

<b>BOAT</b> Name <b>PREMIUM</b> Sail Nr <b>EST 499</b>	<b>GPH</b> <b>562.7</b>	<b>HULL</b> Length Overall <b>12.350m</b> Maximum Beam <b>3.646m</b> Displacement <b>6,996kg</b> Draft <b>2.316m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0.000%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Cored</b> Carbon Rudder <b>No</b> Crew Arm Extension
<b>GENERAL</b> Class <b>X-41 mod</b> Designer <b>JEPPESEN</b> Builder <b>X YACHTS</b> Series <b>01/2006</b> Age <b>07/2016</b> Age Allowance <b>0.422%</b> Offset File <b>EST499.off - 5/13/2019 10:10:47 PM</b> Measurement by <b>Tetsmann/ Tagu - 09/07/2019</b>		IMSL <b>11.108m</b> VCGD <b>-0.174m</b> Sink <b>23.07kg/mm</b> RL <b>10.258m</b> VCGM <b>-0.193m</b> WS <b>32.57m<sup>2</sup></b> LSMO <b>10.990m</b> Displacement/Length ratio <b>5.2706</b>



**2019**  
ORC International  
Certificate

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

SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	<b>548.9</b>			<b>614.6</b>		
Time on Time	<b>1.0931</b>			<b>1.0982</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>637.9</b>	<b>500.6</b>	<b>447.3</b>	<b>829.7</b>	<b>616.7</b>	<b>539.6</b>
Time on Time	<b>1.0582</b>	<b>1.3485</b>	<b>1.5092</b>	<b>0.8135</b>	<b>1.0946</b>	<b>1.2509</b>

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>948.1</b>	<b>777.2</b>	<b>690.9</b>	<b>659.3</b>	<b>645.3</b>	<b>636.7</b>	<b>624.4</b>
52°	<b>614.7</b>	<b>513.6</b>	<b>477.1</b>	<b>463.8</b>	<b>458.1</b>	<b>455.2</b>	<b>447.3</b>
60°	<b>574.6</b>	<b>490.1</b>	<b>462.3</b>	<b>451.4</b>	<b>445.4</b>	<b>442.0</b>	<b>434.2</b>
75°	<b>538.7</b>	<b>473.6</b>	<b>449.0</b>	<b>434.5</b>	<b>426.2</b>	<b>419.4</b>	<b>413.1</b>
90°	<b>536.6</b>	<b>473.6</b>	<b>448.7</b>	<b>429.7</b>	<b>412.4</b>	<b>398.9</b>	<b>384.3</b>
110°	<b>563.6</b>	<b>473.8</b>	<b>440.3</b>	<b>419.2</b>	<b>404.8</b>	<b>388.1</b>	<b>354.7</b>
120°	<b>577.1</b>	<b>480.4</b>	<b>444.0</b>	<b>415.8</b>	<b>390.8</b>	<b>375.0</b>	<b>346.5</b>
135°	<b>649.1</b>	<b>519.2</b>	<b>463.1</b>	<b>434.4</b>	<b>406.5</b>	<b>379.3</b>	<b>322.5</b>
150°	<b>767.6</b>	<b>612.4</b>	<b>517.5</b>	<b>466.3</b>	<b>439.1</b>	<b>413.5</b>	<b>362.2</b>
Run VMG	<b>886.4</b>	<b>707.1</b>	<b>597.6</b>	<b>531.2</b>	<b>487.9</b>	<b>454.8</b>	<b>406.5</b>

**Certificate**  
Number **EST499**  
ORC Ref **EST00000788**  
Issued On **7/27/2019**  
VPP Ver. **2019 1.01**  
Valid until **12/31/2019**

**Crew Weight**  
Default **788kg**  
Maximum **920kg**  
Minimum\* **690kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>573.1</b>	<b>1.0469</b>
Double H.OSN	<b>561.1</b>	<b>1.0694</b>
Non Spin GPH	<b>600.7</b>	<b>0.9988</b>
Non Spin OSN	<b>584.7</b>	<b>1.0261</b>

