



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2020  
ORC Club  
Certificate**

**Rating Office**  
Hellenic Sailing Federation  
Offshore Committee  
Επιτροπή  
Ανοικτής Θαλάσσης  
Ελληνικής  
Ιστιοπλοϊκής Ομοσπονδίας

**Certificate**  
Number **01117**  
Issued On **29/07/2020**  
ORC Ref **03420000NBL**  
VPP Ver. **2020 1.02**  
Valid until **28/02/2021**

**Crew Weight**

Default	759kg
Maximum	<b>670kg</b>
Minimum*	<b>503kg</b>

*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

ToD	ToT
Non Spin GPH <b>654.4</b>	<b>0.9169</b>
Non Spin OSN <b>633.6</b>	<b>0.9469</b>

**Sails Limitations**

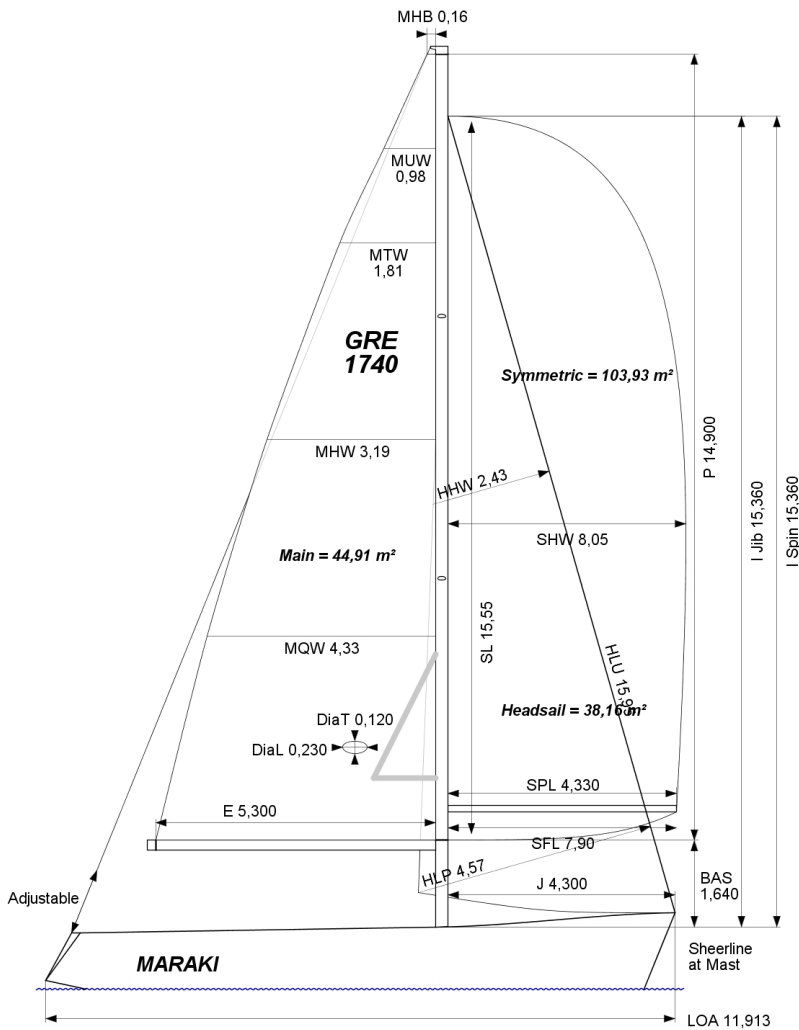
Headsails **5** Spinnakers **4**

**Spinnaker configuration**  
Symmetric: **Yes** **103.93**  
Asymmetric: **No**  
Flying H/S: **No**  
Spin. Pole: **Yes**

