

BOAT Name SUGAR 3 Sail Nr EST-792	GPH 589.1	HULL Length Overall 11.650m Maximum Beam 3.972m Displacement 6,457kg Draft 2.115m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.023% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class ITALIA 11.98 Designer POLLI Builder ITALIA YACHTS Series 04/2019 Age 04/2019 Age Allowance 0.000% Offset File IY1198.off - 24/04/2019 11:06:02 Measurement by - 21/05/2019		IMSL 10.405m VCGD 0.202m Sink 21.57kg/mm RL 9.122m VCGM 0.151m WS 28.68m² LSM0 10.088m Displacement/Length ratio 6.2895



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	575.0			647.2		
Time on Time	1.0436			1.0429		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	673.0	522.5	466.1	878.9	649.7	566.1
Time on Time	1.0030	1.2918	1.4482	0.7680	1.0389	1.1924

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1014.2	837.4	740.0	699.2	682.0	675.1	662.5
52°	658.4	554.1	500.6	478.9	471.3	467.9	462.7
60°	619.5	527.0	484.8	465.6	457.0	452.7	448.6
75°	565.1	489.5	461.1	447.9	439.1	429.5	422.0
90°	546.9	481.4	455.1	434.6	416.3	407.2	394.4
110°	592.9	494.8	456.9	430.6	410.1	395.1	366.9
120°	609.4	503.7	462.0	434.7	408.2	384.7	357.6
135°	678.1	548.5	482.9	452.6	426.6	402.0	354.0
150°	801.8	639.1	540.6	483.5	454.9	430.8	386.3
Run VMG	925.9	738.0	624.2	551.6	504.1	468.8	422.1

Certificate

Number **EST792**
ORC Ref **ITA00052951**
Issued On **29/05/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight

Default **697kg**
Maximum **715kg**
Minimum* **536kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	598.2	1.0030
Double H.OSN	585.2	1.0254
Non Spin GPH	626.9	0.9571
Non Spin OSN	609.7	0.9842

Selected Courses							
Windward / Leeward	970.0	787.7	682.1	625.4	593.1	571.9	542.3
Circular Random	808.9	654.2	571.7	524.0	494.6	474.9	448.5
Coastal / Long Distance	965.6	737.7	613.5	543.5	505.2	475.1	427.5
Non Spinnaker	876.9	702.2	607.4	551.5	516.8	493.7	463.5

Sails Limitations

Headsails	Spinnakers
5	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	43.6°	42.2°	41.2°	40.4°	40.7°	40.4°	40.4°
Beat VMG	3.55	4.30	4.86	5.15	5.28	5.33	5.43
52°	5.47	6.50	7.19	7.52	7.64	7.69	7.78
60°	5.81	6.83	7.43	7.73	7.88	7.95	8.03
75°	6.37	7.35	7.81	8.04	8.20	8.38	8.53
90°	6.58	7.48	7.91	8.28	8.65	8.84	9.13
110°	6.07	7.28	7.88	8.36	8.78	9.11	9.81
120°	5.91	7.15	7.79	8.28	8.82	9.36	10.07
135°	5.31	6.56	7.45	7.95	8.44	8.95	10.17
150°	4.49	5.63	6.66	7.45	7.91	8.36	9.32
Run VMG	3.89	4.88	5.77	6.53	7.14	7.68	8.53
Gybe Angles	143.9°	147.7°	149.7°	155.9°	170.6°	180.0°	180.0°

Class Division Length

CDL = **9.764**

Storm Sails Areas

Heavy Weather Jib **30.51**
Storm Jib (JL=9.78) **11.30**
Storm Trysail **13.59**

Owner

BOAT	
Name SUGAR 3	Sail Nr EST-792
File EST792	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 07/05/2019	SG 1.0020	
FFM 1.246	FF 1.251	SFFP 0.004
FAM 0.372	FA 0.383	SAFP 11.642
W1 84.7	PD1 539.5	WD 12.610
W2 84.7	PD2 527.7	GSA 1.0
W3 84.7	PD3 528.9	RSA 1.0
W4 84.7	PD4 534.4	PLM 9000.0
LCF from stem on CL / on sheer		6.430 / 6.672
Maximum beam station from stem		8.592
RM Measured		157.9kg-m
RM Default		179.2kg-m
Limit of positive stability / Stab.Index		115.5° / 114.0
Freeboard at mast at 4.900		1.338