Selected Courses							
	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Windward / Leeward	<b>917.2</b>	<b>742.2</b>	<b>644.3</b>	<b>595.2</b>	<b>566.6</b>	<b>545.7</b>	<b>515.5</b>
Circular Random	<b>769.1</b>	<b>623.4</b>	<b>546.3</b>	<b>502.1</b>	<b>474.5</b>	<b>455.4</b>	<b>427.8</b>
Coastal / Long Distance	<b>914.2</b>	<b>696.6</b>	<b>582.2</b>	<b>520.5</b>	<b>486.1</b>	<b>458.1</b>	<b>411.4</b>
Non Spinnaker	<b>838.4</b>	<b>672.1</b>	<b>582.1</b>	<b>529.3</b>	<b>496.4</b>	<b>474.3</b>	<b>444.4</b>

**Sails Limitations**

Headsails	6	Spinnakers	4
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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>43.5°</b>	<b>42.2°</b>	<b>40.3°</b>	<b>38.8°</b>	<b>38.6°</b>	<b>38.1°</b>	<b>38.1°</b>
Beat VMG	<b>3.80</b>	<b>4.63</b>	<b>5.21</b>	<b>5.46</b>	<b>5.58</b>	<b>5.65</b>	<b>5.77</b>
52°	<b>5.86</b>	<b>7.01</b>	<b>7.55</b>	<b>7.76</b>	<b>7.86</b>	<b>7.91</b>	<b>8.05</b>
60°	<b>6.27</b>	<b>7.35</b>	<b>7.79</b>	<b>7.97</b>	<b>8.08</b>	<b>8.15</b>	<b>8.29</b>
75°	<b>6.68</b>	<b>7.60</b>	<b>8.02</b>	<b>8.29</b>	<b>8.45</b>	<b>8.58</b>	<b>8.72</b>
90°	<b>6.71</b>	<b>7.60</b>	<b>8.02</b>	<b>8.38</b>	<b>8.73</b>	<b>9.02</b>	<b>9.37</b>
110°	<b>6.39</b>	<b>7.60</b>	<b>8.18</b>	<b>8.59</b>	<b>8.89</b>	<b>9.28</b>	<b>10.15</b>
120°	<b>6.24</b>	<b>7.49</b>	<b>8.11</b>	<b>8.66</b>	<b>9.21</b>	<b>9.60</b>	<b>10.39</b>
135°	<b>5.55</b>	<b>6.93</b>	<b>7.77</b>	<b>8.29</b>	<b>8.86</b>	<b>9.49</b>	<b>11.16</b>
150°	<b>4.69</b>	<b>5.88</b>	<b>6.96</b>	<b>7.72</b>	<b>8.20</b>	<b>8.71</b>	<b>9.94</b>
Run VMG	<b>4.06</b>	<b>5.09</b>	<b>6.02</b>	<b>6.78</b>	<b>7.38</b>	<b>7.91</b>	<b>8.86</b>
Gybe Angles	<b>144.1°</b>	<b>146.7°</b>	<b>149.6°</b>	<b>156.2°</b>	<b>170.4°</b>	<b>180.0°</b>	<b>180.0°</b>

**Class Division Length**  
CDL = **10.684**

**Storm Sails Areas**

Heavy Weather Jib	<b>39.71</b>
Storm Jib (JL=11.15)	<b>14.71</b>
Storm Trysail	<b>15.40</b>

**Owner**  
Priit Tammemägi  
Kesk-Kaare tee 3  
Viimsi, Estonia  
ESS Kalev JK

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

<b>BOAT</b>	
Name <b>PREMIUM</b>	Sail Nr <b>EST 499</b>
File <b>Est0499</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>11/05/2019</b>		SG <b>1.0000</b>	
FFM <b>1.451</b>	FF <b>1.461</b>	SFFP <b>0.200</b>	
FAM <b>1.087</b>	FA <b>1.093</b>	SAFP <b>11.995</b>	
W1 <b>107.6</b>	PD1 <b>562.8</b>	WD <b>13.350</b>	
W2 <b>107.6</b>	PD2 <b>547.9</b>	GSA <b>1.0</b>	
W3 <b>107.6</b>	PD3 <b>552.2</b>	RSA <b>1.0</b>	
W4 <b>107.6</b>	PD4 <b>554.5</b>	PLM <b>9000.0</b>	
LCF from stem on CL / on sheer		<b>6.943 / 7.152</b>	
Maximum beam station from stem		<b>8.432</b>	
RM Measured		<b>204.1kg·m</b>	
RM Default		<b>205.1kg·m</b>	
Limit of positive stability / Stab.Index		<b>128.8° / 132.6</b>	
Freeboard at mast at 5.200		<b>1.212</b>	



