



**ORC**

Offshore Racing Congress  
World leader in rating technology

**2019  
ORC Club  
Certificate**

**Rating Office**

**EYU**  
**Purje 8**  
**11911, Tallinn**  
**Estonia**

**Certificate**

Number **EST295**  
Issued On **4/20/2019**  
ORC Ref **EST00000460**  
VPP Ver. **2019 1.01**  
Valid until **12/31/2019**

**Crew Weight**

Default 547kg  
Maximum **510kg**  
Minimum\* **383kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>668.9</b>	<b>0.8970</b>
Double H.OSN	<b>650.5</b>	<b>0.9224</b>
Non Spin GPH	<b>689.3</b>	<b>0.8704</b>
Non Spin OSN	<b>666.4</b>	<b>0.9003</b>

**Sails Limitations**

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

**Spinnaker configuration**

Symmetric: **Yes** **54.10**  
Asymmetric: **No**  
Flying H/S: **No**  
Spin. Pole: **Yes**

**Class Division Length**

**CDL = 8.309**

**Stability (Estimated)**

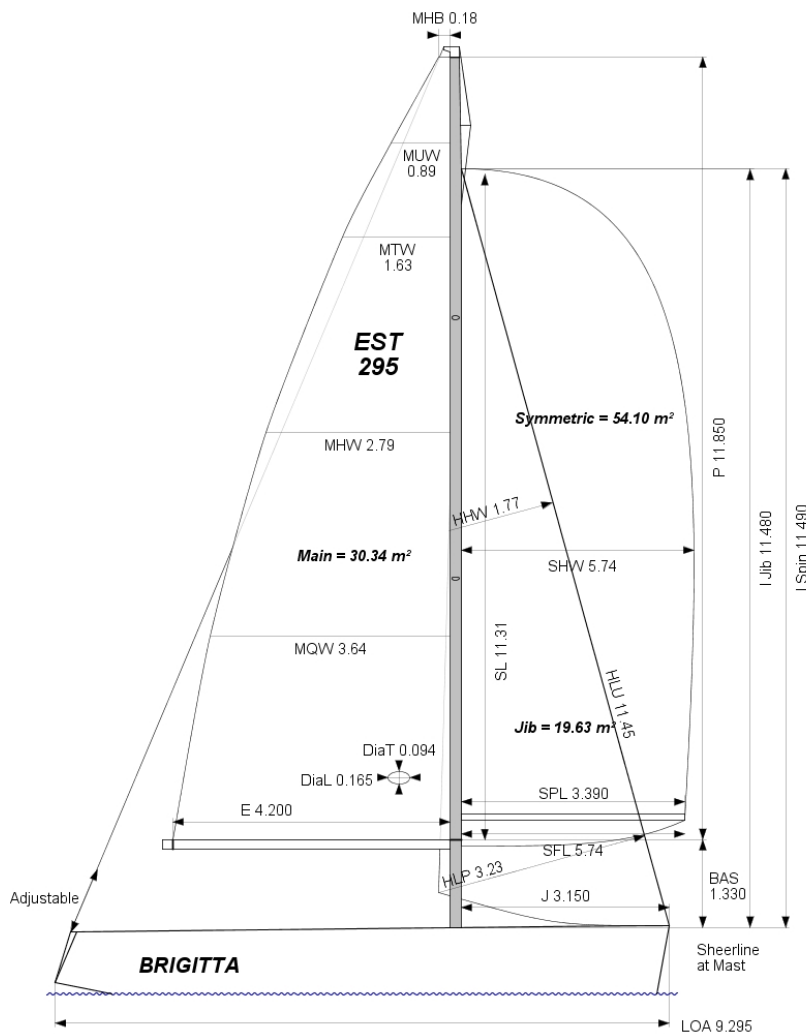
Limit Positive Stab.: **124.8°**  
Stability Index: **123.4**

