

BOAT Name HAKUNA MATATA Sail Nr GRE-1243	GPH 580.5	HULL Length Overall 12.480m Maximum Beam 3.922m Displacement 7,396kg Draft 2.352m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.043% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class COMET 41S Designer A.VALLICELLI & C. Builder COMAR Series 08/2005 Age 05/2007 Age Allowance 0.455% Offset File COMET41S.OFF - 20/05/2007 09:47:56 Measurement by - 12/05/2007		IMSL 11.173m VCGD 0.049m Sink 23.46kg/mm RL 9.890m VCGM 0.056m WS 31.13m² LSM0 10.983m Displacement/Length ratio 5.5826



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	564.9			631.5		
Time on Time	1.0621			1.0689		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	664.0	514.5	459.4	858.8	634.2	551.5
Time on Time	1.0166	1.3120	1.4693	0.7860	1.0643	1.2239

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	968.7	799.8	708.5	671.5	656.4	650.0	636.0
52°	634.7	534.2	486.5	469.2	462.9	459.8	453.2
60°	599.7	510.9	472.9	457.0	450.3	446.7	441.4
75°	572.5	494.8	463.2	445.9	433.8	426.4	420.0
90°	577.6	495.5	458.9	443.3	427.2	412.7	393.4
110°	593.4	492.3	452.9	429.9	409.0	395.2	375.9
120°	609.8	501.6	457.4	432.2	408.2	387.4	358.6
135°	675.4	546.3	479.2	448.7	425.2	401.2	355.0
150°	802.7	640.5	540.1	480.1	450.8	428.7	384.7
Run VMG	926.9	739.5	623.7	548.9	500.8	464.2	419.9

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Number **000011**
ORC Ref **GRE01015342**
Issued On **03/04/2019**
VPP Ver. **2019 1.01**
Valid until **28/02/2020**

Crew Weight
Default **787kg**
Maximum **750kg**
Minimum* **563kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

ToD	ToT
Non Spin GPH 611.0	0.9820
Non Spin OSN 594.4	1.0094

Selected Courses							
Windward / Leeward	947.8	769.7	666.1	610.2	578.6	557.1	527.9
Circular Random	797.8	644.8	563.2	516.2	487.3	468.0	442.0
Coastal / Long Distance	945.7	723.2	600.9	533.5	497.9	469.5	422.8
Non Spinnaker	852.7	683.6	592.1	538.4	505.1	483.0	453.7

Sails Limitations

Headsails	Spinnakers
6	4

Velocity Prediction in Knots for True Wind Speeds							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	42.8°	41.2°	40.3°	39.1°	38.5°	38.2°	38.6°
Beat VMG	3.72	4.50	5.08	5.36	5.48	5.54	5.66
52°	5.67	6.74	7.40	7.67	7.78	7.83	7.94
60°	6.00	7.05	7.61	7.88	7.99	8.06	8.16
75°	6.29	7.28	7.77	8.07	8.30	8.44	8.57
90°	6.23	7.27	7.84	8.12	8.43	8.72	9.15
110°	6.07	7.31	7.95	8.37	8.80	9.11	9.58
120°	5.90	7.18	7.87	8.33	8.82	9.29	10.04
135°	5.33	6.59	7.51	8.02	8.47	8.97	10.14
150°	4.48	5.62	6.67	7.50	7.99	8.40	9.36
Run VMG	3.88	4.87	5.77	6.56	7.19	7.76	8.57
Gybe Angles	141.6°	147.7°	149.4°	155.3°	168.2°	180.0°	180.0°

Class Division Length
CDL = **10.532**

Storm Sails Areas
Heavy Weather Jib **35.08**
Storm Jib (JL=10.48) **13.00**
Storm Trysail **15.60**

Owner

BOAT	
Name HAKUNA MATATA	Sail Nr GRE-1243
File GR1243	Data in meters/kilograms

RIG	
Forestay Tension Aft	Spreaders 2
Inner Stay None Fitted	Runners 0
Carbon Mast No	Jumper Struts None
Taper Hollows No	Jib Furler No
Fiber Rigging No	Main Furler No
Lenticular Rigging No	Without Backstay No
Articulated Bowsprit No	
P 15.474	E 5.760 MDT1 0.145 MW 0.240
IG 16.015	J 4.950 MDL1 0.240 GO 0.272
ISP 16.170	SFJ 0.000 MDT2 0.128 BD 0.186
BAS 1.731	SPL 4.950 MDL2 0.210 MWT
FSP 0.070	TPS 0.650 TL 0.650 MCG

