width	25		P / F	_____
6.30	Boom band distance		3404	P / F	_____
6.31	Spinnaker pole length	2597	2610	P / F	_____
6.32	Spinnaker pole diameter	50		P / F	_____
6.33	Whisker pole length	3000	3100	P / F	_____
6.34	Whisker pole diameter	35	64	P / F	_____

Section 7 — Dry Weight of Hull and Rig

	<u>Min.</u>	<u>Max.</u>	<u>Actual</u>	<u>Initials</u>
7.1 Lifting slings weight:		3kg	P / F	_____
7.2 Dry weight of hull and rig (w/o correctors) :	950kg		_____	_____

The dry weight of the complete **hull and rig** as raced including the following:

- (a) One set of sheets only (main sheet, jib sheets and spinnaker sheets)
- (b) Hatch covers.
- (c) Mast partner blocks
- (d) Fastened or permanent equipment including:
 - Compasses (excluding batteries).
 - Running lights.
 - Permanent bilge pump.
 - Mast head fly and telltales.
 - Lifting slings

	<u>Actual</u>	<u>Initials</u>
7.3 Corrector weights required:		
(a) Forward of the aft face of the mast.	_____	_____
(b) In the keel sump.	_____	_____
(c) In the aft lazarette.	_____	_____

Corrector weights shall be added to the **hull** as prescribed below when the **boat** weight is less than 950kg. Corrector weights shall be noted on the **hull certification mark**.

- (d) **Boats** weighing between 940kg and 950kg: Corrector weights shall be placed in the keel sump.
- (e) **Boats** weighing between 922kg and 940kg: Corrector weights in the amount of 9kg shall be placed in the keel sump. The balance shall be divided equally and secured in the aft lazarette and forward of the aft face of the **mast**.
- (f) **Boats** weighing between 897kg and 922kg: The total corrector weight shall be divided into three equal portions. One portion shall be placed in the keel sump. The balance shall be divided equally and secured in the aft lazarette and forward of the aft face of the mast.

NOTES: _____

ACCEPTED BY: _____ **Official Measurer** Date: _____
 (Signature)
 _____ (Print Name)

ACCEPTED BY: _____ **Builder's Official Measurer:** Date: _____
 (Signature)
 _____ (Print Name)