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**IMS Measurement Certificate**

<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>Yes</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>15.850</b>	E <b>5.550</b>	MDT1 <b>0.130</b>	MW <b>0.230</b>	
IG <b>17.035</b>	J <b>5.200</b>	MDL1 <b>0.245</b>	GO <b>0.265</b>	
ISP <b>18.165</b>	SFJ	MDT2 <b>0.094</b>	BD <b>0.270</b>	
BAS <b>1.765</b>	SPL <b>5.600</b>	MDL2 <b>0.207</b>	MWT <b>180.30</b>	
FSP <b>0.076</b>	TPS <b>6.480</b>	TL <b>1.300</b>	MCG <b>5.790</b>	

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.430</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.125</b>		
Twin Screw <b>No</b>	PIPA <b>0.0032</b>		
ST1 <b>0.060</b>	ST3	ST5 <b>0.325</b>	
ST2	ST4 <b>0.092</b>	EDL <b>1.540</b>	

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<b>COMMENTS</b>	

<b>MOVABLE BALLAST</b>	
N/A	

<b>CENTERBOARD</b>	
N/A	

<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.530	1.40	2.25	3.65	4.64	53.83	55.05	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	17.80	17.80	17.80	10.10	10.43	150.80	SL · (SFL + 4·SHW) / 6		
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL				
	19.80	17.48	18.64	10.27	11.03	161.89	AS · (SFL + 4·SHW) / 6		

<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0.11	0.83	1.58	3.07	4.49	5.80	18.39	55.35	N	Y	20/05/2019	Unknow	
0.16	0.90	1.63	3.00	4.35	5.63	16.54	48.86			28/06/2016	Carbon	Jib Top
0.18	0.90	1.60	2.94	4.22	5.49	16.93	48.84	Y		09/07/2019	Unknow	Jib Light
0.11	0.69	1.32	2.60	3.92	5.37	16.39	43.38			25/05/2018	Unknow	

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>Grubiša, Pindozi</b>				
Date <b>11/05/2019</b>				
Comment <b>Pirita</b>				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
1	Engine	Volvo.Penta	40 HP	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

