



**ORC**

Offshore Racing Congress  
World leader in rating technology

**2019  
ORC Club  
Certificate**

**Rating Office**

**EYU  
Purje 8  
11911, Tallinn  
Estonia**

**Certificate**

Number **Est990**  
Issued On **7/29/2019**  
ORC Ref **EST00000806**  
VPP Ver. **2019 1.01**  
Valid until **12/31/2019**

**Crew Weight**

Default	539kg
Maximum	<b>544kg</b>
Minimum*	<b>408kg</b>
*when applied by the NoR and SI	
Non Manual Pwr	<b>No</b>

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>636.8</b>	<b>0.9422</b>
Double H.OSN	<b>623.4</b>	<b>0.9625</b>
Non Spin GPH	<b>650.4</b>	<b>0.9225</b>
Non Spin OSN	<b>633.2</b>	<b>0.9476</b>

**Sails Limitations**

Headsails **5** Spinnakers **3**

**Spinnaker configuration**

Symmetric: **Yes 72.59**  
Asymmetric: **No**  
Flying H/S: **No**  
Spin. Pole: **Yes**

**Class Division Length**

**CDL = 8.624**

**Stability (Measured)**

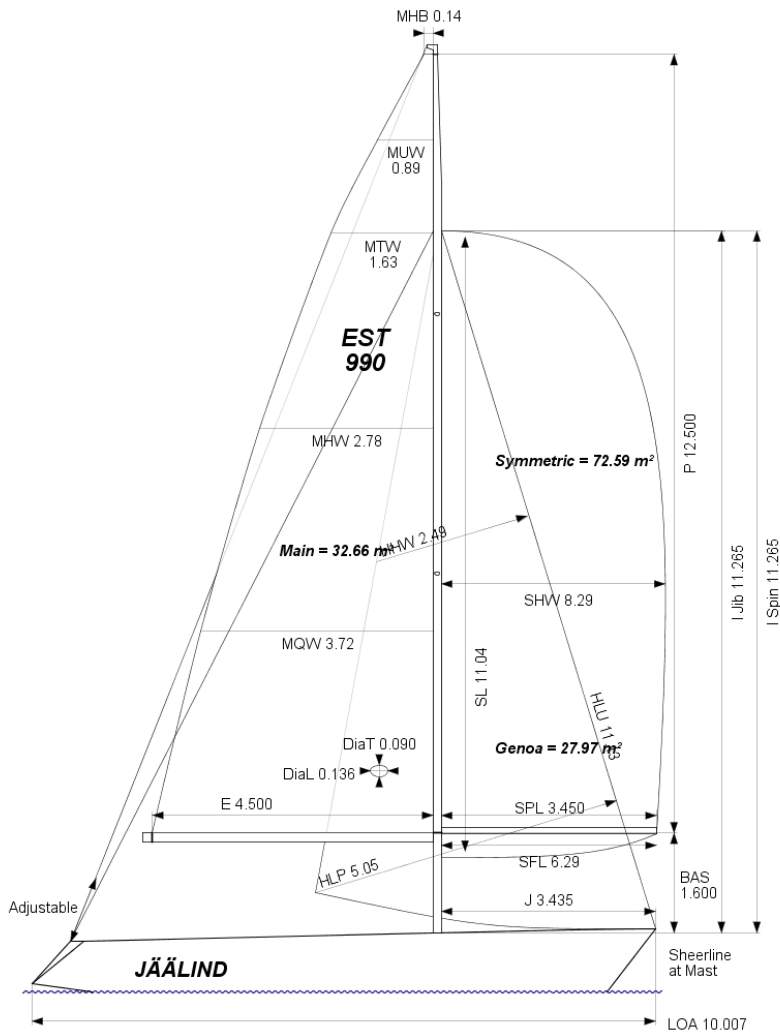
Limit Positive Stab.: **114.1°**  
Stability Index: **111.8**

