



World Leader in Rating Technology

2018 ORC Club Certificate

Rating Office

EYU
Regati 1
11911, Tallinn
Estonia

Certificate

Number **EST711**
Issued On **8/7/2018**
ORC Ref **EST0000328**
VPP Ver. **2018 1.00**
Valid until **12/31/2018**

Crew Weight

Default 720kg
Maximum **750kg**
Minimum* **563kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	607.5	0.9876
Double H.OSN	592.2	1.0132
Non Spin GPH	637.9	0.9406
Non Spin OSN	618.6	0.9700

Sails Limitations

Headsails **5** Spinnakers **3**

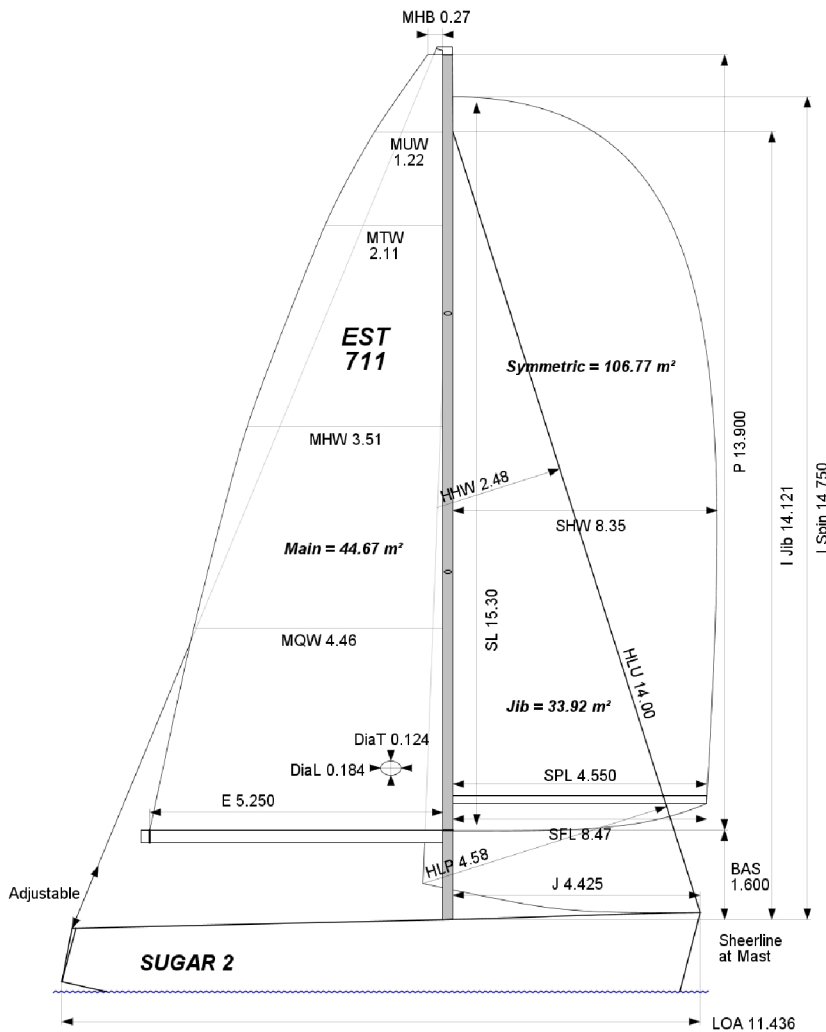
Spinnaker configuration
Symmetric: **Yes** 106.77
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = 9.750

Stability (Estimated)

Limit Positive Stab.: **110.3°**
Stability Index: **111.6**



BOAT		GPH	HULL			
Name	SUGAR 2	603.3	Data File	Est0711	LOA	11.436m
Sail Nr	EST-711		Offset File	NM38SNSK-1a	MB	3.566m
			Displacement	5,745kg	Draft	2.020m
CLASS			IMS Division	Cruiser/Racer	Dynamic All.	0.154%
Class	NM38S		Fwd Accom.	Yes	Construction	Cored
Designer	COSSUTTI		Fiber Rigging	No	Aramid Core	No
Builder	NAUTILUS MARINE		Crew Arm Ex		Carbon Rudder	Yes
Series	09/2010				Light Stanchions	
Age Date	05/2011		IMSL	10.572m	VCGD	0.116m
Age Allowance	0.260%		RL	8.927m	VCGM	0.223m
COMMENTS			WS	27.65m²		
Boat weight and RM declared			LSM0	10.320m	Displacement/Length ratio	5.2270
			Water Ballast	0	Trim Tab	No
			BLR Index	0.0000		
PROPELLER			CENTERBOARD			
Installation	Strut	PRD	N/A			
Type	Folding 2 blades	PBW				
		PIPA				
SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	585.8			658.1		
Time on Time	1.0242			1.0257		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	697.3	532.4	474.0	904.2	659.9	574.7
Time on Time	0.9680	1.2679	1.4242	0.7465	1.0229	1.1746

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

INCLINING TEST AND FREEBOARDS	
Inclining Test Enter RM directly	
Flotation date 04/07/2018	SG 1.0000
	RMCE 152.3
FFM 1.407	FF 1.414 SFFP 0.550
FAM 1.139	FA 1.146 SAFB 11.190
LCF from stem on CL / on sheer	6.300 / 6.535
Maximum beam station from stem	7.900
	RM Measured 152.3kg·m
	RM Default 157.4kg·m
Limit of positive stability / Stab.Index	110.3° / 111.6
Freeboard at mast at 4.425	1.306



