



**ORC**

Offshore Racing Congress  
World leader in rating technology

**2019  
ORC Club  
Certificate**

**Rating Office**

**EYU  
Purje 8  
11911, Tallinn  
Estonia**

**Certificate**

Number **EST520**  
Issued On **6/6/2019**  
ORC Ref **EST0000627**  
VPP Ver. **2019 1.01**  
Valid until **12/31/2019**

**Crew Weight**

Default 621kg  
Maximum **550kg**  
Minimum\* **413kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>679.3</b>	<b>0.8832</b>
Double H.OSN	<b>659.3</b>	<b>0.9101</b>
Non Spin GPH	<b>702.5</b>	<b>0.8541</b>
Non Spin OSN	<b>678.9</b>	<b>0.8837</b>

**Sails Limitations**

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

**Spinnaker configuration**

Symmetric: **Yes** **67.22**  
Asymmetric: **No**  
Flying H/S: **No**  
Spin. Pole: **Yes**

**Class Division Length**

**CDL = 8.343**

**Stability (Estimated)**

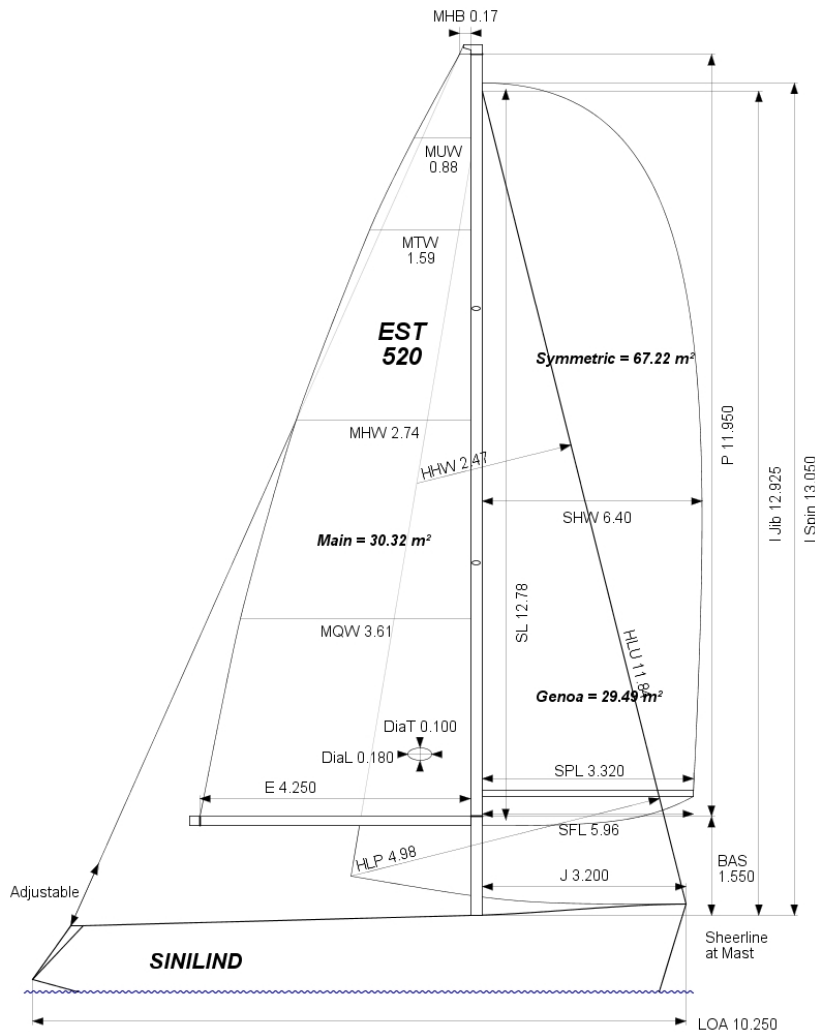
Limit Positive Stab.: **111.9°**  
Stability Index: **112.9**