**Class Division Length**  
CDL = **9.706**

**Stability (Estimated)**  
Limit Positive Stab.: **113.9°**  
Stability Index: **118.1**

**Owner**



<b>BOAT</b> Name <b>MARAKI</b> Sail Nr <b>GRE-1740</b>	<b>GPH</b> <b>622.3</b>	<b>HULL</b> Data File <b>GR1740</b> LOA <b>11.913m</b> Offset File <b>E40SDFIN.off</b> MB <b>3.844m</b> Displacement <b>8,335kg</b> Draft <b>2.076m</b>
<b>CLASS</b> Class <b>ELAN 40 SD FK</b> Designer <b>ROB HUMPHREYS</b> Builder <b>ELAN</b> Series <b>01/2002</b> Age Date <b>01/2003</b> Age Allowance <b>0.487%</b>		IMS Division <b>Cruiser/Racer</b> Dynamic All. <b>0.280%</b> Plan Review Construction <b>Solid</b> Fiber Rigging <b>No</b> Aramid Core <b>No</b> Crew Arm Ex Carbon Rudder <b>No</b> Light Stanchions <b>No</b>
<b>COMMENTS</b> ex "LENA"		IMSL <b>10.732m</b> VCGD <b>0.249m</b> Sink <b>23.22kg/mm</b> RL <b>8.679m</b> VCGM <b>0.049m</b> WS <b>31.55m²</b> LSM0 <b>10.710m</b> Displacement/Length ratio <b>6.7848</b>
<b>PROPELLER</b> Installation <b>Strut</b> PRD <b>0.440</b> Type <b>Folding 2 blades</b> PBW <b>0.101</b> PIPA <b>0.0037</b>		Water Ballast <b>0</b> Trim Tab <b>No</b> BLR Index <b>0.0000</b>
		<b>CENTERBOARD</b> <b>NA</b>
<b>SCORING OPTIONS</b>		
	<b>COASTAL / LONG DISTANCE</b>	<b>WINDWARD / LEEWARD</b>
Time on Distance	<b>603.8</b>	<b>673.5</b>
Time on Time	<b>0.9938</b>	<b>1.0022</b>
Triple Number	Low Medium High	Low Medium High
Time on Distance	<b>720.8 549.1 487.4</b>	<b>933.1 679.6 581.3</b>
Time on Time	<b>0.9364 1.2292 1.3849</b>	<b>0.7234 0.9933 1.1611</b>

<b>BOAT</b>	
Name <b>MARAKI</b>	Sail Nr <b>GRE-1740</b>
File <b>GR1740</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Club Estimated VCG</b>			
Flotation date <b>09/07/2015</b>		SG	
FFM <b>1.435</b>	FF <b>1.428</b>	SFFP <b>0.609</b>	
FAM <b>0.990</b>	FA <b>1.000</b>	SAFP <b>11.257</b>	
LCF from stem on CL / on sheer		<b>6.645 / 6.912</b>	
Maximum beam station from stem		<b>6.868</b>	
RM Measured		<b>185.7kg-m</b>	
RM Default		<b>183.0kg-m</b>	
Limit of positive stability / Stab.Index		<b>113.9° / 118.1</b>	
Freeboard at mast at 4.300		<b>1.179</b>	



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Measurements  
Datasheet


<b>RIG</b>			
Forestay Tension <b>Aft</b>	Runners/Checkstays <b>0</b>		Spreaders <b>2</b>
Inner Stay <b>None Fitted</b>	Main Furler <b>Yes</b>		Jib Furler <b>No</b>
Carbon Mast <b>No</b>			
Fiber Rigging <b>No</b>			
Non-Circular Rigging <b>No</b>			
Articulated Bowsprit <b>No</b>			
P <b>14.900</b>	E <b>5.300</b>	MDT1 <b>0.120</b>	MW
IG <b>15.360</b>	J <b>4.300</b>	MDL1 <b>0.230</b>	GO
ISP <b>15.360</b>	SFJ <b>0.000</b>	MDT2	BD
BAS <b>1.640</b>	SPL <b>4.330</b>	MDL2	MWT
FSD <b>-3.000</b>	TPS	TL <b>-3.000</b>	MCG

