



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

**2020**  
**ORC Club**  
**Certificate**

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



**Certificate**

Number **004/20**  
Issued On **03/06/2020**  
ORC Ref **03880000JMF**  
VPP Ver. **2020 1.02**  
Valid until **31/12/2020**

**Crew Weight**

Default 603kg  
Maximum **605kg**  
Minimum\* **454kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

ToD ToT  
Non Spin GPH **632.9 0.9480**  
Non Spin OSN **626.3 0.9580**

**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 = 8.501**

**Stability (Measured)**

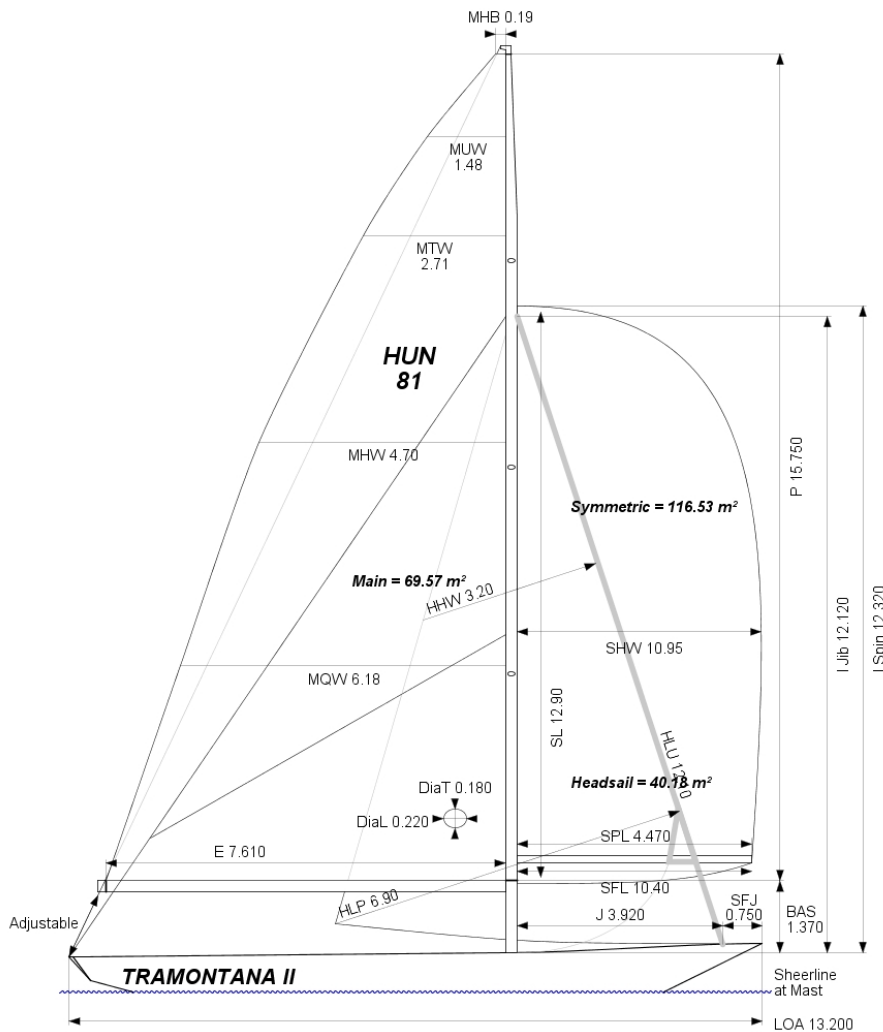
Limit Positive Stab.: **180.0°**  
Stability Index: **186.6**

**Owner**

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

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

Signature



<b>BOAT</b> Name <b>Tramontana II</b> Sail Nr <b>HUN 8-1</b>		<b>GPH</b> <b>614.3</b>	<b>HULL</b> Data File <b>HUN 8-1</b> LOA <b>13.200m</b> Offset File <b>TRAMONT-</b> MB <b>2.246m</b> Displacement <b>6,903kg</b> Draft <b>1.677m</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>01/1910</b> Age Allowance <b>0.487%</b>			IMS Division <b>Cruiser/Racer</b> Dynamic All. <b>0.040%</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>			IMSL <b>9.778m</b> VCGD <b>-0.445m</b> Sink <b>13.90kg/mm</b> RL <b>7.229m</b> VCGM <b>-0.374m</b> WS <b>25.19m²</b> LSM0 <b>9.116m</b> Displacement/Length ratio					
<b>PROPELLER</b> Installation <b>In Aperture</b> PRD <b>0.390</b> Type <b>Folding 3 blades</b> PBW <b>0.100</b> PIPA <b>0.0106</b>			Water Ballast Trim Tab <b>No</b> BLR Index <b>0.0000</b>					
<b>SCORING OPTIONS</b>			<b>CENTERBOARD</b> <b>N/A</b>					
Time on Distance	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>				
	<b>608.4</b>			<b>683.2</b>				
Time on Time	<b>0.9861</b>			<b>0.9880</b>				
Triple Number	Low	Medium	High	Low	Medium	High		
Time on Distance	<b>672.1</b>	<b>554.6</b>	<b>508.7</b>	<b>876.6</b>	<b>688.1</b>	<b>610.0</b>		
Time on Time	<b>1.0043</b>	<b>1.2171</b>	<b>1.3268</b>	<b>0.7700</b>	<b>0.9809</b>	<b>1.1066</b>		