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RIG				
Forestay Tension Aft & Forward	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 14.430	E 5.380	MDT1 0.125	MW 0.182	
IG 14.950	J 4.750	MDL1 0.207	GO 0.208	
ISP 16.260	SFJ 0.150	MDT2 0.108	BD	
BAS 1.490	SPL 4.710	MDL2 0.159	MWT 145.30	
FSP 0.076	TPS 6.160	TL 2.250	MCG 5.760	

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MIZZEN RIG AND SAILS	
N/A	

PROPELLER		
Installation Strut	PRD 0.452	
Type Folding 2 blades	PBW 0.117	
Twin Screw No	PIPA 0.0040	
ST1 0.065	ST3 0.180	ST5 0.350
ST2 0.180	ST4 0.110	EDL 1.930

COMMENTS	
ACL	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.460	1.29	2.09	3.45	4.49	46.74	47.85	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	16.65	16.65	16.65	8.68	8.44	119.77		SL · (SFL + 4·SHW) / 6	
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL				
	18.37	16.20	17.29	8.27	8.62	120.13		AS · (SFL + 4·SHW) / 6	

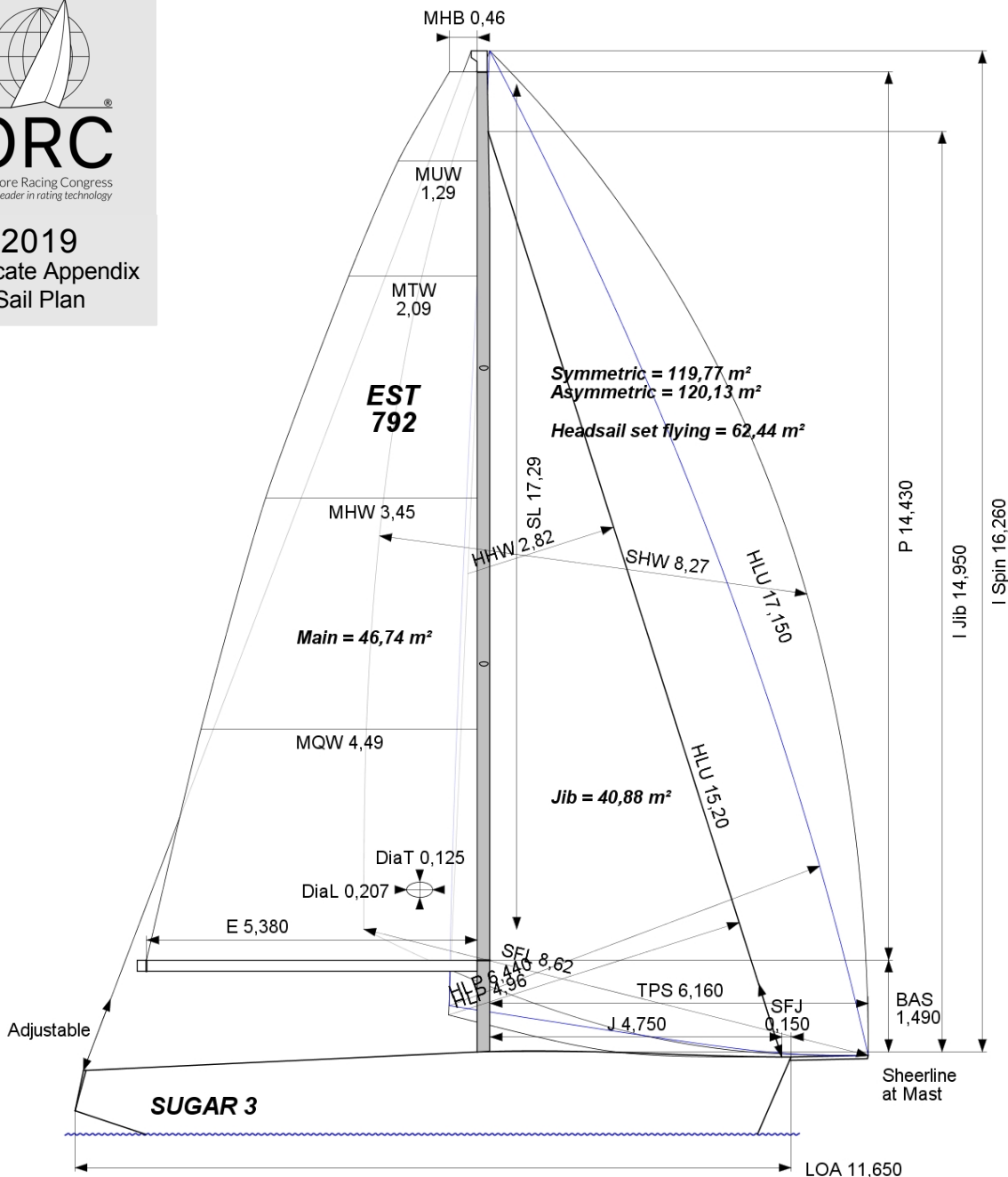
HEADSAILS												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0.05	1.08	2.09	3.97	5.44	6.44	17.15	62.44	N	Y	09/04/2019	Carbon	JFLY
0.13	0.90	1.61	2.82	3.86	4.96	15.20	40.88	Y	N	21/05/2019	Carbon	J0
0.12	0.82	1.54	2.83	4.04	5.18	14.87	40.84	Y	N	21/05/2019	Carbon	JTOP
0.12	0.88	1.60	2.80	3.85	4.94	15.16	40.55	Y	N	21/05/2019	Carbon	J1
0.12	0.86	1.55	2.70	3.77	4.95	15.16	39.80	Y	N	21/05/2019	Carbon	J2