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Measurements Datasheet

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 13.900	E 5.250 MDT1 0.124 MW 0.178
IG 14.121	J 4.425 MDL1 0.184 GO 0.190
ISP 14.750	SFJ 0.000 MDT2 0.124 BD 0.230
BAS 1.600	SPL 4.550 MDL2 0.168 MWT 171.80
FSP 0.088	TPS TL 1.280 MCG 5.705

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MIZZEN RIG AND SAILS	
N/A	

PROPELLER	
Installation Strut	PRD 0.405
Type Folding 2 blades	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

COMMENTS	
Boat weight and RM declared	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS INVENTORY																
MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
I	0.270	1.22	2.11	3.51	4.46	44.67	ITA160 Pais	22/07/2015		Unknown	P13,90;E5,25					
HEADSAILS (6)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
B	0.13	0.73	1.35	2.48	3.57	4.58	14.00	104%	33.92	Y		EST 5	09/06/2018	OneSails	Unknown	Jib Top
A	0.13	0.82	1.51	2.55	3.49	4.44	13.91	100%	33.87	Y		EST 5	09/06/2018	Onesails	Unknown	Jib XL
C	0.11	0.83	1.51	2.55	3.48	4.42	13.92	100%	33.82	Y		EST 5	09/06/2018	OneSails	Unknown	Jib L
G	0.12	0.79	1.42	2.45	3.47	4.42	14.03	100%	33.47			ITA160	02/05/2018	OneSails	Unknown	Jib M
H	0.13	0.65	1.16	2.18	3.23	4.29	14.04	97%	30.76			ITA160	09/05/2018	OneSails	Unknown	Jib H
V	0.07	0.45	0.95	1.68	2.56	3.50	12.77	79%	22.19			Sizil	25/05/2015	North	Unknown	Staysail
SYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
B	15.30	15.30	15.30	8.35	8.47	106.77	EST 5	09/06/2018	OneSails	Unknown	S1					
C	14.89	14.89	14.89	8.62	8.41	106.44	EST 5	09/06/2018	OneSails	Unknown	S2					
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				

MEASUREMENT INVENTORY					
Measurer					
Date 04/07/2018					
Comment					
Id	Item	Weight	Distance	VCG	Description
Id	Item	Maker	Model		
1	Engine	Lombardini	30HP		
Id	Item	Weight	Description		

MEASUREMENT INVENTORY								
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condn	Description
1	Tank	Diesel	St.steel	60.0	9.04			44-0
2	Tank	Water	St.steel	80.0	8.24			0-0
Id	Item	Weight	Distance	VCG Description				
1	Ballast	93.0	8.70	3 lead bal. 31kg, 32kg, 30kg				
1	Battery	16.0	7.94					
2	Battery	42.0	8.24	2 service batteries				
1	Misc	6.00		Stove (without oven)				
2	Misc	11.00		Heater Webasto				



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ORC Club Certificate Appendix

BOAT	
Name SUGAR 2	Certificate Number EST711
Sail Nr EST-711	Issued On 8/7/2018

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1047.8	859.5	753.5	706.7	691.9	687.5	678.8
52°	680.3	566.8	507.6	485.3	478.4	475.6	469.9
60°	640.6	538.2	490.7	471.3	463.8	460.3	455.6
75°	610.7	518.2	479.0	458.8	444.7	436.9	431.0
90°	616.4	513.7	472.7	456.6	437.7	420.5	400.8
110°	611.7	504.4	462.4	436.7	417.6	404.8	383.1
120°	627.1	514.7	467.6	439.1	411.9	389.2	362.7
135°	691.7	558.9	489.5	457.5	430.8	404.0	351.5
150°	824.5	655.9	550.9	488.7	459.0	434.4	385.9
Run VMG	952.1	757.3	636.1	557.9	509.1	472.8	425.0
Selected Courses							
Windward / Leeward	999.9	808.4	694.8	632.3	600.5	580.2	551.9
Circular Random	835.7	672.4	584.8	534.3	503.3	483.0	456.4
Coastal / Long Distance	995.1	757.9	625.0	551.2	513.4	482.9	433.7
Non Spinnaker	897.6	716.2	617.5	559.6	524.0	500.9	471.6

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	43.7°	42.4°	41.5°	40.5°	40.0°	40.0°	40.9°
Beat VMG	3.44	4.19	4.78	5.09	5.20	5.24	5.30
52°	5.29	6.35	7.09	7.42	7.52	7.57	7.66
60°	5.62	6.69	7.34	7.64	7.76	7.82	7.90
75°	5.89	6.95	7.52	7.85	8.10	8.24	8.35
90°	5.84	7.01	7.62	7.88	8.23	8.56	8.98
110°	5.89	7.14	7.79	8.24	8.62	8.89	9.40
120°	5.74	7.00	7.70	8.20	8.74	9.25	9.92
135°	5.20	6.44	7.35	7.87	8.36	8.91	10.24
150°	4.37	5.49	6.54	7.37	7.84	8.29	9.33
Run VMG	3.78	4.75	5.66	6.45	7.07	7.61	8.47
Gybe Angles	140.3°	148.4°	149.0°	155.8°	169.8°	180.0°	180.0°