# 2020

## ORC Club Certificate Appendix

<b>BOAT</b>	
Name	<b>Tramontana II</b>
Certificate Number	<b>004/20</b>
Sail Nr	<b>HUN 8-1</b>
Issued On	<b>03/06/2020</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>979.1</b>	<b>872.6</b>	<b>817.2</b>	<b>785.4</b>	<b>770.7</b>	<b>756.0</b>	<b>745.8</b>
52°	<b>638.4</b>	<b>570.9</b>	<b>539.2</b>	<b>523.2</b>	<b>514.7</b>	<b>511.9</b>	<b>501.6</b>
60°	<b>596.2</b>	<b>536.2</b>	<b>512.9</b>	<b>501.2</b>	<b>494.6</b>	<b>490.9</b>	<b>483.7</b>
75°	<b>558.7</b>	<b>506.6</b>	<b>489.0</b>	<b>479.9</b>	<b>474.3</b>	<b>470.5</b>	<b>466.8</b>
90°	<b>553.7</b>	<b>498.0</b>	<b>476.2</b>	<b>464.7</b>	<b>457.4</b>	<b>452.2</b>	<b>446.4</b>
110°	<b>581.3</b>	<b>503.5</b>	<b>482.3</b>	<b>467.0</b>	<b>451.7</b>	<b>438.8</b>	<b>422.7</b>
120°	<b>596.0</b>	<b>504.2</b>	<b>473.6</b>	<b>459.3</b>	<b>447.5</b>	<b>436.4</b>	<b>418.6</b>
135°	<b>671.6</b>	<b>537.9</b>	<b>486.2</b>	<b>461.0</b>	<b>438.9</b>	<b>419.6</b>	<b>399.1</b>
150°	<b>794.6</b>	<b>638.5</b>	<b>537.1</b>	<b>486.6</b>	<b>462.2</b>	<b>440.3</b>	<b>398.2</b>
Run VMG	<b>917.6</b>	<b>737.3</b>	<b>620.1</b>	<b>549.3</b>	<b>501.9</b>	<b>472.9</b>	<b>430.0</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>948.3</b>	<b>805.0</b>	<b>718.7</b>	<b>667.3</b>	<b>636.3</b>	<b>614.5</b>	<b>587.9</b>
Circular Random	<b>813.7</b>	<b>671.4</b>	<b>598.1</b>	<b>557.1</b>	<b>532.4</b>	<b>516.3</b>	<b>495.5</b>
Coastal / Long Distance	<b>945.2</b>	<b>752.8</b>	<b>644.6</b>	<b>581.6</b>	<b>546.8</b>	<b>517.8</b>	<b>472.2</b>
Non Spinnaker	<b>848.0</b>	<b>695.7</b>	<b>615.8</b>	<b>570.2</b>	<b>542.4</b>	<b>524.3</b>	<b>502.2</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>42.8°</b>	<b>42.0°</b>	<b>42.0°</b>	<b>42.0°</b>	<b>42.4°</b>	<b>41.6°</b>	<b>42.4°</b>
Beat VMG	<b>3.68</b>	<b>4.13</b>	<b>4.41</b>	<b>4.58</b>	<b>4.67</b>	<b>4.76</b>	<b>4.83</b>
52°	<b>5.64</b>	<b>6.31</b>	<b>6.68</b>	<b>6.88</b>	<b>6.99</b>	<b>7.03</b>	<b>7.18</b>
60°	<b>6.04</b>	<b>6.71</b>	<b>7.02</b>	<b>7.18</b>	<b>7.28</b>	<b>7.33</b>	<b>7.44</b>
75°	<b>6.44</b>	<b>7.11</b>	<b>7.36</b>	<b>7.50</b>	<b>7.59</b>	<b>7.65</b>	<b>7.71</b>
90°	<b>6.50</b>	<b>7.23</b>	<b>7.56</b>	<b>7.75</b>	<b>7.87</b>	<b>7.96</b>	<b>8.07</b>
110°	<b>6.19</b>	<b>7.15</b>	<b>7.46</b>	<b>7.71</b>	<b>7.97</b>	<b>8.20</b>	<b>8.52</b>
120°	<b>6.04</b>	<b>7.14</b>	<b>7.60</b>	<b>7.84</b>	<b>8.04</b>	<b>8.25</b>	<b>8.60</b>
135°	<b>5.36</b>	<b>6.69</b>	<b>7.40</b>	<b>7.81</b>	<b>8.20</b>	<b>8.58</b>	<b>9.02</b>
150°	<b>4.53</b>	<b>5.64</b>	<b>6.70</b>	<b>7.40</b>	<b>7.79</b>	<b>8.18</b>	<b>9.04</b>
Run VMG	<b>3.92</b>	<b>4.88</b>	<b>5.81</b>	<b>6.55</b>	<b>7.17</b>	<b>7.61</b>	<b>8.37</b>
Gybe Angles	<b>144.0°</b>	<b>146.0°</b>	<b>149.5°</b>	<b>158.0°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>