

BOAT Name BEETHOVEN IV Sail Nr GRE-1303	GPH 637.0	HULL Length Overall 12.688m Maximum Beam 4.128m Displacement 9,354kg Draft 1.820m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.368% Fwd Accommodation Yes Hull Construction Solid Carbon Rudder No Crew Arm Extension
GENERAL Class FIRST 42 S7 Designer B. FARR Builder BENETEAU Series 11/1993 Age 03/1994 Age Allowance 0.487% Offset File ANEMOESA.OFF - 13/03/1998 08:36:00 Measurement by CHRISTOFOR/VOGIATZ - 13/05/2008		IMSL 11.249m VCGD 0.302m Sink 26.03kg/mm RL 8.089m VCGM 0.252m WS 34.86m² LSM0 11.093m Displacement/Length ratio 6.8525



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	617.9			699.5		
Time on Time	0.9710			0.9650		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	746.6	559.4	494.4	972.1	705.8	604.3
Time on Time	0.9041	1.2066	1.3654	0.6944	0.9563	1.1170

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1129.2	925.1	812.7	742.5	710.1	696.3	693.0
52°	726.2	606.3	534.3	497.6	482.4	476.5	473.4
60°	681.1	572.8	508.7	480.9	467.8	461.8	457.9
75°	647.6	546.7	491.9	468.1	454.8	445.1	435.3
90°	652.5	540.6	481.7	458.3	447.5	437.5	416.6
110°	649.5	532.4	475.9	451.3	433.1	416.4	395.5
120°	671.1	550.1	484.6	456.3	436.5	417.3	383.7
135°	749.9	605.0	518.8	474.5	451.6	432.9	395.6
150°	888.7	699.6	593.9	524.9	487.5	465.3	435.5
Run VMG	1026.2	807.8	685.8	606.1	562.9	521.7	463.3

Certificate

Number **000452**
ORC Ref **GRE01009664**
Issued On **04/05/2018**
VPP Ver. **2018 1.00**
Valid until **28/02/2019**

Crew Weight

Default 798kg
Maximum **750kg**
Minimum* **563kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	668.8	0.8971
Non Spin OSN	646.8	0.9277

Selected Courses							
Windward / Leeward	1077.7	866.5	749.3	674.3	636.5	609.0	578.1
Circular Random	891.1	713.5	617.0	560.6	526.3	504.5	478.9
Coastal / Long Distance	1072.5	811.3	667.9	578.8	535.2	502.7	452.9
Non Spinnaker	951.9	755.5	646.9	582.0	541.7	516.0	487.2

Sails Limitations

Headsails	Spinnakers
1	3

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	44.8°	43.1°	42.6°	42.4°	41.8°	41.2°	41.3°
Beat VMG	3.19	3.89	4.43	4.85	5.07	5.17	5.19
52°	4.96	5.94	6.74	7.24	7.46	7.55	7.60
60°	5.29	6.28	7.08	7.49	7.70	7.80	7.86
75°	5.56	6.59	7.32	7.69	7.92	8.09	8.27
90°	5.52	6.66	7.47	7.85	8.04	8.23	8.64
110°	5.54	6.76	7.56	7.98	8.31	8.65	9.10
120°	5.36	6.54	7.43	7.89	8.25	8.63	9.38
135°	4.80	5.95	6.94	7.59	7.97	8.32	9.10
150°	4.05	5.15	6.06	6.86	7.38	7.74	8.27
Run VMG	3.51	4.46	5.25	5.94	6.39	6.90	7.77
Gybe Angles	144.6°	147.3°	147.2°	147.5°	149.6°	174.7°	178.1°

Class Division Length

CDL = **9.670**

Storm Sails Areas

Heavy Weather Jib **33.43**
Storm Jib (JL=10.23) **12.38**
Storm Trysail **12.79**

