



World Leader in Rating Technology

## 2016 ORC Club Certificate

### Rating Office

Hungarian Yachting Association  
Istvanmezei ut 1-3  
H-1146 Budapest  
HUNGARY



### Certificate

Number **022/16**  
Issued On **5.5.2016.**  
ORC Ref **HUN00062863**  
VPP Ver. **2016 1.01**  
Valid until **31.12.2016.**

### Crew Weight

Declared **605kg**  
Default\* **605kg**  
Non Manual Pwr **No**

### Special Scoring

	ToD	ToT
Non Spin GPH	<b>613.0</b>	<b>0.9788</b>
Non Spin OSN	<b>602.2</b>	<b>0.9964</b>
N/S Perf. Line	<b>30.9</b>	<b>0.665</b>

### Sails Limitations

Headsails **1** Spinnakers **4**

### Spinnaker configuration

Symmetric: **Yes** **116.53**  
Asymmetric: **No**  
Flying H/S: **No**  
Spin. Pole: **Yes**

### Class Division Length

CDL = **9.204**

### Stability

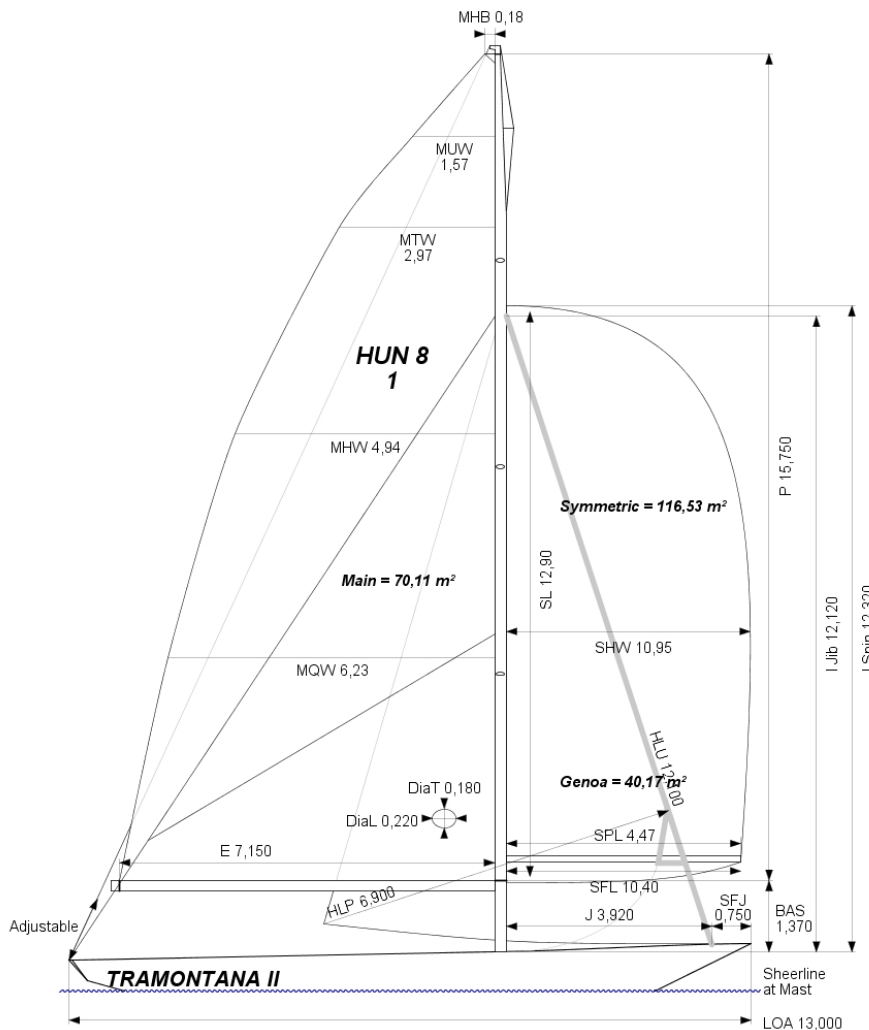
LPS (Estimated): **180.0°**  
Stability Index: **186.6**  
OSR Category: **N/A**

### Owner

Tramontana Vitorlás Alapítvány  
Dr. Ovari Ferenc utca 53  
H-8220 Balatonalmád  
HUNGARY

I certify that I understand my responsibilities under ORC Rules and Regulations

Signature



BOAT	GPH	HULL
Name <b>Tramontana II</b> Sail Nr <b>HUN 8-1</b>	<b>594.8</b>	Data File <b>HUN 8-1.dxt</b> LOA <b>13.000m</b> Offset File <b>TRAMONT-</b> MB <b>2.246m</b> Displacement <b>6,944kg</b> Draft <b>1.673m</b>
<b>CLASS</b> Class <b>8mR</b> Designer <b>W. Hacht</b> Builder <b>W. Hacht</b> Series <b>01.1907</b> Age Date <b>01.1907</b> Age Allowance <b>0.487%</b>		IMS Division <b>Cruiser/Racer</b> Dynamic All. <b>0.038%</b> Fwd Accom. <b>Yes</b> 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>		IMSL <b>9.796m</b> VCGD <b>-0.979m</b> Sink <b>13.93kg/mm</b> RL <b>8.611m</b> VCGM <b>-0.911m</b> WS <b>25.26m2</b> LSM0 <b>9.133m</b> Displacement/Length ratio <b>9.1153</b>
<b>PROPELLER</b> Installation <b>In Aperture</b> PRD <b>0.350</b> Type <b>Solid 3 blades</b> PBW <b>0.100</b> PIPA <b>0.0086</b>		Water Ballast <b>0</b> Trim Tab <b>No</b>
<b>SCORING OPTIONS</b>		<b>CENTERBOARD</b> N/A
	<b>OFFSHORE</b> COASTAL / LONG DISTANCE	<b>INSHORE</b> WINDWARD / LEEWARD
Time On Distance	<b>583.8</b>	<b>653.8</b>
Time On Time	<b>1.0277</b>	<b>1.0324</b>
Performance Line	PLT <b>0.724</b> PLD <b>53.8</b>	PLT <b>0.922</b> PLD <b>234.8</b>
Triple Number	Low <b>1.0058</b> Medium <b>1.2719</b> High <b>1.4242</b>	Low <b>0.7651</b> Medium <b>1.0253</b> High <b>1.1870</b>