**Owner**

**Kristjan Rahn**  
**Ristiku tee 37**  
**Pärnumaa**

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

Signature



BOAT		GPH		HULL		
Name	<b>BRIGITTA</b>			Data File	<b>Est0295</b>	
Sail Nr	<b>EST 295</b>			Offset File	<b>cross31.off</b>	
		<b>659.3</b>		Displacement	<b>3,494kg</b>	
				LOA	<b>9.295m</b>	
				MB	<b>3.106m</b>	
				Draft	<b>1.982m</b>	
<b>CLASS</b>				IMS Division	<b>Cruiser/Racer</b>	
Class	<b>CROSS 31</b>			Dynamic All.	<b>0.250%</b>	
Designer				Fwd Accom.	<b>No</b>	
Builder	<b>AS RIDAS JAHT</b>			Construction	<b>Cored</b>	
Series	<b>01/1999</b>			Fiber Rigging	<b>No</b>	
Age Date	<b>01/2001</b>			Aramid Core	<b>No</b>	
Age Allowance	<b>0.487%</b>			Carbon Rudder	<b>No</b>	
				Light Stanchions		
<b>COMMENTS</b>				IMSL	<b>8.618m</b>	
Internal Ballast 300kg				VCGD	<b>-0.002m</b>	
				Sink	<b>13.67kg/mm</b>	
				RL	<b>7.999m</b>	
				VCGM	<b>-0.081m</b>	
				WS	<b>18.53m²</b>	
				LSM0	<b>8.514m</b>	
				Displacement/Length ratio	<b>5.6614</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>0.330</b>			
Type	<b>Folding 2 blades</b>	PBW	<b>0.095</b>			
		PIPA	<b>0.0027</b>			
				<b>N/A</b>		
<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>639.7</b>			<b>709.9</b>		
Time on Time	<b>0.9379</b>			<b>0.9508</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>756.6</b>	<b>583.7</b>	<b>519.6</b>	<b>976.4</b>	<b>713.1</b>	<b>616.7</b>
Time on Time	<b>0.8921</b>	<b>1.1564</b>	<b>1.2992</b>	<b>0.6913</b>	<b>0.9466</b>	<b>1.0946</b>

<b>BOAT</b>	
Name <b>BRIGITTA</b>	Sail Nr <b>EST 295</b>
File <b>Est0295</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Club Estimated VCG</b>			
Flotation date <b>29/06/2001</b>		SG <b>1.0020</b>	
FFM	FF	1.031	SFFP <b>0.275</b>
FAM	FA	0.931	SAFP <b>8.975</b>
LCF from stem on CL / on sheer		<b>5.037 / 5.242</b>	
Maximum beam station from stem		<b>6.265</b>	
RM Measured		<b>68.9kg·m</b>	
RM Default		<b>66.9kg·m</b>	
Limit of positive stability / Stab.Index		<b>124.8° / 123.4</b>	
Freeboard at mast at 3.150		<b>1.002</b>	



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**2019**  
Measurements  
Datasheet

<b>RIG</b>				
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>		Runners <b>0</b>	
Inner Stay <b>None Fitted</b>	Carbon Mast <b>Yes</b>		Jumper Struts <b>Yes</b>	
Taper Hollows <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>11.850</b>	E <b>4.200</b>	MDT1 <b>0.094</b>	MW <b>0.165</b>	
IG <b>11.480</b>	J <b>3.150</b>	MDL1 <b>0.165</b>	GO <b>0.165</b>	
ISP <b>11.490</b>	SFJ	MDT2 <b>0.083</b>	BD <b>0.143</b>	
BAS <b>1.330</b>	SPL <b>3.390</b>	MDL2 <b>0.140</b>	MWT	
FSP <b>-3.000</b>	TPS	TL <b>1.750</b>	MCG	

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD	<b>0.330</b>	
Type <b>Folding 2 blades</b>	PBW	<b>0.095</b>	
Twin Screw <b>No</b>	PIPA	<b>0.0027</b>	
ST1 <b>0.041</b>	ST3 <b>0.185</b>	ST5 <b>0.244</b>	
ST2 <b>0.210</b>	ST4 <b>0.092</b>	EDL <b>0.880</b>	

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<b>COMMENTS</b>	
Internal Ballast 300kg	

<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					
3	0.18	0.89	1.63	2.79	3.64	30.35	EST 5	13/07/2013		Unknown						
<b>HEADSAILS (3)</b>																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
5	0.09	0.49	0.93	1.77	2.55	3.23	11.45	103%	19.63			EST 1	12/05/2015		Unknown	
4	0.08	0.43	0.82	1.57	2.25	2.88	10.90	91%	16.56			EST 1	12/05/2014		Unknown	
3	0.06	0.43	0.84	1.68	2.54	3.38	8.85	107%	14.98			EST 5	13/07/2012		Unknown	
<b>SYMMETRIC SPINNAKERS (2)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	11.31	11.31	11.31	5.74	5.74	54.10	EST 5	13/07/2013		Unknown						
2	11.32	11.32	11.32	5.72	5.72	53.96	SLO 03	06/06/2016		Unknown						
<b>ASYMMETRIC SPINNAKERS (0)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				

# 2019

## ORC Club Certificate Appendix

### BOAT

Name	<b>BRIGITTA</b>	Certificate Number	<b>EST295</b>
Sail Nr	<b>EST 295</b>	Issued On	<b>4/20/2019</b>