MEASUREMENT INVENTORY				
Measurer FIV 174				
Date 07/05/2019				
Comment				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
A	Engine	VOLVO	40 HP	
Id	Item	Weight Description		

MEASUREMENT INVENTORY									
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description	
A	Tank	WATER	INOX	200.0	9.30	0.00	0-0	EMPTY SX	
B	Tank	DIESEL	INOX	110.0	9.30	0.00	34-0	L DX	
C	Tank	BLACK	INOX	36.0	7.85	0.00	0-0	EMPTY DX	
Id	Item	Weight	Distance	VCG Description					
A	Ballast	17.2	5.00	0.00 2 LEAD PIGS PORT					
B	Ballast	20.0	5.31	0.00 2 LEAD PIGS PORT					
C	Ballast	20.0	5.31	0.00 2 LEAD PIGS STBD					
D	Ballast	78.4	3.60	0.00 5 LEAD PIGS PORT					
E	Ballast	64.2	3.60	0.00 5 LEAD PIGS STBD					
A	Battery	0.0	5.25	0.00 AGM 130 Ah - SERV - STBD					
B	Battery	0.0	8.60	0.00 AGM 50 Ah - ENG - STBD					
A	Misc	10.0	10.35	0.00 AUTOPILOT					
B	Misc	0.0	6.41	0.00 COOKING STOVE					



2019
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
B	0.46	1.29	2.09	3.45	4.49	46.75		21/05/2019	ONE	Carbon						
HEADSAILS (5)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
E	0.05	1.08	2.09	3.97	5.44	6.44	17.15	136%	62.44	N	Y		09/04/2019	ONE	Carbon	JFLY
B	0.13	0.90	1.61	2.82	3.86	4.96	15.20	104%	40.88	Y	N		21/05/2019	ONE	Carbon	J0
F	0.12	0.82	1.54	2.83	4.04	5.18	14.87	109%	40.84	Y	N		21/05/2019	ONE	Carbon	JTOP
C	0.12	0.88	1.60	2.80	3.85	4.94	15.16	104%	40.55	Y	N		21/05/2019	ONE	Carbon	J1
D	0.12	0.86	1.55	2.70	3.77	4.95	15.16	104%	39.80	Y	N		21/05/2019	ONE	Carbon	J2
SYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
B	16.65	16.65	16.65	8.68	8.44	119.77		21/05/2019	ONE	Nylon	S1					
A	16.27	16.27	16.27	8.80	8.21	117.72		09/04/2019	ONE	Nylon	S2					
ASYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
A	18.37	16.20	17.29	8.27	8.62	120.14	asym		09/04/2019	ONE	Nylon	A1				
B	18.37	16.20	17.29	8.27	8.62	120.14	asym		09/04/2019	ONE	Nylon	A1				