

BOAT
Name SUGAR 2 Sail Nr EST-711

GPH
616.9

HULL
Length Overall 11.385 m
Maximum Beam 3.566 m
Displacement 5,591 kg
Draft 1.970 m
IMS Reg. Division Cruiser/Racer
Dynamic Allowance 0.145%
Fwd Accommodation Yes
Hull Construction Cored
Carbon Rudder Yes
Crew Arm Extension
IMS L 10.561 VCGD 0.104 VCGM 0.218
Sink 22.03 kg/mm Wetted Area 27.39 m²



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2012
ORC International
Certificate

GENERAL
Class NM38S
Designer COSSUTTI
Builder NAUTILUS MARINE
Series 09/2010
Age 05/2011
Age Allowance 0.130%
Offset File I16639.OFF - 5/8/2012 19:27:06
Measurement by CUCCOTTI-PARRA - 24/07/2012

SCORING OPTIONS	OFFSHORE			INSHORE		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	591.0			680.8		
Time On Time	1.0152			0.9914		
Performance Line	PLT 0.803	PLD 69.8		PLT 0.803	PLD 177.2	
Triple Number	Low 0.8809	Medium 1.1786	High 1.4533	Low 0.7145	Medium 0.9822	High 1.1561

Rating Office

Offshore
Racing
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TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1084.0	893.5	791.5	741.6	712.4	694.7	689.1
52°	696.8	583.3	520.8	489.6	476.1	468.4	461.8
60°	651.5	551.6	493.8	465.7	454.8	448.0	441.2
75°	617.1	527.5	477.0	448.4	428.9	421.2	413.1
90°	615.2	515.2	463.9	448.9	428.2	411.3	389.5
110°	624.7	517.6	460.1	427.6	404.5	392.5	372.6
120°	647.3	535.0	470.3	436.1	409.5	384.5	355.9
135°	730.1	589.5	506.9	462.1	433.3	408.7	360.7
150°	872.9	687.0	574.9	507.1	465.6	437.7	392.4
Run VMG	1008.0	793.3	662.9	580.4	521.1	480.1	427.7

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Selected Courses							
Windward / Leeward	1046.0	843.4	727.2	661.0	616.7	587.4	558.4
Circular Random	861.8	691.1	598.0	542.6	507.8	484.9	456.7
Ocean for PCS	919.2	721.9	610.3	540.9	494.2	460.4	411.8
Non Spinnaker	924.0	735.6	631.4	568.5	528.6	502.0	469.9

Crew Weight
Declared 750 kg
Default* 731 kg
Non Manual Power No

Special Scoring
ToD ToT
D. Hand OSN 596.1 1.0065
Non Spin. OSN 625.6 0.9591
N/S Perf. Line 42.9 0.720

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	44.7°	43.4°	42.9°	42.0°	41.4°	41.3°	42.3°
Beat VMG	3.32	4.03	4.55	4.85	5.05	5.18	5.22
52°	5.17	6.17	6.91	7.35	7.56	7.69	7.80
60°	5.53	6.53	7.29	7.73	7.92	8.04	8.16
75°	5.83	6.82	7.55	8.03	8.39	8.55	8.71
90°	5.85	6.99	7.76	8.02	8.41	8.75	9.24
110°	5.76	6.96	7.82	8.42	8.90	9.17	9.66
120°	5.56	6.73	7.65	8.25	8.79	9.36	10.12
135°	4.93	6.11	7.10	7.79	8.31	8.81	9.98
150°	4.12	5.24	6.26	7.10	7.73	8.23	9.17
Run VMG	3.57	4.54	5.43	6.20	6.91	7.50	8.42
Gybe Angles	143.2°	147.9°	152.6°	159.8°	163.8°	170.6°	173.1°

Sails Limitations		
Genoas 0	Jibs 4	Spinnakers 3
Spinnaker configuration Symmetric		

Storm Sails Areas
Heavy Weather Jib 27.26
Storm Jib (JL=9.24) 10.10
Storm Trysail 12.71

Owner

BOAT	
Name SUGAR 2	Sail Nr EST-711
File Est0711.dxt	Data in meters/kilograms

RIG			
Forestay Tension Aft	Spreaders 2		
Inner Stay None Fitted	Runners 0		
Carbon Mast Yes	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 14.100	E 5.150	MDT1 0.124	TL 1.135
IG 14.170	J 4.280	MDL1 0.184	MWT 171.80
ISP 15.200	SFJ 0.170	MDT2 0.124	MCG 5.705
SPS	SPL 4.540	MDL2 0.165	CPW
BAS 1.650	TPS	MW 0.178	BD 0.230
BAL	FSP 0.088	GO 0.190	BWT 23.00

