

<b>BOAT</b> Name <b>SUGAR</b> Sail Nr <b>EST-774</b>	<b>GPH</b> <b>615.2</b>	<b>HULL</b> Length Overall <b>10.300m</b> Maximum Beam <b>3.536m</b> Displacement <b>4,486kg</b> Draft <b>1.895m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0.038%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Cored</b> Carbon Rudder <b>No</b> Crew Arm Extension
<b>GENERAL</b> Class <b>ITALIA 9.98 F</b> Designer <b>POLLI</b> Builder <b>ITALIA YACHTS</b> Series <b>09/2014</b> Age <b>04/2016</b> Age Allowance <b>0.163%</b> Offset File <b>IY998MP.off - 04/11/2015 14:00:04</b> Measurement by - <b>26/07/2019</b>		IMSL <b>9.370m</b> VCGD <b>0.124m</b> Sink <b>17.63kg/mm</b> RL <b>8.498m</b> VCGM <b>0.126m</b> WS <b>23.35m<sup>2</sup></b> LSM0 <b>9.077m</b> Displacement/Length ratio <b>5.9984</b>



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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>598.7</b>			<b>670.7</b>		
Time on Time	<b>1.0021</b>			<b>1.0064</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>701.5</b>	<b>545.9</b>	<b>487.9</b>	<b>905.8</b>	<b>671.8</b>	<b>590.1</b>
Time on Time	<b>0.9622</b>	<b>1.2365</b>	<b>1.3834</b>	<b>0.7452</b>	<b>1.0048</b>	<b>1.1438</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1045.5</b>	<b>864.1</b>	<b>764.1</b>	<b>724.3</b>	<b>709.5</b>	<b>704.9</b>	<b>697.1</b>
52°	<b>679.2</b>	<b>572.5</b>	<b>522.5</b>	<b>502.6</b>	<b>495.8</b>	<b>492.9</b>	<b>487.9</b>
60°	<b>638.7</b>	<b>546.5</b>	<b>507.8</b>	<b>489.4</b>	<b>480.8</b>	<b>476.7</b>	<b>472.3</b>
75°	<b>609.9</b>	<b>528.5</b>	<b>496.9</b>	<b>476.8</b>	<b>460.6</b>	<b>450.7</b>	<b>443.8</b>
90°	<b>617.3</b>	<b>526.9</b>	<b>489.0</b>	<b>468.6</b>	<b>453.9</b>	<b>435.7</b>	<b>413.4</b>
110°	<b>617.2</b>	<b>517.6</b>	<b>480.1</b>	<b>452.2</b>	<b>430.5</b>	<b>412.5</b>	<b>390.6</b>
120°	<b>634.2</b>	<b>526.0</b>	<b>484.7</b>	<b>454.8</b>	<b>426.8</b>	<b>403.6</b>	<b>369.9</b>
135°	<b>700.6</b>	<b>567.8</b>	<b>505.0</b>	<b>473.9</b>	<b>445.2</b>	<b>418.3</b>	<b>363.7</b>
150°	<b>826.3</b>	<b>657.7</b>	<b>557.3</b>	<b>504.0</b>	<b>475.3</b>	<b>448.7</b>	<b>399.5</b>
Run VMG	<b>954.1</b>	<b>759.5</b>	<b>642.7</b>	<b>571.2</b>	<b>520.8</b>	<b>487.7</b>	<b>437.5</b>

**Certificate**  
Number **Est774**  
ORC Ref **EST00000816**  
Issued On **30/07/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**  
Default **600kg**  
Maximum **690kg**  
Minimum\* **518kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>627.4</b>	<b>0.9564</b>
Double H.OSN	<b>612.4</b>	<b>0.9797</b>
Non Spin GPH	<b>650.7</b>	<b>0.9221</b>
Non Spin OSN	<b>632.4</b>	<b>0.9488</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>999.8</b>	<b>811.8</b>	<b>703.4</b>	<b>647.8</b>	<b>615.1</b>	<b>596.3</b>	<b>567.3</b>
Circular Random	<b>843.8</b>	<b>682.8</b>	<b>597.1</b>	<b>547.7</b>	<b>517.4</b>	<b>497.1</b>	<b>469.5</b>
Coastal / Long Distance	<b>995.2</b>	<b>762.3</b>	<b>635.8</b>	<b>567.1</b>	<b>529.3</b>	<b>498.5</b>	<b>446.6</b>
Non Spinnaker	<b>907.0</b>	<b>727.5</b>	<b>630.5</b>	<b>573.9</b>	<b>539.0</b>	<b>516.2</b>	<b>486.8</b>