**Owner**

**AS VIA GRUPP  
Pardi 14c  
Pärnu, Estonia  
PJK**

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

Signature



BOAT		GPH		HULL		
Name	<b>SINILIND</b>		<b>673.4</b>	Data File	<b>Est0520</b>	
Sail Nr	<b>EST 520</b>			Offset File	<b>MBAV33C.OFF</b>	
				Displacement	<b>5,450kg</b>	
				LOA	<b>10.250m</b>	
				MB	<b>3.485m</b>	
				Draft	<b>1.791m</b>	
<b>CLASS</b>				IMS Division	<b>Cruiser/Racer</b>	
Class	<b>Bavaria 33 CR</b>			Dynamic All.	<b>0.379%</b>	
Designer	<b>Bavaria Yachtbau</b>			Fwd Accom.	<b>Yes</b>	
Builder	<b>Bavaria Yachtbau</b>			Construction	<b>Solid</b>	
Series	<b>01/1993</b>			Fiber Rigging	<b>No</b>	
Age Date	<b>05/2006</b>			Aramid Core	<b>No</b>	
Age Allowance	<b>0.487%</b>			Carbon Rudder	<b>No</b>	
				Light Stanchions		
				IMSL	<b>9.314m</b>	
				VCGM	<b>0.147m</b>	
				Sink	<b>18.72kg/mm</b>	
				RL	<b>7.371m</b>	
				VCGM	<b>0.128m</b>	
				WS	<b>24.64m²</b>	
				LSM0	<b>9.299m</b>	
				Displacement/Length ratio	<b>6.7778</b>	
<b>COMMENTS</b>				Water Ballast	<b>0</b>	
				Trim Tab	<b>No</b>	
				BLR Index	<b>0.0000</b>	
<b>PROPELLER</b>				<b>CENTERBOARD</b>		
Installation	<b>Strut</b>	PRD	<b>0.408</b>			
Type	<b>Folding 2 blades</b>	PIPA	<b>0.0007</b>	<b>N/A</b>		
<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>652.6</b>			<b>728.3</b>		
Time on Time	<b>0.9195</b>			<b>0.9268</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>782.9</b>	<b>593.8</b>	<b>524.9</b>	<b>1012.9</b>	<b>735.6</b>	<b>628.6</b>
Time on Time	<b>0.8622</b>	<b>1.1368</b>	<b>1.2860</b>	<b>0.6664</b>	<b>0.9176</b>	<b>1.0738</b>

<b>BOAT</b>	
Name <b>SINILIND</b>	Sail Nr <b>EST 520</b>
File <b>Est0520</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Club Estimated VCG</b>			
Flotation date <b>06/06/2019</b>		SG	
FFM	FF	1.361	SFFP 0.220
FAM	FA	1.032	SAFP 9.454
LCF from stem on CL / on sheer		5.583 / 5.843	
Maximum beam station from stem		6.260	
RM Measured		121.0kg·m	
RM Default		117.5kg·m	
Limit of positive stability / Stab.Index		111.9° / 112.9	
Freeboard at mast at 3.200		1.198	



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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>0</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>11.950</b>	E <b>4.250</b>	MDT1 <b>0.100</b>	MW <b>0.000</b>
IG <b>12.925</b>	J <b>3.200</b>	MDL1 <b>0.180</b>	GO <b>0.000</b>
ISP <b>13.050</b>	SFJ <b>0.000</b>	MDT2 <b>0.000</b>	BD
BAS <b>1.550</b>	SPL <b>3.320</b>	MDL2 <b>0.000</b>	MWT
FSP <b>-3.000</b>	TPS	TL <b>-3.000</b>	MCG

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

<b>PROPELLER</b>			
Installation	<b>Strut</b>	PRD	<b>0.408</b>
Type	<b>Folding 2 blades</b>	PBW	
Twin Screw	<b>No</b>	PIPA	<b>0.0007</b>
ST1	ST3	ST5	
ST2	ST4	EDL	

<b>Certificate</b>	
Number	<b>EST520</b>
ORC Ref	<b>EST00000627</b>
Issued On	<b>6/6/2019</b>
VPP Ver.	<b>2019 1.01</b>
Valid until	<b>12/31/2019</b>