Owner

BOAT	
Name BEETHOVEN IV	Sail Nr GRE-1303
File GR1303	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 10/05/2008		SG	
FFM 1.369	FF 1.424	SFFP 0.720	
FAM 1.091	FA 1.075	SAFP 10.920	
W1 26.0	PD1 49.0	WD 11.290	
W2 52.0	PD2 101.0	GSA 50.0	
W3 78.0	PD3 149.0	RSA 5542.0	
W4 104.0	PD4 202.0	PLM 2026.0	
LCF from stem on CL / on sheer		7.142 / 7.429	
Maximum beam station from stem		7.306	
RM Measured		203.7kg-m	
RM Default		225.5kg-m	
Limit of positive stability / Stab.Index		103.5° / 106.9	
Freeboard at mast at 4.675		1.240	

RIG			
Forestay Tension Aft	Spreaders 2		
Inner Stay None Fitted	Runners 0		
Carbon Mast No	Jumper Struts None		
Taper Hollows No	Jib Furler Yes		
Fiber Rigging No	Main Furler No		
Lenticular Rigging No	Without Backstay No		
Articulated Bowsprit No			
P 14.257	E 5.125	MDT1 0.123	MW 0.225
IG 15.643	J 4.245	MDL1 0.225	GO 0.250
ISP 16.548	SFJ 0.430	MDT2 0.123	BD 0.190
BAS 1.838	SPL	MDL2 0.191	MWT
FSP 0.076	TPS 4.570	TL 0.700	MCG



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MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Shaft exposed	PRD 0.484		
Type Feathering 3 blades	PBW 0.100		
Twin Screw No	PIPA 0.0064		
PSA 18.000	PHL 0.095	ST3 0.128	ESL 1.125
PSD 0.030	ST1 0.043	ST4 0.061	
PHD 0.076	ST2 0.128	ST5 0.248	

COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.150	1.09	1.91	3.21	4.27	42.98	43.84	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric	SLU	SLE	SL	SHW	SFL	Area	Formula		
	16.90	14.83	15.87	8.32	7.62	108.15	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
0.05	0.75	1.49	3.04	4.60	6.20	15.15	46.44			04/07/2016	Pentex	
0.05	0.61	1.22	2.54	3.95	5.43	15.35	40.22			07/05/2009	Dacron	
0.04	0.70	1.37	2.53	3.63	4.66	14.35	35.24			13/05/2008	Nylon	