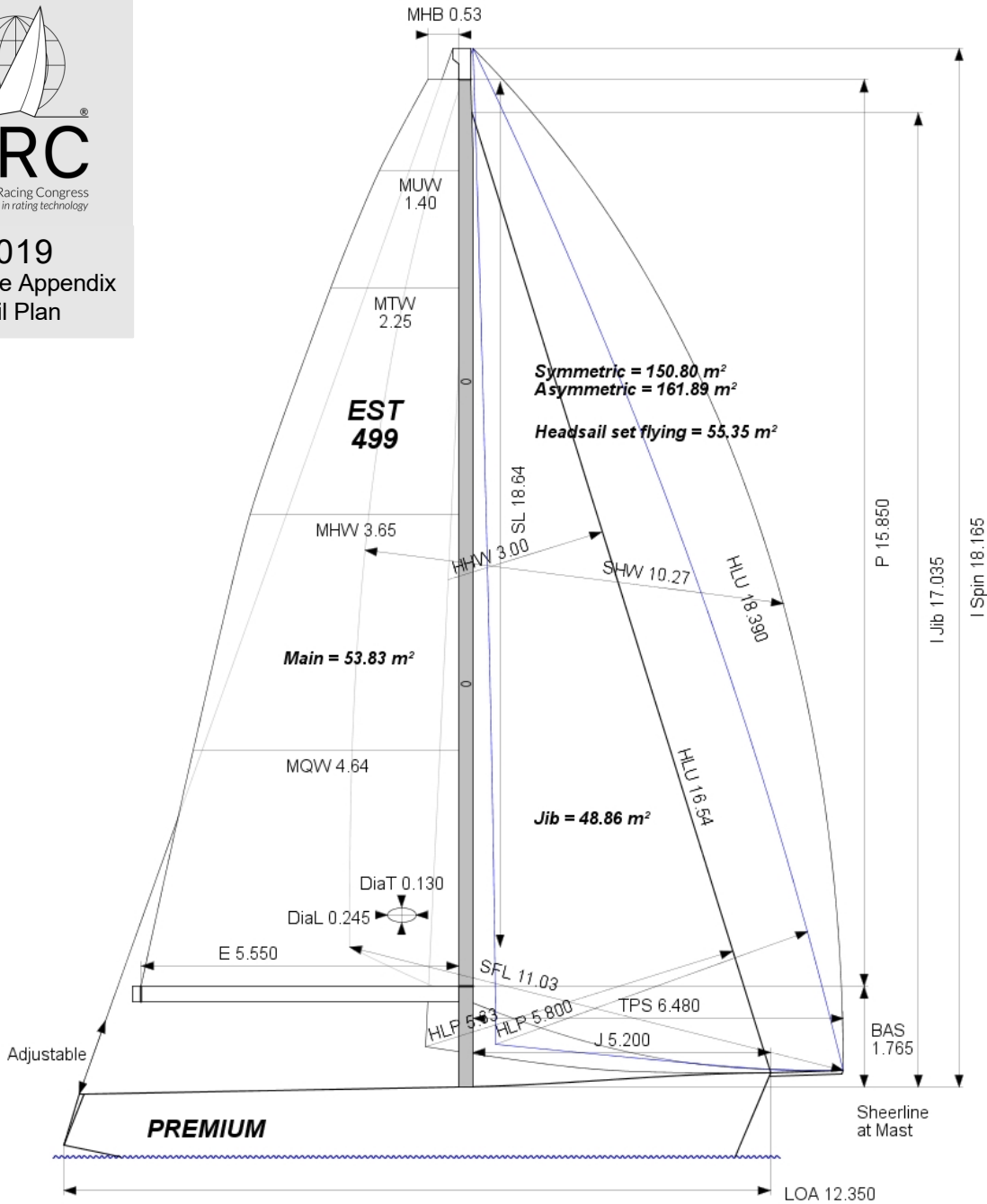
<b>MEASUREMENT INVENTORY</b>						
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG Condn Description</i>
1	Tank Fuel		plastic	90.0	5.75	5-0 Fuel tank
2	Tank Water		plastic	180.0	5.20	0-0 Water tank
3	Tank Holding		plastic	30.0	4.40	0-0 Holding tank
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>		
1	Battery	4.90		service battery 180 Ah.		
2	Battery	7.70		engine battery 30 Ah		
Re	Misc			Removed sofa backboards in saloon		
Re	Misc			Removed closet in front cabin		
RE	Misc			Removed decorative wall panels		



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Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL (2)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
8a	0.53	1.40	2.25	3.65	4.64	53.84	EST7	09/07/2019	OneSails	Unknown	P15,85;E5,55
7a	0.21	1.33	2.17	3.59	4.62	52.83		18/06/2018	OneSails	Carbon	P15,85;E5,55

**HEADSAILS (4)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
M	0.11	0.83	1.58	3.07	4.49	5.80	18.39	112%	55.35	N	Y		20/05/2019	OneSails	Unknown	Unknown
K	0.16	0.90	1.63	3.00	4.35	5.63	16.54	108%	48.86				28/06/2016	OneSails	Carbon	Jib Top
L-1	0.18	0.90	1.60	2.94	4.22	5.49	16.93	106%	48.84	Y		EST7	09/07/2019	OneSails	Unknown	Jib Light
M	0.11	0.69	1.32	2.60	3.92	5.37	16.39	103%	43.38				25/05/2018	OneSails	Unknown	Unknown

**SYMMETRIC SPINNAKERS (1)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
G-1	17.80	17.80	17.80	10.10	10.43	150.80	EST7	09/07/2019	OneSails	Unknown	S 2 (2019)

**ASYMMETRIC SPINNAKERS (1)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
B-1	19.80	17.48	18.64	10.27	11.03	161.89	asym	EST7	09/07/2019	OneSails	Unknown	A1