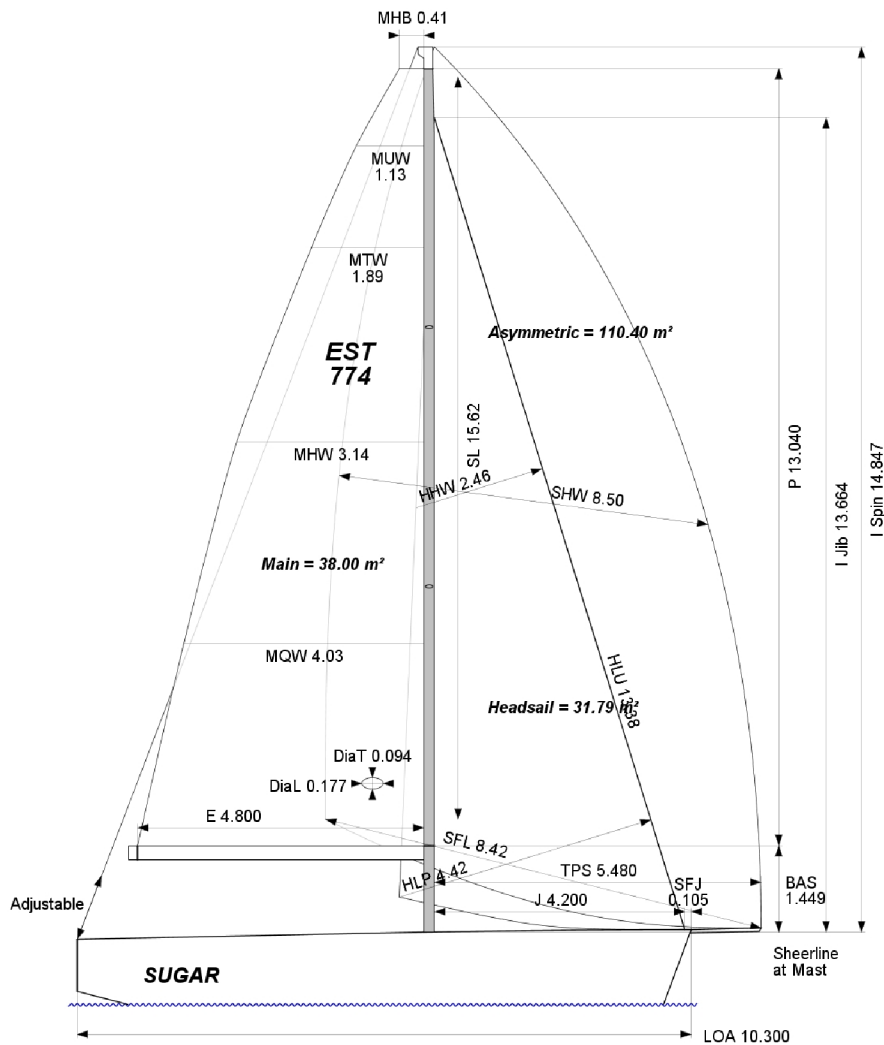




BOAT		GPH	HULL	
Name	SUGAR	616.8	Data File	EST774
Sail Nr	EST-774		Offset File	IY998MP.off
CLASS			Displacement	4,600kg
Class	ITALIA 9.98 F		IMS Division	Cruiser/Racer
Designer	POLLI		Plan Review	Dynamic All. 0.049%
Builder	ITALIA YACHTS		Fiber Rigging	Yes
Series	09/2014		Crew Arm Ex	No
Age Date	04/2016		Light Stanchions	No
Age Allowance	0.195%		IMSL	9.402m
COMMENTS			RL	8.358m
PROPELLER			LSM0	9.122m
Installation	Strut	PRD 0.380	Displacement/Length ratio	6.0602
Type	Folding 2 blades	PBW 0.120	Water Ballast	Trim Tab No
		PIPA 0.0039	BLR Index	0.0000
			CENTERBOARD	
			N/A	

SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	601.5			678.7		
Time on Time	0.9974			0.9946		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	698.4	548.1	495.0	904.3	679.3	605.3
Time on Time	0.9665	1.2315	1.3635	0.7464	0.9936	1.1152



Rating Office
Estonian Yachting Union
Purje 8, maja 3
11911 Tallinn
Estonia



Certificate
Number **115/20**
Issued On **10/07/2020**
ORC Ref **03880000MB9**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

Crew Weight
Default **604kg**
Maximum **620kg**
Minimum* **465kg**
*when applied by the NoR and SI
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **653.3 0.9184**
Non Spin OSN **635.0 0.9449**

Sails Limitations
Headsails **5** Spinnakers **4**
Asymmetric on centerline
Spinnaker configuration
Symmetric: **No**
Asymmetric: **Yes 110.40**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length
CDL = 8.874

Stability (Measured)
Limit Positive Stab.: **117.8°**
Stability Index: **114.9**

BOAT

Name **SUGAR**
File **EST774**

Sail Nr **EST-774**
Data in **meters/kilograms**

RIG

Forestay Tension **Aft**
Inner Stay **None Fitted**
Carbon Mast **Yes**
Fiber Rigging **Yes**
Non-Circular Rigging **No**
Articulated Bowsprit **No**

Spreaders **2**
Runners/Checkstays **0**
Jib Furler **No**
Main Furler **No**

P **13.040** E **4.800** MDT1 **0.094** MW **0.177**
IG **13.664** J **4.200** MDL1 **0.177** GO **0.191**
ISP **14.847** SFJ **0.105** MDT2 **0.083** BD **0.236**
BAS **1.449** SPL **4.320** MDL2 **0.151** MWT **120.20**
FSD **0.038** TPS **5.480** TL **1.100** MCG **5.090**

INCLINING TEST AND FREEBOARDS

Inclining Test **Current Inclining**
Flotation date **22/05/2020** SG **1.0008**

FFM **1.258** FF **1.264** SFFP **0.000**
FAM **0.614** FA **0.622** SAFFP **10.300**

W1 **70.0** PD1 **606.7** WD **11.660**
W2 **70.0** PD2 **603.9** GSA **1.0**
W3 **70.0** PD3 **605.4** RSA **1.0**
W4 **70.0** PD4 **602.4** PLM **9000.0**

LCF from stem on CL / on sheer **5.617 / 5.846**
Maximum beam station from stem **7.304**
RM Measured **106.3kg·m**
RM Default **114.8kg·m**
Limit of positive stability / Stab.Index **117.8° / 114.9**
Freeboard at mast at 4.305 **1.222**

MIZZEN RIG AND SAILS

N/A

PROPELLER

Installation **Strut** PRD **0.380**
Type **Folding 2 blades** PBW **0.120**
Twin Screw **No** PIPA **0.0039**

ST1 **0.065** ST3 **0.180** ST5 **0.350**
ST2 **0.180** ST4 **0.110** EDL **1.000**

COMMENTS

MOVABLE BALLAST

N/A

CENTERBOARD

N/A

Certificate

Number **115/20**
ORC Ref **03880000MB9**
Issued On **10/07/2020**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

EJL

ESTONIAN YACHTING UNION

SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
D	0.41	1.13	1.89	3.14	4.03	38.00		26/07/2019	OneSails	Unknown	

HEADSAILS (3)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
J	0.12	0.78	1.41	2.46	3.43	4.42	13.38	105%	31.79		No		26/07/2019		Unknown	JIB XL
G	0.13	0.79	1.42	2.48	3.42	4.45	13.24	106%	31.60		No		26/07/2019	OneSails	Unknown	JIB L
I	0.15	0.79	1.39	2.40	3.32	4.36	13.40	104%	31.19		No		26/07/2019		Unknown	JIB M

SYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
----	-----	-----	----	-----	-----	------	----------	-----------	-------------	----------	---------

ASYMMETRIC SPINNAKERS (2)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
C	16.78	14.45	15.62	8.50	8.42	110.40	asym				Unknown	A2
B	16.78	14.96	15.87	8.13	9.03	109.90	asym				Unknown	A1

MEASUREMENT INVENTORY

Measurer **K-H Tagu EST7**
Date **27/06/2020**
Comment
Internal Ballast total = 186.0

Id	Item	Weight	Distance	VCG	Description
Id	Item	Maker	Model		
A	Engine	VOLVO	20 HP		
Id	Item	Weight	Description		

MEASUREMENT INVENTORY

Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condn	Description
B	Tank	WATER	PVC	110.0	4.22		0-0	EMPTY
A	Tank	FUEL	PVC	60.0	7.58		45-0	
Id	Item	Weight	Distance	VCG	Description			
5	Ballast	34.0	6.00		11+10+13 kg, starboard			
4	Ballast	39.0	5.70		39 kg, starboard			
3	Ballast	33.0	5.70		16+17 kg, center			
2	Ballast	43.0	6.00		21+22 kg, port			
1	Ballast	37.0	5.70		37 kg, port			
B	Battery	21.0	4.83		1x70ah			
A	Battery	21.0	4.53		1x70Ah			
B	Misc	10.0	8.88		HOT AIR GENERATOR			
A	Misc	8.0	8.48		AUTOHELM			

© Offshore Racing Congress 2020

www.orc.org

2020

ORC Club Certificate Appendix

BOAT			
Name	SUGAR	Certificate Number	115/20
Sail Nr	EST-774	Issued On	10/07/2020

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1051.2	869.1	770.2	730.4	716.0	711.6	703.8
52°	682.9	575.8	524.9	504.6	497.8	494.9	490.0
60°	642.5	549.3	509.5	491.2	482.8	478.8	474.6
75°	612.0	530.7	498.3	478.5	462.8	453.0	446.2
90°	612.8	519.9	489.0	475.2	456.0	438.0	415.7
110°	601.0	510.2	475.2	448.2	431.7	420.0	397.3
120°	616.6	517.3	479.7	449.6	422.1	401.3	375.1
135°	691.5	557.6	499.1	469.1	440.0	412.9	356.1
150°	817.0	652.5	553.1	504.4	480.7	460.1	411.2
Run VMG	943.4	753.5	638.6	581.7	549.8	508.1	460.8
Selected Courses							
Windward / Leeward	997.3	811.3	704.4	656.1	632.9	609.8	582.3
Circular Random	841.5	682.4	598.6	551.1	522.5	503.4	477.1
Coastal / Long Distance	991.9	761.0	636.1	570.7	535.2	503.9	453.1
Non Spinnaker	910.1	730.1	633.0	576.4	541.6	518.9	489.7

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	43.5°	42.0°	40.9°	39.9°	40.1°	40.1°	40.7°
Beat VMG	3.42	4.14	4.67	4.93	5.03	5.06	5.12
52°	5.27	6.25	6.86	7.13	7.23	7.27	7.35
60°	5.60	6.55	7.07	7.33	7.46	7.52	7.59
75°	5.88	6.78	7.22	7.52	7.78	7.95	8.07
90°	5.87	6.92	7.36	7.58	7.90	8.22	8.66
110°	5.99	7.06	7.58	8.03	8.34	8.57	9.06
120°	5.84	6.96	7.50	8.01	8.53	8.97	9.60
135°	5.21	6.46	7.21	7.67	8.18	8.72	10.11
150°	4.41	5.52	6.51	7.14	7.49	7.82	8.75
Run VMG	3.82	4.78	5.64	6.19	6.55	7.09	7.81
Gybe Angles	144.0°	148.0°	148.5°	150.8°	174.0°	177.0°	177.5°