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## ORC Club Certificate Appendix

<b>BOAT</b>	
Name	<b>Tramontana II</b>
Certificate Number	<b>022/16</b>
Sail Nr	<b>HUN 8-1</b>
Issued On	<b>5.5.2016.</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1013.0</b>	<b>852.9</b>	<b>765.3</b>	<b>719.6</b>	<b>690.6</b>	<b>673.7</b>	<b>660.1</b>
52°	<b>646.0</b>	<b>543.5</b>	<b>504.0</b>	<b>486.7</b>	<b>477.3</b>	<b>470.9</b>	<b>463.9</b>
60°	<b>595.9</b>	<b>511.9</b>	<b>483.4</b>	<b>470.2</b>	<b>462.0</b>	<b>456.2</b>	<b>448.7</b>
75°	<b>551.6</b>	<b>492.0</b>	<b>467.7</b>	<b>451.4</b>	<b>440.9</b>	<b>433.3</b>	<b>423.8</b>
90°	<b>546.2</b>	<b>490.5</b>	<b>466.5</b>	<b>447.2</b>	<b>429.7</b>	<b>416.2</b>	<b>401.2</b>
110°	<b>575.6</b>	<b>493.4</b>	<b>462.4</b>	<b>445.1</b>	<b>432.4</b>	<b>420.8</b>	<b>392.8</b>
120°	<b>595.6</b>	<b>501.3</b>	<b>468.3</b>	<b>443.7</b>	<b>422.0</b>	<b>409.9</b>	<b>388.2</b>
135°	<b>675.0</b>	<b>540.9</b>	<b>486.8</b>	<b>461.4</b>	<b>438.5</b>	<b>415.7</b>	<b>369.1</b>
150°	<b>798.7</b>	<b>641.5</b>	<b>539.0</b>	<b>487.5</b>	<b>463.0</b>	<b>441.4</b>	<b>399.1</b>
Run VMG	<b>922.3</b>	<b>740.8</b>	<b>622.4</b>	<b>550.0</b>	<b>501.9</b>	<b>473.2</b>	<b>430.7</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>967.6</b>	<b>796.8</b>	<b>693.9</b>	<b>634.8</b>	<b>596.2</b>	<b>573.5</b>	<b>545.4</b>
Circular Random	<b>808.4</b>	<b>657.9</b>	<b>578.0</b>	<b>531.6</b>	<b>502.6</b>	<b>483.0</b>	<b>456.4</b>
Ocean for PCS	<b>1002.3</b>	<b>778.4</b>	<b>652.1</b>	<b>574.6</b>	<b>524.0</b>	<b>488.5</b>	<b>439.0</b>
Non Spinnaker	<b>840.0</b>	<b>680.9</b>	<b>595.4</b>	<b>545.1</b>	<b>513.4</b>	<b>492.2</b>	<b>465.5</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>45.5°</b>	<b>45.4°</b>	<b>44.0°</b>	<b>42.1°</b>	<b>40.7°</b>	<b>40.2°</b>	<b>39.7°</b>
Beat VMG	<b>3.55</b>	<b>4.22</b>	<b>4.70</b>	<b>5.00</b>	<b>5.21</b>	<b>5.34</b>	<b>5.45</b>
52°	<b>5.57</b>	<b>6.62</b>	<b>7.14</b>	<b>7.40</b>	<b>7.54</b>	<b>7.65</b>	<b>7.76</b>
60°	<b>6.04</b>	<b>7.03</b>	<b>7.45</b>	<b>7.66</b>	<b>7.79</b>	<b>7.89</b>	<b>8.02</b>
75°	<b>6.53</b>	<b>7.32</b>	<b>7.70</b>	<b>7.98</b>	<b>8.16</b>	<b>8.31</b>	<b>8.50</b>
90°	<b>6.59</b>	<b>7.34</b>	<b>7.72</b>	<b>8.05</b>	<b>8.38</b>	<b>8.65</b>	<b>8.97</b>
110°	<b>6.25</b>	<b>7.30</b>	<b>7.79</b>	<b>8.09</b>	<b>8.33</b>	<b>8.56</b>	<b>9.16</b>
120°	<b>6.04</b>	<b>7.18</b>	<b>7.69</b>	<b>8.11</b>	<b>8.53</b>	<b>8.78</b>	<b>9.27</b>
135°	<b>5.33</b>	<b>6.66</b>	<b>7.39</b>	<b>7.80</b>	<b>8.21</b>	<b>8.66</b>	<b>9.75</b>
150°	<b>4.51</b>	<b>5.61</b>	<b>6.68</b>	<b>7.38</b>	<b>7.78</b>	<b>8.16</b>	<b>9.02</b>
Run VMG	<b>3.90</b>	<b>4.86</b>	<b>5.78</b>	<b>6.55</b>	<b>7.17</b>	<b>7.61</b>	<b>8.36</b>
Gybe Angles	<b>144.1°</b>	<b>146.8°</b>	<b>149.8°</b>	<b>158.5°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>