



World Leader in Rating Technology

## 2018 ORC Club Certificate

### Rating Office

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



### Certificate

Number **005/18**  
Issued On **18/05/2018**  
ORC Ref **HUN10014274**  
VPP Ver. **2018 1.00**  
Valid until **31/12/2018**

### 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	<b>631.3</b>	<b>0.9504</b>
Non Spin OSN	<b>624.6</b>	<b>0.9606</b>

### Sails Limitations

Headsails 1 Spinnakers 3

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

### Class Division Length

**CDL = 8.530**

### Stability (Measured)

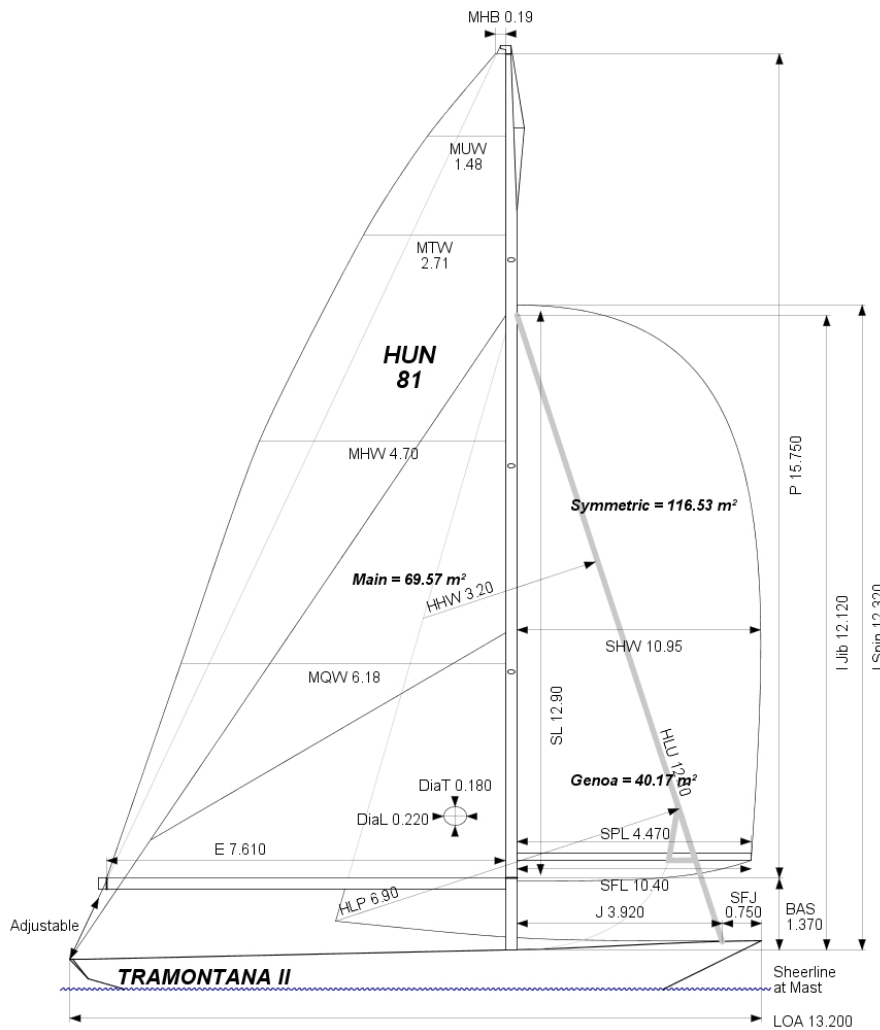
Limit Positive Stab.: **180.0°**  
Stability Index: **186.6**

### 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>612.5</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>01/1907</b> Age Allowance <b>0.487%</b>		IMS Division <b>Cruiser/Racer</b> Dynamic All. <b>0.040%</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>9.778m</b> VCGD <b>-0.445m</b> Sink <b>13.90kg/mm</b> RL <b>7.281m</b> VCGM <b>-0.374m</b> WS <b>25.19m<sup>2</sup></b> LSM0 <b>9.116m</b> Displacement/Length ratio <b>9.1122</b>
<b>PROPELLER</b> Installation <b>In Aperture</b> PRD <b>0.350</b> Type <b>Folding 3 or 4 blades</b> PBW <b>0.100</b> PIPA <b>0.0086</b>		Water Ballast <b>0</b> Trim Tab <b>No</b> BLR Index <b>0.0000</b>
		<b>CENTERBOARD</b>  <b>N/A</b>
<b>SCORING OPTIONS</b>		
	<b>COASTAL / LONG DISTANCE</b>	<b>WINDWARD / LEEWARD</b>
Time on Distance	<b>606.7</b>	<b>681.7</b>
Time on Time	<b>0.9889</b>	<b>0.9902</b>
Triple Number	Low Medium High	Low Medium High
Time on Distance	<b>669.8 553.1 507.5</b>	<b>873.6 686.4 609.2</b>
Time on Time	<b>1.0077 1.2205 1.3300</b>	<b>0.7727 0.9834 1.1080</b>