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 08/04/2010		SG 1.0240	
FFM 1.451	FF 1.449	SFFP 0.341	
FAM 1.105	FA 1.114	SAFP 12.083	
W1 24.0	PD1 59.0	WD 13.075	
W2 48.0	PD2 120.0	GSA 50.0	
W3 72.0	PD3 183.0	RSA 5542.0	
W4 96.0	PD4 240.0	PLM 2026.0	
LCF from stem on CL / on sheer		6.972 / 7.210	
Maximum beam station from stem		7.970	
RM Measured		183.5kg-m	
RM Default		194.2kg-m	
Limit of positive stability / Stab.Index		117.3° / 119.1	
Freeboard at mast at 4.950		1.256	



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MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.432		
Type Folding 2 blades	PBW 0.113		
Twin Screw No	PIPA 0.0026		
ST1 0.043	ST3 0.134	ST5 0.299	
ST2 0.134	ST4 0.088	EDL 1.785	

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COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.180	1.21	2.14	3.68	4.81	52.71	53.88	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	16.07	16.07	16.07	8.92	8.55	118.46		SL · (SFL + 4·SHW) / 6	
Asymmetric	SLU	SLE	SL	SHW	SFL				
	16.15	14.75	15.45	6.83	8.35	91.85 95.43		AS · (SFL + 4·SHW) / 6	

HEADSAILS												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0.11	0.83	1.54	2.76	3.95	5.12	15.72	42.47	Y		10/05/2016	Pentex	
0.13	0.84	1.54	2.76	3.94	5.12	15.61	42.17	Y		07/05/2016	Carbon	
0.12	0.82	1.51	2.75	3.94	5.10	15.59	41.91			08/06/2010	Kevlar	
0.07	0.65	1.24	2.49	3.76	5.01	15.64	39.21	Y		10/05/2016	Kevlar	
0.06	0.63	1.21	2.33	3.40	4.39	14.05	32.05			12/05/2007	Dacron	

MEASUREMENT INVENTORY				
Measurer GRE-17				
Date 08/04/2010				
Comment				
Id	Item	Weight	Distance	VCG Description
2a	Anchor	15.0	11.00	DANFORTH
2b	Anchor	10.0	11.00	DANFORTH
9a	Chain	22.0	11.00	CHAIN + ROPE
4	Tools	15.0	6.00	
Id	Item	Maker	Model	
5	Engine	LOMBARDINI	40 HP	
Id	Item	Weight	Description	
8	Fwd Items	20.0	PORTABLE DECK-	