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.440</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.101</b>		
Twin Screw <b>No</b>	PIPA <b>0.0037</b>		
ST1 <b>0.065</b>	ST3 <b>0.180</b>	ST5 <b>0.260</b>	
ST2 <b>0.180</b>	ST4 <b>0.110</b>	EDL <b>2.620</b>	

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<b>COMMENTS</b>	
ex "LENA"	

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

<b>CENTERBOARD</b>	
N/A	

<b>SAILS INVENTORY</b>																
<b>MAINSAIL (2)</b>																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	0.16	0.98	1.81	3.19	4.33	44.92		25/02/2020	QUANTUM	Dacron						
1	0.04	0.63	1.24	2.52	3.86	38.32		09/07/2015	ONE	Dacron						
<b>HEADSAILS (3)</b>																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovr/tp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
2	0.12	0.72	1.31	2.43	3.53	4.57	15.95	106%	38.16		No		25/02/2020	QUANTUM	Pentex	
1	0.12	0.68	1.26	2.36	3.45	4.57	14.92	106%	35.00		No		25/02/2020	QUANTUM	Pentex	
3	0.13	0.57	1.07	2.08	3.12	4.17	15.51	97%	32.57		No		23/08/2013		Pentex	
<b>SYMMETRIC SPINNAKERS (4)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	15.55	15.55	15.55	8.05	7.90	103.93		03/06/2010	KAKITSIS	Nylon	FLOATER 0.5					
3	14.79	14.79	14.79	8.28	8.01	101.39		01/06/2010		Nylon						
4	15.35	15.27	15.31	7.25	8.71	96.23		25/07/2020	NorthSails	Nylon	0.9+ blue					
1	14.55	14.55	14.55	7.72	7.44	92.93		09/07/2015		Nylon						
<b>ASYMMETRIC SPINNAKERS (0)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>GRE-103</b>				
Date <b>09/07/2015</b>				
Comment				
<b>Internal Ballast total = 0.0</b>				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
1	Engine	VOLVO	VOLVO	
Id	Item	Weight	Description	

<b>MEASUREMENT INVENTORY</b>								
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description
2	Tank	WATER	INOX	150.0	5.75	-0.13	0-0	STARBOARD
3	Tank	FUEL	INOX	120.0	9.90	-0.13	70-0	PORT
1	Tank	WATER	INOX	85.0	5.60	-0.13	0-0	PORT
Id	Item	Weight	Distance	VCG Description				
1	Battery	75.0	9.30	-0.28	3 PCS X 100 Ah			

# 2020

## ORC Club Certificate Appendix

<b>BOAT</b>	
Name	<b>MARAKI</b>
Sail Nr	<b>GRE-1740</b>
Certificate Number	<b>01117</b>
Issued On	<b>29/07/2020</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1067.7</b>	<b>882.0</b>	<b>777.2</b>	<b>716.8</b>	<b>692.1</b>	<b>681.3</b>	<b>670.8</b>
52°	<b>694.3</b>	<b>586.8</b>	<b>523.6</b>	<b>495.8</b>	<b>484.2</b>	<b>479.5</b>	<b>476.9</b>
60°	<b>655.2</b>	<b>557.4</b>	<b>505.3</b>	<b>483.1</b>	<b>471.9</b>	<b>466.6</b>	<b>462.9</b>
75°	<b>626.4</b>	<b>534.9</b>	<b>492.6</b>	<b>472.7</b>	<b>460.0</b>	<b>450.6</b>	<b>440.6</b>
90°	<b>632.9</b>	<b>535.3</b>	<b>485.2</b>	<b>465.8</b>	<b>455.5</b>	<b>442.8</b>	<b>421.5</b>
110°	<b>636.4</b>	<b>525.3</b>	<b>478.1</b>	<b>455.5</b>	<b>437.2</b>	<b>422.7</b>	<b>405.5</b>
120°	<b>655.3</b>	<b>538.6</b>	<b>483.8</b>	<b>458.9</b>	<b>439.1</b>	<b>419.4</b>	<b>389.4</b>
135°	<b>724.7</b>	<b>590.0</b>	<b>510.5</b>	<b>474.3</b>	<b>453.2</b>	<b>433.4</b>	<b>394.4</b>
150°	<b>861.1</b>	<b>682.6</b>	<b>577.5</b>	<b>511.0</b>	<b>475.8</b>	<b>455.5</b>	<b>418.1</b>
Run VMG	<b>994.3</b>	<b>788.2</b>	<b>666.7</b>	<b>583.6</b>	<b>528.5</b>	<b>488.1</b>	<b>446.7</b>
<b>Selected Courses</b>							
Windward / Leeward	<b>1031.0</b>	<b>835.1</b>	<b>721.9</b>	<b>650.2</b>	<b>610.3</b>	<b>584.7</b>	<b>558.8</b>
Circular Random	<b>862.7</b>	<b>694.3</b>	<b>603.4</b>	<b>550.4</b>	<b>517.9</b>	<b>497.0</b>	<b>471.9</b>
Coastal / Long Distance	<b>1027.3</b>	<b>783.8</b>	<b>648.4</b>	<b>567.1</b>	<b>526.8</b>	<b>497.0</b>	<b>450.9</b>
Non Spinnaker	<b>920.9</b>	<b>735.3</b>	<b>633.6</b>	<b>573.5</b>	<b>536.3</b>	<b>512.4</b>	<b>484.3</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>43.5°</b>	<b>41.3°</b>	<b>40.9°</b>	<b>40.5°</b>	<b>39.6°</b>	<b>39.0°</b>	<b>38.6°</b>
Beat VMG	<b>3.37</b>	<b>4.08</b>	<b>4.63</b>	<b>5.02</b>	<b>5.20</b>	<b>5.28</b>	<b>5.37</b>
52°	<b>5.18</b>	<b>6.14</b>	<b>6.88</b>	<b>7.26</b>	<b>7.44</b>	<b>7.51</b>	<b>7.55</b>
60°	<b>5.49</b>	<b>6.46</b>	<b>7.12</b>	<b>7.45</b>	<b>7.63</b>	<b>7.72</b>	<b>7.78</b>
75°	<b>5.75</b>	<b>6.73</b>	<b>7.31</b>	<b>7.62</b>	<b>7.83</b>	<b>7.99</b>	<b>8.17</b>
90°	<b>5.69</b>	<b>6.72</b>	<b>7.42</b>	<b>7.73</b>	<b>7.90</b>	<b>8.13</b>	<b>8.54</b>
110°	<b>5.66</b>	<b>6.85</b>	<b>7.53</b>	<b>7.90</b>	<b>8.23</b>	<b>8.52</b>	<b>8.88</b>
120°	<b>5.49</b>	<b>6.68</b>	<b>7.44</b>	<b>7.85</b>	<b>8.20</b>	<b>8.58</b>	<b>9.25</b>
135°	<b>4.97</b>	<b>6.10</b>	<b>7.05</b>	<b>7.59</b>	<b>7.94</b>	<b>8.31</b>	<b>9.13</b>
150°	<b>4.18</b>	<b>5.27</b>	<b>6.23</b>	<b>7.05</b>	<b>7.57</b>	<b>7.90</b>	<b>8.61</b>
Run VMG	<b>3.62</b>	<b>4.57</b>	<b>5.40</b>	<b>6.17</b>	<b>6.81</b>	<b>7.38</b>	<b>8.06</b>
Gybe Angles	<b>145.0°</b>	<b>149.5°</b>	<b>151.0°</b>	<b>155.0°</b>	<b>170.0°</b>	<b>180.0°</b>	<b>180.0°</b>