**Owner**

**Margo Põbo  
Asalea tee 6  
Eametsa  
Tori vald**

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

Signature



BOAT	GPH	HULL
Name <b>JÄÄLIND</b> Sail Nr <b>EST 990</b>	<b>622.7</b>	Data File <b>Est0990</b> LOA <b>10.007m</b> Offset File <b>X99.OD.OFF</b> MB <b>2.992m</b> Displacement <b>2,982kg</b> Draft <b>1.788m</b>
<b>CLASS</b> Class <b>X-99</b> Designer <b>N.Jeppesen</b> Builder <b>x-Jachts</b> Series <b>04/1985</b> Age Date <b>01/1986</b> Age Allowance <b>0.487%</b>		IMS Division <b>Dynamic All. 0.000%</b> Fwd Accom. <b>Yes</b> Construction 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>8.673m</b> VCGD <b>-0.060m</b> Sink <b>13.62kg/mm</b> RL <b>8.574m</b> VCGM <b>-0.008m</b> WS <b>18.38m²</b> LSM0 <b>8.422m</b> Displacement/Length ratio <b>4.9919</b>
<b>PROPELLER</b> Installation <b>Strut</b> PRD <b>0.356</b> Type <b>Folding 2 blades</b> PBW <b>0.090</b> PIPA <b>0.0035</b>		Water Ballast <b>0</b> Trim Tab <b>No</b> BLR Index <b>0.0000</b>
<b>SCORING OPTIONS</b>		<b>CENTERBOARD</b>  <b>N/A</b>
	<b>COASTAL / LONG DISTANCE</b>	<b>WINDWARD / LEEWARD</b>
Time on Distance	<b>606.7</b>	<b>677.1</b>
Time on Time	<b>0.9889</b>	<b>0.9970</b>
Triple Number	Low Medium High	Low Medium High
Time on Distance	<b>703.2 554.7 496.7</b>	<b>910.1 678.1 597.5</b>
Time on Time	<b>0.9599 1.2169 1.3589</b>	<b>0.7417 0.9954 1.1297</b>

<b>BOAT</b>	
Name <b>JÄÄLIND</b>	Sail Nr <b>EST 990</b>
File <b>Est0990</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>29/07/2015</b>		SG <b>1.0250</b>	
FFM <b>0.997</b>	FF <b>0.997</b>	SFFP <b>0.303</b>	
FAM <b>0.802</b>	FA <b>0.802</b>	SAFP <b>9.175</b>	
W1 <b>41.0</b>	PD1 <b>222.0</b>	WD <b>9.370</b>	
W2 <b>41.0</b>	PD2 <b>220.0</b>	GSA <b>12.6</b>	
W3 <b>41.0</b>	PD3 <b>223.0</b>	RSA <b>4298.7</b>	
W4 <b>41.0</b>	PD4 <b>220.0</b>	PLM <b>2005.0</b>	
LCF from stem on CL / on sheer		<b>5.445 / 5.615</b>	
Maximum beam station from stem		<b>6.027</b>	
RM Measured		<b>60.7kg·m</b>	
RM Default		<b>65.8kg·m</b>	
Limit of positive stability / Stab.Index		<b>114.1° / 111.8</b>	
Freeboard at mast at 3.435		<b>0.946</b>	



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**2019**  
Measurements  
Datasheet

<b>RIG</b>			
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>		
Inner Stay <b>None Fitted</b>	Runners <b>1</b>		
Carbon Mast <b>No</b>	Jumper Struts <b>None</b>		
Taper Hollows <b>No</b>	Jib Furler <b>No</b>		
Fiber Rigging <b>No</b>	Main Furler <b>No</b>		
Lenticular Rigging <b>No</b>	Without Backstay <b>No</b>		
Articulated Bowsprit <b>No</b>			
P <b>12.500</b>	E <b>4.500</b>	MDT1 <b>0.090</b>	MW <b>0.136</b>
IG <b>11.265</b>	J <b>3.435</b>	MDL1 <b>0.136</b>	GO <b>0.136</b>
ISP <b>11.265</b>	SFJ <b>0.000</b>	MDT2 <b>0.060</b>	BD <b>0.140</b>
BAS <b>1.600</b>	SPL <b>3.450</b>	MDL2 <b>0.080</b>	MWT <b>77.60</b>
FSP <b>0.000</b>	TPS	TL <b>2.100</b>	MCG <b>3.950</b>

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.356</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.090</b>		
Twin Screw <b>No</b>	PIPA <b>0.0035</b>		
ST1 <b>0.065</b>	ST3 <b>0.180</b>	ST5 <b>0.256</b>	
ST2 <b>0.180</b>	ST4 <b>0.110</b>	EDL <b>1.075</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					
1	0.14	0.89	1.63	2.78	3.72	32.67	EST 5	18/07/2019		Unknown						
<b>HEADSAILS (3)</b>																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
2	0.07	0.65	1.25	2.49	3.75	5.05	11.13	147%	27.97			EST 5	18/07/2019		Unknown	Unknow
1	0.08	0.65	1.24	2.41	3.68	5.09	11.09	148%	27.56			EST 5	18/07/2019		Unknown	Unknow
3	0.07	0.41	0.76	1.48	2.32	3.23	11.14	94%	17.36	Y		EST 5	18/07/2019		Unknown	Unknow
<b>SYMMETRIC SPINNAKERS (2)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	11.04	11.04	11.04	8.29	6.29	72.59	EST 5	18/07/2019		Unknown						
2	11.14	11.14	11.14	8.08	6.29	71.69	EST 5	18/07/2019		Unknown						
<b>ASYMMETRIC SPINNAKERS (0)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				