**Sails Limitations**

Headsails	Spinnakers
<b>5</b>	<b>3</b>

<b>Velocity Prediction in Knots for True Wind Speeds</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>43.1°</b>	<b>42.0°</b>	<b>40.8°</b>	<b>39.7°</b>	<b>39.9°</b>	<b>39.9°</b>	<b>39.8°</b>
Beat VMG	<b>3.44</b>	<b>4.17</b>	<b>4.71</b>	<b>4.97</b>	<b>5.07</b>	<b>5.11</b>	<b>5.16</b>
52°	<b>5.30</b>	<b>6.29</b>	<b>6.89</b>	<b>7.16</b>	<b>7.26</b>	<b>7.30</b>	<b>7.38</b>
60°	<b>5.64</b>	<b>6.59</b>	<b>7.09</b>	<b>7.36</b>	<b>7.49</b>	<b>7.55</b>	<b>7.62</b>
75°	<b>5.90</b>	<b>6.81</b>	<b>7.24</b>	<b>7.55</b>	<b>7.82</b>	<b>7.99</b>	<b>8.11</b>
90°	<b>5.83</b>	<b>6.83</b>	<b>7.36</b>	<b>7.68</b>	<b>7.93</b>	<b>8.26</b>	<b>8.71</b>
110°	<b>5.83</b>	<b>6.95</b>	<b>7.50</b>	<b>7.96</b>	<b>8.36</b>	<b>8.73</b>	<b>9.22</b>
120°	<b>5.68</b>	<b>6.84</b>	<b>7.43</b>	<b>7.91</b>	<b>8.44</b>	<b>8.92</b>	<b>9.73</b>
135°	<b>5.14</b>	<b>6.34</b>	<b>7.13</b>	<b>7.60</b>	<b>8.09</b>	<b>8.61</b>	<b>9.90</b>
150°	<b>4.36</b>	<b>5.47</b>	<b>6.46</b>	<b>7.14</b>	<b>7.57</b>	<b>8.02</b>	<b>9.01</b>
Run VMG	<b>3.77</b>	<b>4.74</b>	<b>5.60</b>	<b>6.30</b>	<b>6.91</b>	<b>7.38</b>	<b>8.23</b>
Gybe Angles	<b>144.8°</b>	<b>148.5°</b>	<b>151.2°</b>	<b>158.0°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>

**Class Division Length**  
CDL = **8.935**

**Storm Sails Areas**  
Heavy Weather Jib **25.38**  
Storm Jib (JL=8.92) **9.40**  
Storm Trysail **10.96**

**Owner**

<b>BOAT</b>	
Name <b>SUGAR</b>	Sail Nr <b>EST-774</b>
File <b>Est0774</b>	Data in <b>meters/kilograms</b>