### TIME ALLOWANCES

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1098.6</b>	<b>913.5</b>	<b>803.1</b>	<b>746.6</b>	<b>727.8</b>	<b>720.7</b>	<b>708.8</b>
52°	<b>723.6</b>	<b>612.9</b>	<b>557.2</b>	<b>534.2</b>	<b>524.6</b>	<b>520.6</b>	<b>516.6</b>
60°	<b>686.3</b>	<b>586.1</b>	<b>543.2</b>	<b>522.8</b>	<b>511.5</b>	<b>506.4</b>	<b>503.6</b>
75°	<b>660.2</b>	<b>567.7</b>	<b>532.4</b>	<b>512.4</b>	<b>496.8</b>	<b>484.8</b>	<b>474.4</b>
90°	<b>665.4</b>	<b>561.6</b>	<b>522.0</b>	<b>502.0</b>	<b>491.9</b>	<b>474.6</b>	<b>447.1</b>
110°	<b>668.7</b>	<b>557.9</b>	<b>517.8</b>	<b>491.5</b>	<b>466.1</b>	<b>446.6</b>	<b>424.5</b>
120°	<b>693.0</b>	<b>572.1</b>	<b>524.2</b>	<b>497.1</b>	<b>471.1</b>	<b>445.5</b>	<b>403.6</b>
135°	<b>771.7</b>	<b>628.3</b>	<b>551.2</b>	<b>517.0</b>	<b>491.5</b>	<b>465.2</b>	<b>414.2</b>
150°	<b>915.2</b>	<b>724.4</b>	<b>613.0</b>	<b>547.9</b>	<b>516.7</b>	<b>492.7</b>	<b>444.1</b>
Run VMG	<b>1056.8</b>	<b>836.5</b>	<b>705.9</b>	<b>619.9</b>	<b>559.4</b>	<b>524.3</b>	<b>477.0</b>

Selected Courses							
Windward / Leeward	<b>1077.7</b>	<b>875.0</b>	<b>754.5</b>	<b>683.3</b>	<b>643.6</b>	<b>622.5</b>	<b>592.9</b>
Circular Random	<b>908.3</b>	<b>733.4</b>	<b>639.6</b>	<b>585.3</b>	<b>551.8</b>	<b>529.6</b>	<b>500.1</b>
Coastal / Long Distance	<b>1075.6</b>	<b>822.2</b>	<b>682.4</b>	<b>602.3</b>	<b>562.8</b>	<b>532.0</b>	<b>479.2</b>
Non Spinnaker	<b>962.8</b>	<b>771.6</b>	<b>667.8</b>	<b>607.1</b>	<b>569.7</b>	<b>545.4</b>	<b>514.5</b>

### Velocity Prediction in Knots for True Wind Speeds

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>42.1°</b>	<b>40.4°</b>	<b>39.9°</b>	<b>38.0°</b>	<b>37.1°</b>	<b>37.2°</b>	<b>37.0°</b>
Beat VMG	<b>3.28</b>	<b>3.94</b>	<b>4.48</b>	<b>4.82</b>	<b>4.95</b>	<b>5.00</b>	<b>5.08</b>
52°	<b>4.97</b>	<b>5.87</b>	<b>6.46</b>	<b>6.74</b>	<b>6.86</b>	<b>6.92</b>	<b>6.97</b>
60°	<b>5.25</b>	<b>6.14</b>	<b>6.63</b>	<b>6.89</b>	<b>7.04</b>	<b>7.11</b>	<b>7.15</b>
75°	<b>5.45</b>	<b>6.34</b>	<b>6.76</b>	<b>7.03</b>	<b>7.25</b>	<b>7.43</b>	<b>7.59</b>
90°	<b>5.41</b>	<b>6.41</b>	<b>6.90</b>	<b>7.17</b>	<b>7.32</b>	<b>7.59</b>	<b>8.05</b>
110°	<b>5.38</b>	<b>6.45</b>	<b>6.95</b>	<b>7.32</b>	<b>7.72</b>	<b>8.06</b>	<b>8.48</b>
120°	<b>5.19</b>	<b>6.29</b>	<b>6.87</b>	<b>7.24</b>	<b>7.64</b>	<b>8.08</b>	<b>8.92</b>
135°	<b>4.67</b>	<b>5.73</b>	<b>6.53</b>	<b>6.96</b>	<b>7.32</b>	<b>7.74</b>	<b>8.69</b>
150°	<b>3.93</b>	<b>4.97</b>	<b>5.87</b>	<b>6.57</b>	<b>6.97</b>	<b>7.31</b>	<b>8.11</b>
Run VMG	<b>3.41</b>	<b>4.30</b>	<b>5.10</b>	<b>5.81</b>	<b>6.44</b>	<b>6.87</b>	<b>7.55</b>
Gybe Angles	<b>145.6°</b>	<b>150.4°</b>	<b>152.5°</b>	<b>159.9°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>