# 2009

## ORC Club Certificate Appendix

<b>BOAT</b>			
Name	<b>JÄÄLIND</b>	Certificate Number	<b>Est990</b>
Sail Nr	<b>EST 990</b>	Issued On	<b>7/29/2019</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>997.3</b>	<b>824.4</b>	<b>746.9</b>	<b>721.1</b>	<b>709.5</b>	<b>706.3</b>	<b>700.4</b>
52°	<b>656.3</b>	<b>559.9</b>	<b>528.2</b>	<b>517.5</b>	<b>512.1</b>	<b>509.2</b>	<b>504.1</b>
60°	<b>622.0</b>	<b>543.6</b>	<b>516.4</b>	<b>503.8</b>	<b>497.2</b>	<b>493.4</b>	<b>488.2</b>
75°	<b>596.8</b>	<b>532.7</b>	<b>505.6</b>	<b>486.2</b>	<b>472.7</b>	<b>465.2</b>	<b>458.7</b>
90°	<b>606.9</b>	<b>534.2</b>	<b>505.3</b>	<b>481.8</b>	<b>459.8</b>	<b>443.0</b>	<b>426.6</b>
110°	<b>624.6</b>	<b>530.7</b>	<b>493.9</b>	<b>463.2</b>	<b>441.6</b>	<b>426.9</b>	<b>404.0</b>
120°	<b>646.4</b>	<b>539.9</b>	<b>499.9</b>	<b>465.8</b>	<b>433.8</b>	<b>407.2</b>	<b>378.7</b>
135°	<b>725.8</b>	<b>586.5</b>	<b>522.4</b>	<b>489.4</b>	<b>456.2</b>	<b>424.1</b>	<b>356.8</b>
150°	<b>879.7</b>	<b>695.4</b>	<b>581.0</b>	<b>521.8</b>	<b>491.1</b>	<b>460.5</b>	<b>400.5</b>
Run VMG	<b>1015.8</b>	<b>803.0</b>	<b>670.8</b>	<b>588.8</b>	<b>536.1</b>	<b>503.2</b>	<b>446.4</b>
<b>Selected Courses</b>							
Windward / Leeward	<b>1006.6</b>	<b>813.7</b>	<b>708.9</b>	<b>655.0</b>	<b>622.8</b>	<b>604.7</b>	<b>573.4</b>
Circular Random	<b>848.6</b>	<b>689.1</b>	<b>604.8</b>	<b>556.4</b>	<b>526.4</b>	<b>505.9</b>	<b>477.1</b>
Coastal / Long Distance	<b>1007.5</b>	<b>766.6</b>	<b>643.5</b>	<b>576.5</b>	<b>538.5</b>	<b>507.2</b>	<b>456.8</b>
Non Spinnaker	<b>897.2</b>	<b>723.7</b>	<b>631.0</b>	<b>577.2</b>	<b>543.8</b>	<b>521.2</b>	<b>490.7</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>42.2°</b>	<b>40.9°</b>	<b>38.8°</b>	<b>37.8°</b>	<b>37.3°</b>	<b>37.4°</b>	<b>37.3°</b>
Beat VMG	<b>3.61</b>	<b>4.37</b>	<b>4.82</b>	<b>4.99</b>	<b>5.07</b>	<b>5.10</b>	<b>5.14</b>
52°	<b>5.48</b>	<b>6.43</b>	<b>6.82</b>	<b>6.96</b>	<b>7.03</b>	<b>7.07</b>	<b>7.14</b>
60°	<b>5.79</b>	<b>6.62</b>	<b>6.97</b>	<b>7.15</b>	<b>7.24</b>	<b>7.30</b>	<b>7.37</b>
75°	<b>6.03</b>	<b>6.76</b>	<b>7.12</b>	<b>7.41</b>	<b>7.62</b>	<b>7.74</b>	<b>7.85</b>
90°	<b>5.93</b>	<b>6.74</b>	<b>7.12</b>	<b>7.47</b>	<b>7.83</b>	<b>8.13</b>	<b>8.44</b>
110°	<b>5.76</b>	<b>6.78</b>	<b>7.29</b>	<b>7.77</b>	<b>8.15</b>	<b>8.43</b>	<b>8.91</b>
120°	<b>5.57</b>	<b>6.67</b>	<b>7.20</b>	<b>7.73</b>	<b>8.30</b>	<b>8.84</b>	<b>9.51</b>
135°	<b>4.96</b>	<b>6.14</b>	<b>6.89</b>	<b>7.36</b>	<b>7.89</b>	<b>8.49</b>	<b>10.09</b>
150°	<b>4.09</b>	<b>5.18</b>	<b>6.20</b>	<b>6.90</b>	<b>7.33</b>	<b>7.82</b>	<b>8.99</b>
Run VMG	<b>3.54</b>	<b>4.48</b>	<b>5.37</b>	<b>6.11</b>	<b>6.72</b>	<b>7.15</b>	<b>8.06</b>
Gybe Angles	<b>144.3°</b>	<b>148.8°</b>	<b>149.4°</b>	<b>158.4°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>