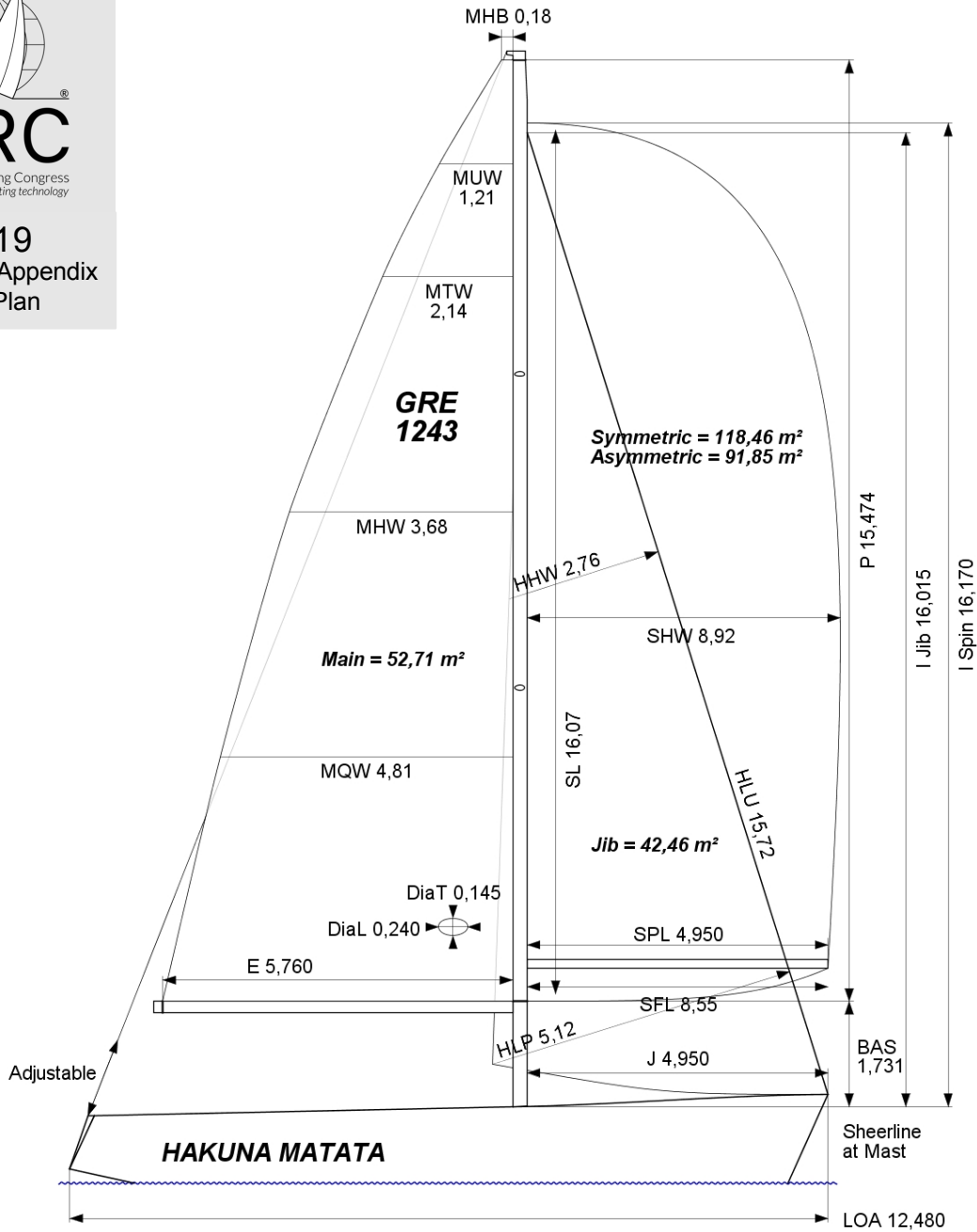
MEASUREMENT INVENTORY									
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description	
6a	Tank	WATER	PLASTIC	200.0	10.00		0-0	EMPTY	
6b	Tank	WATER	PLASTIC	200.0	10.00		0-0	EMPTY	
6c	Tank	FUEL	INOX	140.0	6.80		0-0	EMPTY	
Id	Item	Weight	Distance	VCG Description					
3a	Battery	50.0	6.00	2 x 100 Ah					



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Sail Plan



SAILS INVENTORY

MAINSAIL (3)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
3	0.18	1.21	2.14	3.68	4.81	52.71		18/10/2016	QUANTUM	Pentex	
2	0.17	1.23	2.15	3.67	4.77	52.58		06/03/2013	QUANTUM	Kevlar	

HEADSAILS (5)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1A	0.11	0.83	1.54	2.76	3.95	5.12	15.72	103%	42.47	Y			10/05/2016	QUANTUM	Pentex	
2	0.13	0.84	1.54	2.76	3.94	5.12	15.61	103%	42.17	Y			07/05/2016	QUANTUM	Carbon	
1	0.12	0.82	1.51	2.75	3.94	5.10	15.59	103%	41.91				08/06/2010	QUANTUM	Kevlar	
3	0.07	0.65	1.24	2.49	3.76	5.01	15.64	101%	39.21	Y			10/05/2016	QUANTUM	Kevlar	
4	0.06	0.63	1.21	2.33	3.40	4.39	14.05	89%	32.05				12/05/2007	QUANTUM	Dacron	

SYMMETRIC SPINNAKERS (5)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
S3	16.07	16.07	16.07	8.92	8.55	118.47		07/05/2016	QUANTUM	Nylon	BW old
3	15.96	15.96	15.96	8.95	8.73	118.45		10/03/2012	QUANTUM	Nylon	
S1	15.99	15.99	15.99	8.88	8.73	117.93		07/05/2016	QUANTUM	Nylon	VMG RG
1	16.09	16.09	16.09	8.66	8.37	115.34		08/06/2010	QUANTUM	Nylon	
S4	16.09	16.09	16.09	8.03	8.23	108.21		10/05/2016	QUANTUM	Nylon	Orange

ASYMMETRIC SPINNAKERS (2)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
A5	16.15	14.75	15.45	6.83	8.35	91.86	asym		04/05/2008	QUANTUM	Nylon	
AC	16.26	14.94	15.60	6.15	8.11	85.05	asym		10/03/2012	QUANTUM	Unknown	