<b>RIG</b>	
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>
Inner Stay <b>None Fitted</b>	Runners <b>0</b>
Carbon Mast <b>Yes</b>	Jumper Struts <b>None</b>
Taper Hollows <b>No</b>	Jib Furler <b>No</b>
Fiber Rigging <b>Yes</b>	Main Furler <b>No</b>
Lenticular Rigging <b>No</b>	Without Backstay <b>No</b>
Articulated Bowsprit <b>No</b>	
P <b>13.040</b>	E <b>4.800</b> MDT1 <b>0.094</b> MW <b>0.177</b>
IG <b>13.664</b>	J <b>4.200</b> MDL1 <b>0.177</b> GO <b>0.191</b>
ISP <b>14.847</b>	SFJ <b>0.105</b> MDT2 <b>0.083</b> BD <b>0.236</b>
BAS <b>1.449</b>	SPL <b>4.320</b> MDL2 <b>0.151</b> MWT <b>120.20</b>
FSP <b>0.076</b>	TPS <b>4.320</b> TL <b>1.100</b> MCG <b>5.090</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>13/04/2018</b>		SG <b>1.0240</b>	
FFM <b>1.269</b>	FF <b>1.268</b>	SFFP <b>0.000</b>	
FAM <b>0.628</b>	FA <b>0.631</b>	SAFP <b>10.300</b>	
W1 <b>66.1</b>	PD1 <b>579.8</b>	WD <b>11.380</b>	
W2 <b>66.1</b>	PD2 <b>575.6</b>	GSA <b>1.0</b>	
W3 <b>66.1</b>	PD3 <b>575.4</b>	RSA <b>1.0</b>	
W4 <b>66.1</b>	PD4 <b>579.3</b>	PLM <b>9000.0</b>	
LCF from stem on CL / on sheer		<b>5.603 / 5.832</b>	
Maximum beam station from stem		<b>7.304</b>	
RM Measured		<b>102.6kg-m</b>	
RM Default		<b>113.3kg-m</b>	
Limit of positive stability / Stab.Index		<b>116.2° / 112.9</b>	
Freeboard at mast at 4.305		<b>1.228</b>	



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<b>MIZZEN RIG AND SAILS</b>	
N/A	

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.380</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.120</b>		
Twin Screw <b>No</b>	PIPA <b>0.0039</b>		
ST1 <b>0.065</b>	ST3 <b>0.180</b>	ST5 <b>0.350</b>	
ST2 <b>0.180</b>	ST4 <b>0.110</b>	EDL <b>1.000</b>	

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<b>COMMENTS</b>	

<b>MOVABLE BALLAST</b>	
N/A	

<b>CENTERBOARD</b>	
N/A	



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<b>SAILS (Maximum Areas)</b>									
<b>Mainsail</b>	<b>MHB</b>	<b>MUW</b>	<b>MTW</b>	<b>MHW</b>	<b>MQW</b>	<b>Area</b>	<b>Area (r)</b>	<b>Formula</b>	
	0.410	1.13	1.89	3.14	4.03	38.00	38.91	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
<b>Symmetric</b>	<b>SLU</b>	<b>SLE</b>	<b>SL</b>	<b>SHW</b>	<b>SFL</b>				
	14.35	14.35	14.35	7.91	7.68	94.04		SL · (SFL + 4·SHW) / 6	
<b>Asymmetric on centerline</b>	<b>SLU</b>	<b>SLE</b>	<b>SL</b>	<b>SHW</b>	<b>SFL</b>				
	14.90	13.40	14.15	5.68	7.45	71.15 75.99		AS · (SFL + 4·SHW) / 6	

<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
<b>HHB</b>	<b>HUW</b>	<b>HTW</b>	<b>HHW</b>	<b>HQW</b>	<b>HLP</b>	<b>HLU</b>	<b>Area</b>	<b>Btn</b>	<b>Fly</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.12	0.78	1.41	2.46	3.43	4.42	13.38	31.79			26/07/2019	Unknow	JIB XL
0.13	0.79	1.42	2.48	3.42	4.45	13.24	31.60			26/07/2019	Unknow	JIB L
0.15	0.79	1.39	2.40	3.32	4.36	13.40	31.19			26/07/2019	Unknow	JIB M

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>162</b>				
Date <b>13/04/2018</b>				
Comment <b>Condizioni ottime</b>				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
A	Engine	VOLVO	20 HP	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