<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	0.17	0.88	1.59	2.74	3.61	30.33				Unknown						
<b>HEADSAILS (2)</b>																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.08	0.66	1.26	2.47	3.71	4.98	11.84	156%	29.50						Unknown	
2	0.09	0.59	1.12	2.23	3.42	4.71	12.04	147%	27.66						Unknown	
<b>SYMMETRIC SPINNAKERS (1)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	12.78	12.78	12.78	6.40	5.96	67.23				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>SINILIND</b>	Certificate Number <b>EST520</b>
Sail Nr <b>EST 520</b>	Issued On <b>6/6/2019</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1163.9</b>	<b>964.6</b>	<b>851.7</b>	<b>777.8</b>	<b>745.7</b>	<b>735.5</b>	<b>740.1</b>
52°	<b>751.7</b>	<b>636.2</b>	<b>568.3</b>	<b>534.7</b>	<b>519.4</b>	<b>513.8</b>	<b>512.3</b>
60°	<b>707.6</b>	<b>602.6</b>	<b>546.3</b>	<b>520.2</b>	<b>506.3</b>	<b>499.0</b>	<b>495.8</b>
75°	<b>678.0</b>	<b>577.6</b>	<b>530.8</b>	<b>508.6</b>	<b>493.7</b>	<b>482.1</b>	<b>469.3</b>
90°	<b>685.4</b>	<b>579.7</b>	<b>522.8</b>	<b>498.1</b>	<b>484.5</b>	<b>474.9</b>	<b>449.3</b>
110°	<b>692.7</b>	<b>571.3</b>	<b>517.0</b>	<b>491.3</b>	<b>470.3</b>	<b>450.4</b>	<b>426.2</b>
120°	<b>715.6</b>	<b>588.4</b>	<b>524.3</b>	<b>496.0</b>	<b>474.2</b>	<b>452.5</b>	<b>414.6</b>
135°	<b>792.2</b>	<b>643.6</b>	<b>555.5</b>	<b>513.5</b>	<b>489.8</b>	<b>468.5</b>	<b>426.9</b>
150°	<b>930.8</b>	<b>734.8</b>	<b>623.5</b>	<b>550.7</b>	<b>513.4</b>	<b>491.2</b>	<b>451.2</b>
Run VMG	<b>1074.8</b>	<b>848.4</b>	<b>718.3</b>	<b>629.2</b>	<b>565.5</b>	<b>523.4</b>	<b>479.5</b>
<b>Selected Courses</b>							
Windward / Leeward	<b>1119.4</b>	<b>906.5</b>	<b>785.0</b>	<b>703.5</b>	<b>655.6</b>	<b>629.5</b>	<b>609.8</b>
Circular Random	<b>936.1</b>	<b>752.5</b>	<b>652.9</b>	<b>594.3</b>	<b>558.5</b>	<b>535.8</b>	<b>510.0</b>
Coastal / Long Distance	<b>1114.9</b>	<b>850.5</b>	<b>704.2</b>	<b>612.6</b>	<b>566.3</b>	<b>534.7</b>	<b>484.5</b>
Non Spinnaker	<b>988.9</b>	<b>789.6</b>	<b>680.2</b>	<b>615.4</b>	<b>575.3</b>	<b>549.8</b>	<b>520.8</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>44.0°</b>	<b>42.1°</b>	<b>41.7°</b>	<b>40.8°</b>	<b>40.0°</b>	<b>39.6°</b>	<b>40.1°</b>
Beat VMG	<b>3.09</b>	<b>3.73</b>	<b>4.23</b>	<b>4.63</b>	<b>4.83</b>	<b>4.89</b>	<b>4.86</b>
52°	<b>4.79</b>	<b>5.66</b>	<b>6.34</b>	<b>6.73</b>	<b>6.93</b>	<b>7.01</b>	<b>7.03</b>
60°	<b>5.09</b>	<b>5.97</b>	<b>6.59</b>	<b>6.92</b>	<b>7.11</b>	<b>7.21</b>	<b>7.26</b>
75°	<b>5.31</b>	<b>6.23</b>	<b>6.78</b>	<b>7.08</b>	<b>7.29</b>	<b>7.47</b>	<b>7.67</b>
90°	<b>5.25</b>	<b>6.21</b>	<b>6.89</b>	<b>7.23</b>	<b>7.43</b>	<b>7.58</b>	<b>8.01</b>
110°	<b>5.20</b>	<b>6.30</b>	<b>6.96</b>	<b>7.33</b>	<b>7.66</b>	<b>7.99</b>	<b>8.45</b>
120°	<b>5.03</b>	<b>6.12</b>	<b>6.87</b>	<b>7.26</b>	<b>7.59</b>	<b>7.96</b>	<b>8.68</b>
135°	<b>4.54</b>	<b>5.59</b>	<b>6.48</b>	<b>7.01</b>	<b>7.35</b>	<b>7.68</b>	<b>8.43</b>
150°	<b>3.87</b>	<b>4.90</b>	<b>5.77</b>	<b>6.54</b>	<b>7.01</b>	<b>7.33</b>	<b>7.98</b>
Run VMG	<b>3.35</b>	<b>4.24</b>	<b>5.01</b>	<b>5.72</b>	<b>6.37</b>	<b>6.88</b>	<b>7.51</b>
Gybe Angles	<b>146.3°</b>	<b>150.6°</b>	<b>153.0°</b>	<b>156.7°</b>	<b>174.1°</b>	<b>180.0°</b>	<b>180.0°</b>