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## ORC Club Certificate Appendix

<b>BOAT</b>			
Name	<b>Tramontana II</b>	Certificate Number	<b>005/18</b>
Sail Nr	<b>HUN 8-1</b>	Issued On	<b>18/05/2018</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>972.3</b>	<b>866.8</b>	<b>813.0</b>	<b>782.5</b>	<b>768.4</b>	<b>754.6</b>	<b>744.9</b>
52°	<b>634.2</b>	<b>566.7</b>	<b>536.2</b>	<b>520.9</b>	<b>512.6</b>	<b>510.7</b>	<b>500.0</b>
60°	<b>592.7</b>	<b>533.0</b>	<b>510.4</b>	<b>499.3</b>	<b>492.8</b>	<b>489.1</b>	<b>482.1</b>
75°	<b>556.3</b>	<b>504.7</b>	<b>487.3</b>	<b>478.3</b>	<b>472.7</b>	<b>468.8</b>	<b>466.3</b>
90°	<b>551.8</b>	<b>496.9</b>	<b>475.2</b>	<b>463.2</b>	<b>455.7</b>	<b>450.3</b>	<b>444.1</b>
110°	<b>579.5</b>	<b>501.3</b>	<b>480.2</b>	<b>466.4</b>	<b>451.0</b>	<b>437.7</b>	<b>420.5</b>
120°	<b>595.4</b>	<b>503.3</b>	<b>472.4</b>	<b>457.9</b>	<b>446.0</b>	<b>435.0</b>	<b>417.0</b>
135°	<b>672.6</b>	<b>538.5</b>	<b>486.0</b>	<b>460.8</b>	<b>438.6</b>	<b>418.4</b>	<b>397.4</b>
150°	<b>794.9</b>	<b>638.6</b>	<b>537.2</b>	<b>486.4</b>	<b>462.1</b>	<b>440.2</b>	<b>398.1</b>
Run VMG	<b>917.9</b>	<b>737.3</b>	<b>620.3</b>	<b>549.1</b>	<b>501.6</b>	<b>472.9</b>	<b>430.0</b>
<b>Selected Courses</b>							
Windward / Leeward	<b>945.1</b>	<b>802.1</b>	<b>716.7</b>	<b>665.8</b>	<b>635.0</b>	<b>613.8</b>	<b>587.4</b>
Circular Random	<b>811.1</b>	<b>669.3</b>	<b>596.4</b>	<b>555.6</b>	<b>531.1</b>	<b>515.0</b>	<b>494.3</b>
Coastal / Long Distance	<b>942.4</b>	<b>750.3</b>	<b>642.8</b>	<b>580.0</b>	<b>545.4</b>	<b>516.6</b>	<b>470.9</b>
Non Spinnaker	<b>845.8</b>	<b>693.8</b>	<b>614.2</b>	<b>568.8</b>	<b>541.1</b>	<b>523.1</b>	<b>501.0</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>42.9°</b>	<b>42.1°</b>	<b>42.2°</b>	<b>42.2°</b>	<b>42.8°</b>	<b>41.7°</b>	<b>42.6°</b>
Beat VMG	<b>3.70</b>	<b>4.15</b>	<b>4.43</b>	<b>4.60</b>	<b>4.68</b>	<b>4.77</b>	<b>4.83</b>
52°	<b>5.68</b>	<b>6.35</b>	<b>6.71</b>	<b>6.91</b>	<b>7.02</b>	<b>7.05</b>	<b>7.20</b>
60°	<b>6.07</b>	<b>6.75</b>	<b>7.05</b>	<b>7.21</b>	<b>7.30</b>	<b>7.36</b>	<b>7.47</b>
75°	<b>6.47</b>	<b>7.13</b>	<b>7.39</b>	<b>7.53</b>	<b>7.62</b>	<b>7.68</b>	<b>7.72</b>
90°	<b>6.52</b>	<b>7.25</b>	<b>7.58</b>	<b>7.77</b>	<b>7.90</b>	<b>7.99</b>	<b>8.11</b>
110°	<b>6.21</b>	<b>7.18</b>	<b>7.50</b>	<b>7.72</b>	<b>7.98</b>	<b>8.23</b>	<b>8.56</b>
120°	<b>6.05</b>	<b>7.15</b>	<b>7.62</b>	<b>7.86</b>	<b>8.07</b>	<b>8.28</b>	<b>8.63</b>
135°	<b>5.35</b>	<b>6.68</b>	<b>7.41</b>	<b>7.81</b>	<b>8.21</b>	<b>8.60</b>	<b>9.06</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>5.80</b>	<b>6.56</b>	<b>7.18</b>	<b>7.61</b>	<b>8.37</b>
Gybe Angles	<b>144.2°</b>	<b>146.5°</b>	<b>149.7°</b>	<b>158.3°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>