MIZZEN RIG AND SAILS	
N/A	

COMMENTS
ex.Rewind,ITA23230

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 12/07/2011		SG 1.0250	
FFM 1.433	FF 1.433	SFFP 0.550	
FAM 1.142	FA 1.142	SAFP 11.190	
W1 90.000	PD1 550.4	WD 11.930	
W2 90.000	PD2 552.4	GSA 1.0	
W3 90.000	PD3 558.5	RSA 1.0	
W4 90.000	PD4 550.0	PLM 9000.0	
Max. beam station / LCF from stem		7.900 / 6.328	
RM Measured / Default		153.0 / 152.6	
Limit of positive stability		111.1°	
Stability Index		111.9	
Freeboard at mast at 4.450		1.315	

PROPELLER			
Installation Strut	PRD 0.405		
Type Folding	PBW 0.108		
Twin Screw No	PIPA 0.0029		
ST1 0.051	ST3 0.200	ST5 0.335	
ST2 0.170	ST4 0.088	EDL 2.110	

WATER BALLAST	
N/A	

CENTERBOARD	
N/A	



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SAILS (Maximum Areas)									
Mainsail	HB	MGT	MGU	MGM	MGL	MSW	Area	Area (r)	Formula
	0.475	1.32	2.17	3.50	4.46	15.50	45.62	46.89	$P/8 \cdot (E + 2 \cdot MGL + 2 \cdot MGM + 1.5 \cdot MGU + MGT + 0.5 \cdot HB)$
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG		
	0.10	0.64	1.20	2.35	3.51	14.02	4.60	32.89	$0.1125 \cdot JL \cdot (1.445 \cdot LPG + 2 \cdot JGL + 2 \cdot JGM + 1.5 \cdot JGU + JGT + 0.5 \cdot JH)$
Symmetric	SL	SMG	SF						
	15.15	8.23	7.97					103.25	$SL \cdot (SF + 4 \cdot SMG) / 6$
Asymmetric Not Available									
Code Zero Not Available									

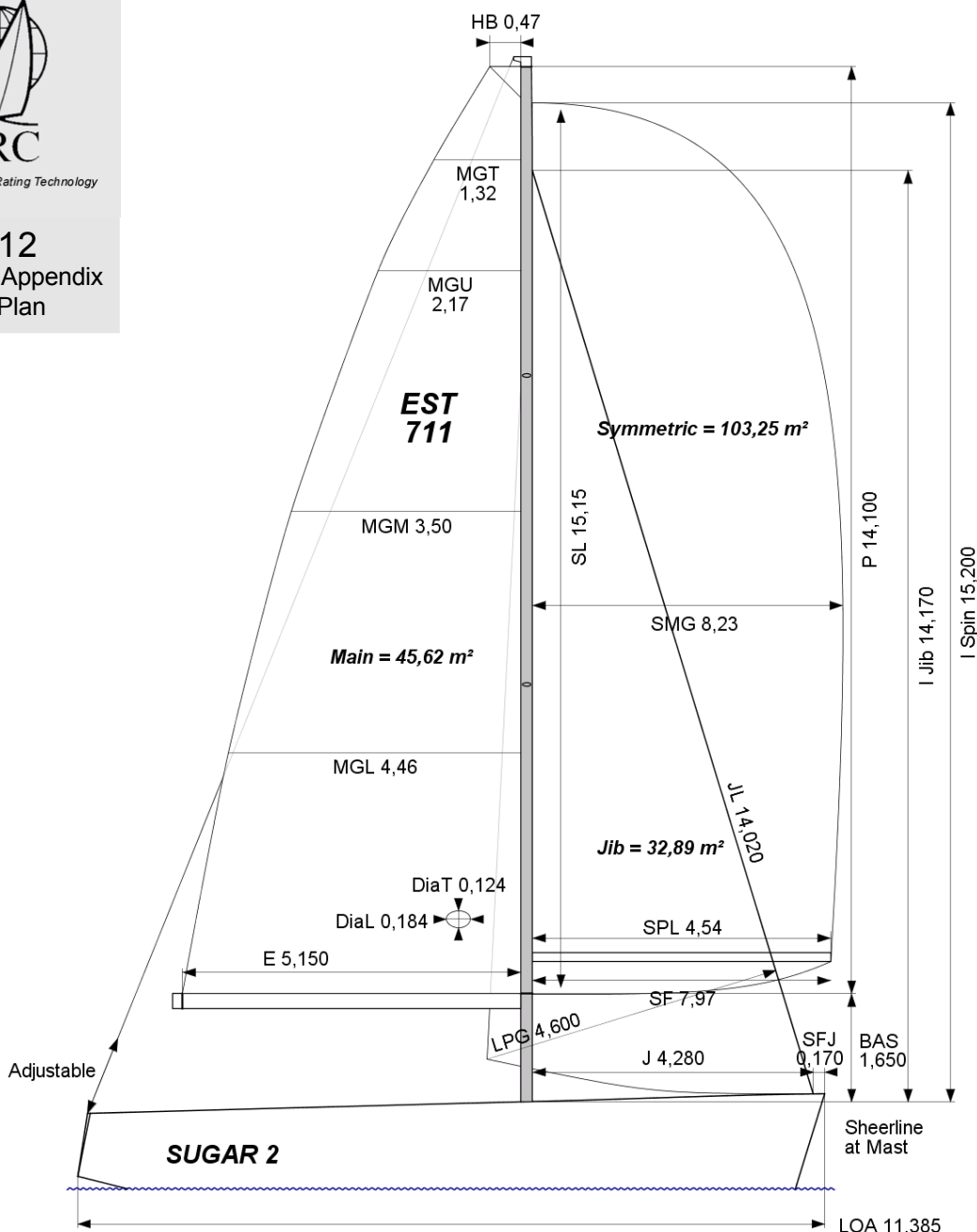
MEASUREMENT INVENTORY					
Measurer PARRA110					
Date 12/07/2011					
Comment					
Id	Item	Weight	Distance	VCG	Description
A	Anchor	6.0	7.49		
B	Anchor	12.0	7.49		
A	Tools	6.7	7.49		
B	Tools	11.8	7.49		
Id	Item	Maker	Model		
A	Engine	LOMBARDINI	30 HP		
Id	Item	Weight	Description		
A	Deck Gear	15.0			
A	Fwd Items	4.5	9 Salv agente		