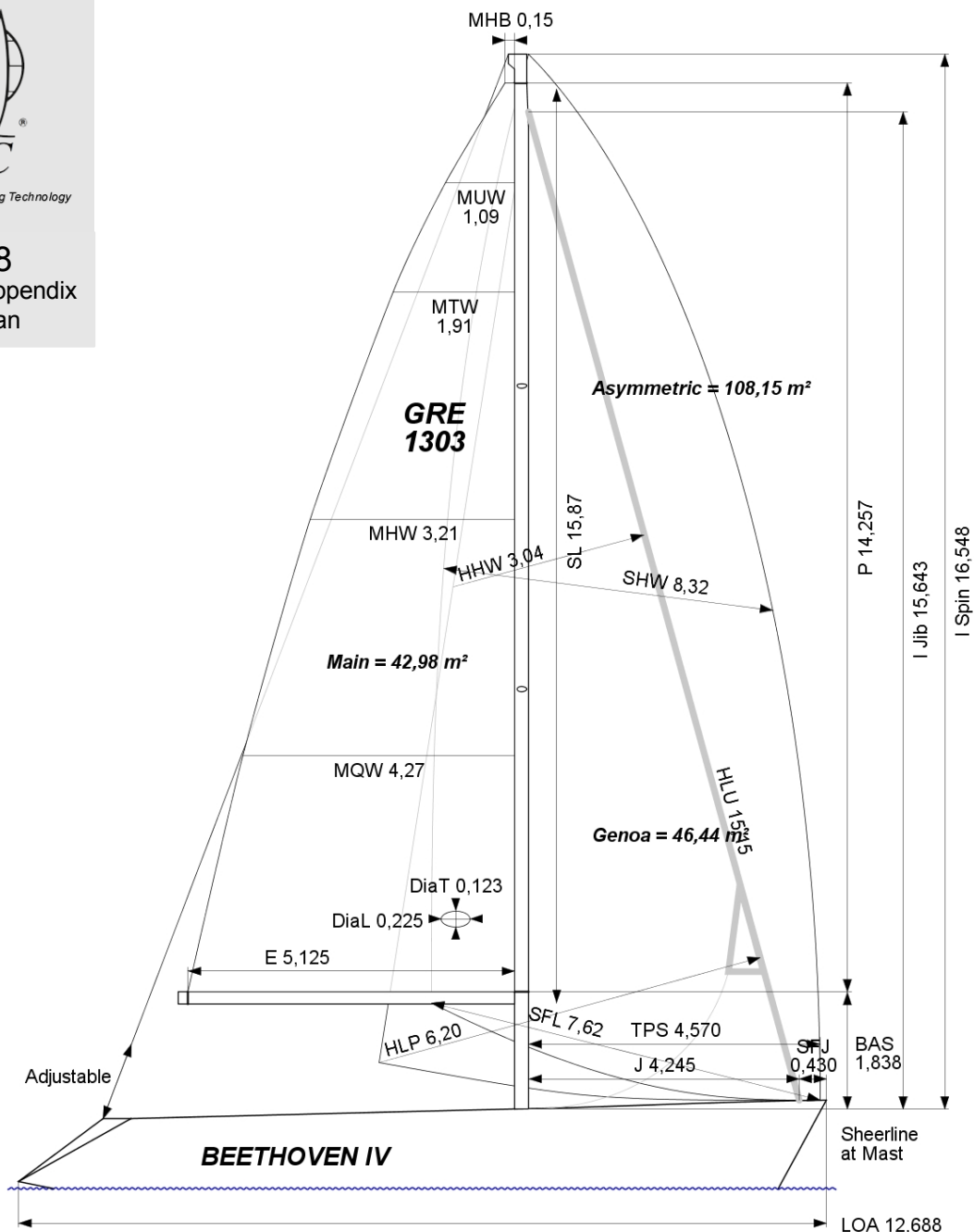
MEASUREMENT INVENTORY				
Measurer CHRISTOFORIS GRE-43				
Date 10/05/2008				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
2	Anchor	14.0	12.00	Danforth
4	Anchor	15.0	-0.20	Bruee
2	Chain	16.0	12.00	8m chain 10mm
4	Chain	184.0	0.90	87m chain 10mm
4	Foels	20.0	5.50	
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
1	Engine	Yanmar	50 Hp	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Description</i>	
4	Deck Gear	15.0		

MEASUREMENT INVENTORY								
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn</i>	<i>Description</i>
3	Tank	Diesel	Inox	150.0	9.00		0-0	
2	Tank	Water	Plastic	400.0	9.00		0-0	
1	Tank	Water	Plastic	240.0	3.50		0-0	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>				
2	Battery	32.5	7.50	130 Ah				
4	Battery	32.5	7.00	130 Ah				
3	Battery	32.5	7.50	130 Ah				
1	Battery	32.5	7.50	130 Ah				
2	Misc	25.0	1.00	Anchor Windlass				
1	Misc	30.0	2.30	Genoa Furling				



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.150	1.09	1.91	3.21	4.27	42.98	VOGIATZIS	04/07/2016	Kakitsis Sails	Dacron	

HEADSAILS (3)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
3	0.05	0.75	1.49	3.04	4.60	6.20	15.15	146%	46.44			VOGIATZI	04/07/2016	Kakitsis Sails	Pentex	
1	0.05	0.61	1.22	2.54	3.95	5.43	15.35	128%	40.22			CHRISTO	07/05/2009	KAKITSIS	Dacron	
2	0.04	0.70	1.37	2.53	3.63	4.66	14.35	110%	35.24			CHRISTO	13/05/2008		Nylon	

SYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
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ASYMMETRIC SPINNAKERS (3)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
3	16.90	14.83	15.86	8.32	7.62	108.15	asym	VOGIATZIS	12/04/2017	KAKITSIS	Nylon	
2	15.08	13.79	14.43	7.14	8.54	89.26	asym	VOGIATZIS	24/06/2015		Nylon	
1	15.47	13.16	14.32	6.75	7.52	82.36	asym	CHRISTOFORID	07/05/2009	KAKITSIS	Nylon	