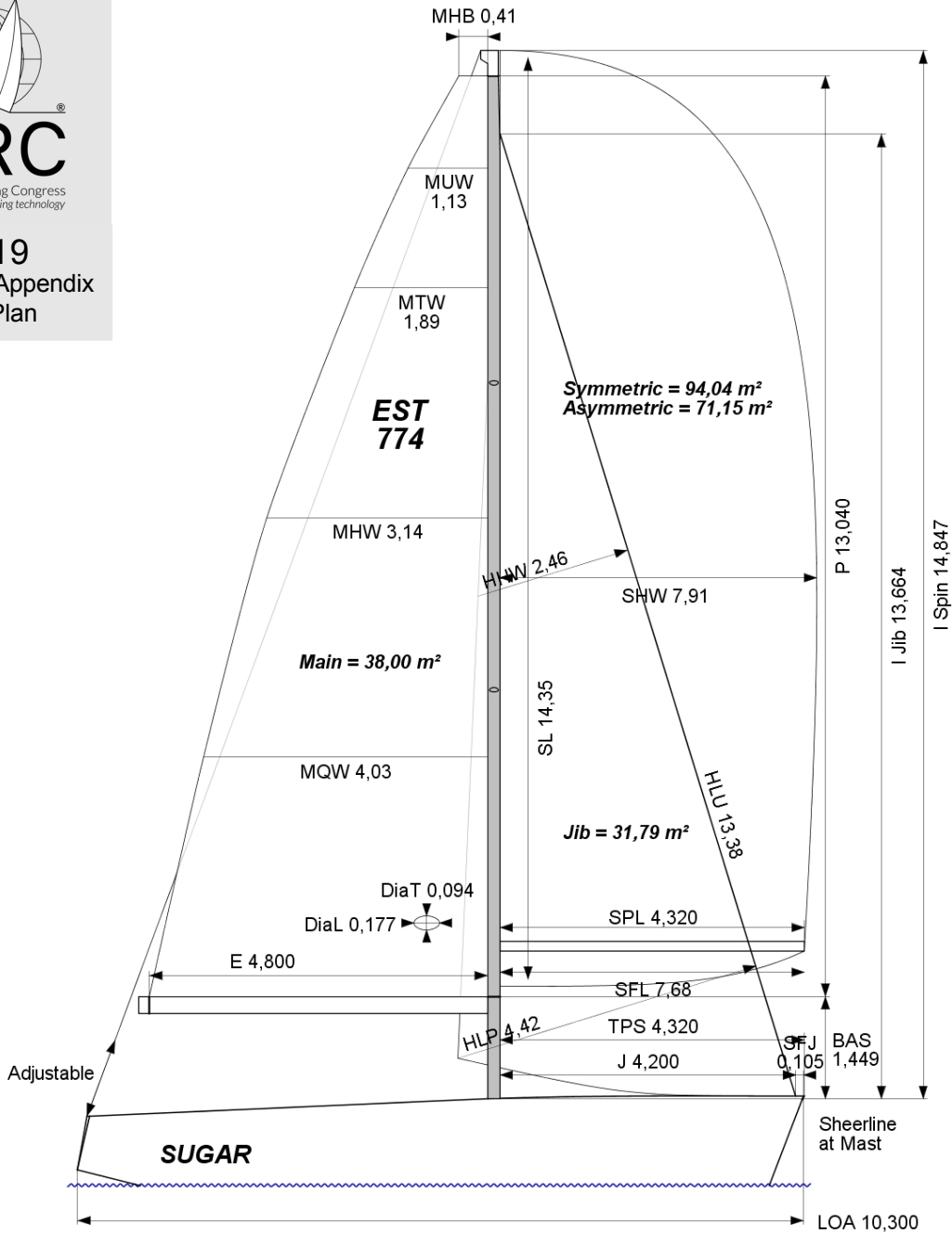
<b>MEASUREMENT INVENTORY</b>							
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG</b>	<b>Condtn Description</b>
A	Tank	FUEL	PVC	60.0	7.58	0.00	15.0 L
B	Tank	WATER	PVC	110.0	4.22	0.00	0.0 EMPTY
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>			
A	Battery	21.0	4.53	0.00 1x70Ah			
B	Battery	21.0	4.82	0.00 1x70Ah			
A	Misc	8.0	8.48	0.00 AUTOHELM			
B	Misc	10.0	8.88	0.00 HOT AIR GENERATOR			



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**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	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
J	0.12	0.78	1.41	2.46	3.43	4.42	13.38	105%	31.79				26/07/2019		Unknown	JIB XL
G	0.13	0.79	1.42	2.48	3.42	4.45	13.24	106%	31.60				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				26/07/2019		Unknown	JIB M
SYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
D	14.35	14.35	14.35	7.91	7.68	94.05		11/05/2017	ONE	Nylon	S2					
A	13.93	13.93	13.93	7.32	7.29	84.91		10/07/2016		Unknown						
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
A	14.90	13.40	14.15	5.68	7.45	71.16	asym		10/04/2017		Unknown					