MEASUREMENT INVENTORY								
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description
A	Tank	DIESEL	PVC	60.0	9.04			20.0 LITRI
B	Tank	ACQUA	PVC	80.0	8.24			0.0 VUOTO
Id	Item	Weight	Distance	VCG	Description			
A	Battery	16.0	7.94					
B	Battery	22.0	8.24					



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Certificate Appendix
Sail Plan



SAILS INVENTORY

MANSAIL														
Id	HB	MGT	MGU	MGM	MGL	MSW	Area	Measurer	Meas.Date	Manufacture	Material	Comment		
C	0.475	1.32	2.17	3.50	4.46	15.50	45.62	EST 2	22/06/2012		Unknown			
D	0.565	1.25	2.01	3.30	4.32	16.50	43.95	EST 2	22/06/2012		Unknown			
JIBS / GENOAS														
Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Ovrlp	Area	Measurer	Meas.Date	Manufacture	Material	Comment
B	0.10	0.64	1.20	2.35	3.51	4.60	14.02	107%	32.90	EST 2	24/07/2012	Montefusco	Nylon	Unknown
D	0.10	0.79	1.42	2.43	3.39	4.30	14.00	100%	32.80	PAIS	12/07/2011	Montefusco	Carbon	JL
C	0.09	0.79	1.42	2.42	3.39	4.30	14.00	100%	32.76	Pais	13/07/2011	Montefusco	Carbon	JXL
E	0.12	0.77	1.38	2.40	3.37	4.31	14.00	101%	32.55	PAIS	12/07/2011	Montefusco	Carbon	JM
A	0.11	0.64	1.18	2.26	3.30	4.28	14.22	100%	31.63	Pais	12/05/2011	Montefusco	Carbon	JH
SYMMETRIC SPINNAKERS														
Id	SL	SMG	SF	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
D	15.15	8.23	7.97	103.25	Pais	16/07/2012	Montefusco	Nylon	S2 (top)					
E	15.15	8.08	8.27	102.49	Pais	16/07/2012	Montefusco	Nylon	S1.5 (top)					
B	14.45	7.62	7.58	91.66	Pais	12/05/2011	Montefusco	Nylon	S1.5					
C	14.27	7.72	7.49	91.26	Pais	12/05/2011	Montefusco	Nylon	S2					
A	14.76	7.28	7.94	91.17	Pais	12/05/2011	Montefusco	Nylon	S1					
ASYMMETRIC SPINNAKERS														
Id	SLU	SLE	ASL	AMG	ASF	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment		