



**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 **00831**  
Issued On **17/06/2020**  
ORC Ref **0342000KSW**  
VPP Ver. **2020 1.02**  
Valid until **28/02/2021**

**Crew Weight**

Default	686kg
Maximum	<b>560kg</b>
Minimum*	<b>420kg</b>

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

**Special Scoring**

ToD	ToT
Non Spin GPH <b>665.0</b>	<b>0.9023</b>
Non Spin OSN <b>645.4</b>	<b>0.9296</b>

**Sails Limitations**

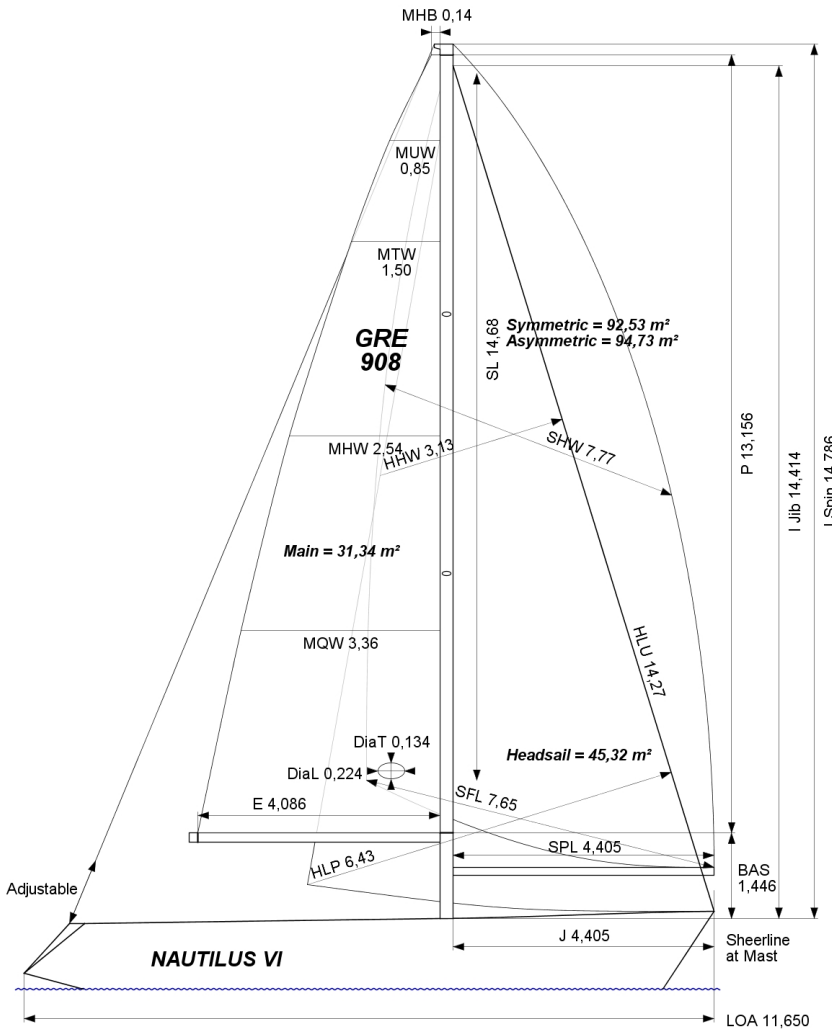
Headsails **5** Spinnakers **4**

**Spinnaker configuration**  
Symmetric: **Yes** **92.53**  
Asymmetric: **Yes** **94.73**  
Flying H/S: **No**  
Spin. Pole: **Yes**

**Class Division Length**  
**CDL = 9.114**

**Stability (Measured)**  
Limit Positive Stab.: **115.1°**  
Stability Index: **115.4**

**Owner**



<b>BOAT</b> Name <b>NAUTILUS VI</b> Sail Nr <b>GRE-908</b>	<b>GPH</b> <b>635.3</b>	<b>HULL</b> Data File <b>GR908</b> LOA <b>11.650m</b> Offset File <b>DUF_38C.BOF</b> MB <b>3.852m</b> Displacement <b>6,516kg</b> Draft <b>1.878m</b> IMS Division <b>Cruiser/Racer</b> Dynamic All. <b>0.253%</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> IMSL <b>10.043m</b> VCGD <b>0.024m</b> Sink <b>21.10kg/mm</b> RL <b>8.189m</b> VCGM <b>0.049m</b> WS <b>26.82m²</b> LSMO <b>9.978m</b> Displacement/Length ratio <b>6.5592</b> Water Ballast <b>0</b> Trim Tab <b>No</b> BLR Index <b>0.0000</b>
<b>CLASS</b> Class <b>DUFOUR 38 classic</b> Designer <b>Chabaud/Poncin</b> Builder <b>DUFOUR SA</b> Series <b>02/1997</b> Age Date <b>05/1999</b> Age Allowance <b>0.487%</b>	<b>COMMENTS</b>	<b>CENTERBOARD</b> <b>N/A</b>
<b>PROPELLER</b> Installation <b>Strut</b> PRD <b>0.430</b> Type <b>Folding 2 blades</b> PBW <b>0.111</b> PIPA <b>0.0012</b>	<b>SCORING OPTIONS</b>	
	<b>COASTAL / LONG DISTANCE</b>	<b>WINDWARD / LEEWARD</b>
Time on Distance	<b>617.3</b>	<b>690.1</b>
Time on Time	<b>0.9720</b>	<b>0.9781</b>
Triple Number	Low Medium High	Low Medium High
Time on Distance	<b>732.3 561.9 499.7</b>	<b>948.4 695.9 600.2</b>
Time on Time	<b>0.9218 1.2013 1.3509</b>	<b>0.7117 0.9700 1.1247</b>

<b>BOAT</b>	
Name <b>NAUTILUS VI</b>	Sail Nr <b>GRE-908</b>
File <b>GR908</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/Checkstays <b>0</b>
Carbon Mast <b>No</b>	Jib Furler <b>No</b>
Fiber Rigging <b>No</b>	Main Furler <b>No</b>
Non-Circular Rigging <b>No</b>	
Articulated Bowsprit <b>No</b>	
P <b>13.156</b>	E <b>4.086</b> MDT1 <b>0.134</b> MW <b>0.224</b>
IG <b>14.414</b>	J <b>4.405</b> MDL1 <b>0.224</b> GO <b>0.264</b>
ISP <b>14.786</b>	SFJ <b>0.000</b> MDT2 <b>0.134</b> BD <b>0.150</b>
BAS <b>1.446</b>	SPL <b>4.405</b> MDL2 <b>0.224</b> MWT
FSD <b>0.035</b>	TPS TL <b>0.000</b> MCG

<b>INCLINING TEST AND FREEBOARDS</b>		
Inclining Test <b>Current Inclining</b>		
Flotation date <b>09/04/2006</b>	SG <b>1.0290</b>	
FFM <b>1.270</b>	FF <b>1.297</b>	SFFP <b>0.900</b>
FAM <b>1.118</b>	FA <b>1.114</b>	SAFP <b>10.625</b>
W1 <b>102.0</b>	PD1 <b>265.0</b>	WD <b>11.600</b>
W2 <b>102.0</b>	PD2 <b>265.0</b>	GSA <b>28.3</b>
W3 <b>102.0</b>	PD3 <b>265.0</b>	RSA <b>5674.5</b>
W4 <b>102.0</b>	PD4 <b>265.0</b>	PLM <b>2115.0</b>
LCF from stem on CL / on sheer		<b>6.299 / 6.574</b>
Maximum beam station from stem		<b>6.960</b>
RM Measured		<b>164.4kg-m</b>
RM Default		<b>152.0kg-m</b>
Limit of positive stability / Stab.Index		<b>115.1° / 115.4</b>
Freeboard at mast at 4.405		<b>1.192</b>



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**2020**  
Measurements  
Datasheet

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

<b>PROPELLER</b>		
Installation <b>Strut</b>	PRD <b>0.430</b>	
Type <b>Folding 2 blades</b>	PBW <b>0.111</b>	
Twin Screw <b>No</b>	PIPA <b>0.0012</b>	
ST1 <b>0.044</b>	ST3 <b>0.170</b> ST5 <b>0.290</b>	
ST2 <b>0.170</b>	ST4 <b>0.044</b> EDL <b>2.500</b>	

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<b>COMMENTS</b>	

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

<b>CENTERBOARD</b>	
N/A	

<b>SAILS INVENTORY</b>																
<b>MAINSAIL (1)</b>																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	0.14	0.85	1.50	2.54	3.36	31.34		06/03/2016	KAKITSIS	Dacron						
<b>HEADSAILS (5)</b>																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
1b	0.07	0.77	1.53	3.13	4.79	6.43	14.27	146%	45.32		No		06/03/2016	KAKITSIS	Kevlar	
1	0.08	0.74	1.45	2.94	4.52	6.18	14.01	140%	42.25		No		06/09/2010	ZOUGANELI	Pentex	2 (ONEIRO)
2	0.09	0.75	1.46	2.95	4.54	6.20	13.86	141%	41.98		No		12/12/2009	ZOUGANELI	Pentex	2 (ONEIRO)
3	0.06	0.54	1.06	2.20	3.45	4.72	14.25	107%	32.51		No		11/07/2014	KAKITSIS	Dacron	2.5
4	0.06	0.45	0.85	1.69	2.52	3.33	13.00	76%	21.92	Y	No		27/03/2010		Dacron	3.5 (BRINIS)
<b>SYMMETRIC SPINNAKERS (1)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	14.61	14.61	14.61	7.59	7.64	92.53		11/07/2014	KAKITSIS	Nylon	HEAVY					
<b>ASYMMETRIC SPINNAKERS (2)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
1	14.79	14.56	14.68	7.77	7.65	94.73	asym		11/06/2020	KAKITSIS	Nylon					
2	13.77	13.65	13.71	6.39	6.30	72.81	asym		11/06/2020	KAKITSIS	Nylon					

<b>MEASUREMENT INVENTORY</b>				
Measurer				
Date <b>09/04/2006</b>				
Comment				
<b>Internal Ballast total = 0.0</b>				
Id	Item	Weight	Distance	VCG Description
4	Anchor	16.0	0.80	Fortress
2	Anchor	16.0	7.70	Fortress
4	Chain	95.0	0.80	70m x 8mm
2	Chain	20.0	7.70	7m x 8mm +
4	Tools	19.0	6.40	
2	Tools	60.0	10.08	Tools (2+3kg)-
Id	Item	Maker	Model	
1	Engine	Volvo	40hp	
Id	Item	Weight Description		
4	Deck-Gear	5.0		

<b>MEASUREMENT INVENTORY</b>							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
1	Tank Fuel		PVC hard	140.0	9.40		0-0
2	Tank Water		PVC hard	150.0	1.80		0-0
3	Tank Water		PVC hard	150.0	9.40		0-0
Id	Item	Weight	Distance	VCG Description			
1	Battery	26.0	6.60	100Ah			
2	Battery	26.0	6.60	100Ah			
3	Battery	20.0	7.60	75Ah			
1	Misc	18.0	1.00	Anchor windlass			
2	Misc	10.0	9.00	Bimini			
3	Misc	20.0	5.90	Water boiler			

# 2020

## ORC Club Certificate Appendix

<b>BOAT</b>	
Name	<b>NAUTILUS VI</b>
Sail Nr	<b>GRE-908</b>
Certificate Number	<b>00831</b>
Issued On	<b>17/06/2020</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1084.6</b>	<b>904.0</b>	<b>798.4</b>	<b>737.9</b>	<b>714.1</b>	<b>703.9</b>	<b>705.3</b>
52°	<b>704.2</b>	<b>595.7</b>	<b>535.1</b>	<b>507.5</b>	<b>495.3</b>	<b>490.4</b>	<b>488.4</b>
60°	<b>662.4</b>	<b>564.6</b>	<b>516.2</b>	<b>494.2</b>	<b>482.3</b>	<b>476.4</b>	<b>472.9</b>
75°	<b>631.0</b>	<b>542.1</b>	<b>502.7</b>	<b>483.2</b>	<b>469.5</b>	<b>458.5</b>	<b>446.9</b>
90°	<b>637.1</b>	<b>542.7</b>	<b>496.9</b>	<b>474.9</b>	<b>464.5</b>	<b>450.8</b>	<b>427.5</b>
110°	<b>647.6</b>	<b>536.2</b>	<b>489.6</b>	<b>465.8</b>	<b>445.4</b>	<b>427.5</b>	<b>407.9</b>
120°	<b>666.8</b>	<b>550.0</b>	<b>495.7</b>	<b>469.7</b>	<b>447.9</b>	<b>427.0</b>	<b>393.3</b>
135°	<b>737.6</b>	<b>601.5</b>	<b>522.8</b>	<b>486.0</b>	<b>463.4</b>	<b>441.9</b>	<b>401.7</b>
150°	<b>871.2</b>	<b>692.2</b>	<b>587.2</b>	<b>520.2</b>	<b>486.8</b>	<b>465.5</b>	<b>425.8</b>
Run VMG	<b>1006.0</b>	<b>799.3</b>	<b>677.5</b>	<b>595.3</b>	<b>539.8</b>	<b>499.5</b>	<b>456.4</b>
<b>Selected Courses</b>							
Windward / Leeward	<b>1045.3</b>	<b>851.6</b>	<b>738.0</b>	<b>666.6</b>	<b>626.9</b>	<b>601.7</b>	<b>580.9</b>
Circular Random	<b>877.3</b>	<b>707.7</b>	<b>616.3</b>	<b>563.0</b>	<b>530.3</b>	<b>509.4</b>	<b>485.2</b>
Coastal / Long Distance	<b>1041.4</b>	<b>798.8</b>	<b>662.9</b>	<b>580.8</b>	<b>539.9</b>	<b>508.9</b>	<b>460.8</b>
Non Spinnaker	<b>930.5</b>	<b>745.4</b>	<b>644.3</b>	<b>584.6</b>	<b>547.7</b>	<b>524.0</b>	<b>496.1</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>42.0°</b>	<b>42.0°</b>	<b>40.9°</b>	<b>40.1°</b>	<b>39.8°</b>	<b>41.1°</b>
Beat VMG	<b>3.32</b>	<b>3.98</b>	<b>4.51</b>	<b>4.88</b>	<b>5.04</b>	<b>5.11</b>	<b>5.10</b>
52°	<b>5.11</b>	<b>6.04</b>	<b>6.73</b>	<b>7.09</b>	<b>7.27</b>	<b>7.34</b>	<b>7.37</b>
60°	<b>5.43</b>	<b>6.38</b>	<b>6.97</b>	<b>7.28</b>	<b>7.46</b>	<b>7.56</b>	<b>7.61</b>
75°	<b>5.71</b>	<b>6.64</b>	<b>7.16</b>	<b>7.45</b>	<b>7.67</b>	<b>7.85</b>	<b>8.06</b>
90°	<b>5.65</b>	<b>6.63</b>	<b>7.25</b>	<b>7.58</b>	<b>7.75</b>	<b>7.99</b>	<b>8.42</b>
110°	<b>5.56</b>	<b>6.71</b>	<b>7.35</b>	<b>7.73</b>	<b>8.08</b>	<b>8.42</b>	<b>8.82</b>
120°	<b>5.40</b>	<b>6.55</b>	<b>7.26</b>	<b>7.66</b>	<b>8.04</b>	<b>8.43</b>	<b>9.15</b>
135°	<b>4.88</b>	<b>5.99</b>	<b>6.89</b>	<b>7.41</b>	<b>7.77</b>	<b>8.15</b>	<b>8.96</b>
150°	<b>4.13</b>	<b>5.20</b>	<b>6.13</b>	<b>6.92</b>	<b>7.40</b>	<b>7.73</b>	<b>8.45</b>
Run VMG	<b>3.58</b>	<b>4.50</b>	<b>5.31</b>	<b>6.05</b>	<b>6.67</b>	<b>7.21</b>	<b>7.89</b>
Gybe Angles	<b>145.5°</b>	<b>150.0°</b>	<b>151.0°</b>	<b>155.5°</b>	<b>171.0°</b>	<b>180.0°</b>	<b>180.0°</b>