



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2020**  
**ORC Club**  
**Certificate**

**Rating Office**

**Estonian Yachting Union**  
Purje 8, maja 3  
11911 Tallinn  
Estonia



**ESTONIAN**  
**YACHTING**  
**UNION**

**Certificate**

Number **002/20**  
Issued On **05/06/2020**  
ORC Ref **03880000JTM**  
VPP Ver. **2020 1.02**  
Valid until **31/12/2020**

**Crew Weight**

Default 434kg  
Maximum **450kg**  
Minimum\* **338kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

ToD ToT  
Non Spin GPH **691.9 0.8672**  
Non Spin OSN **673.4 0.8911**

**Sails Limitations**

Headsails **5** Spinnakers **4**

**Spinnaker configuration**

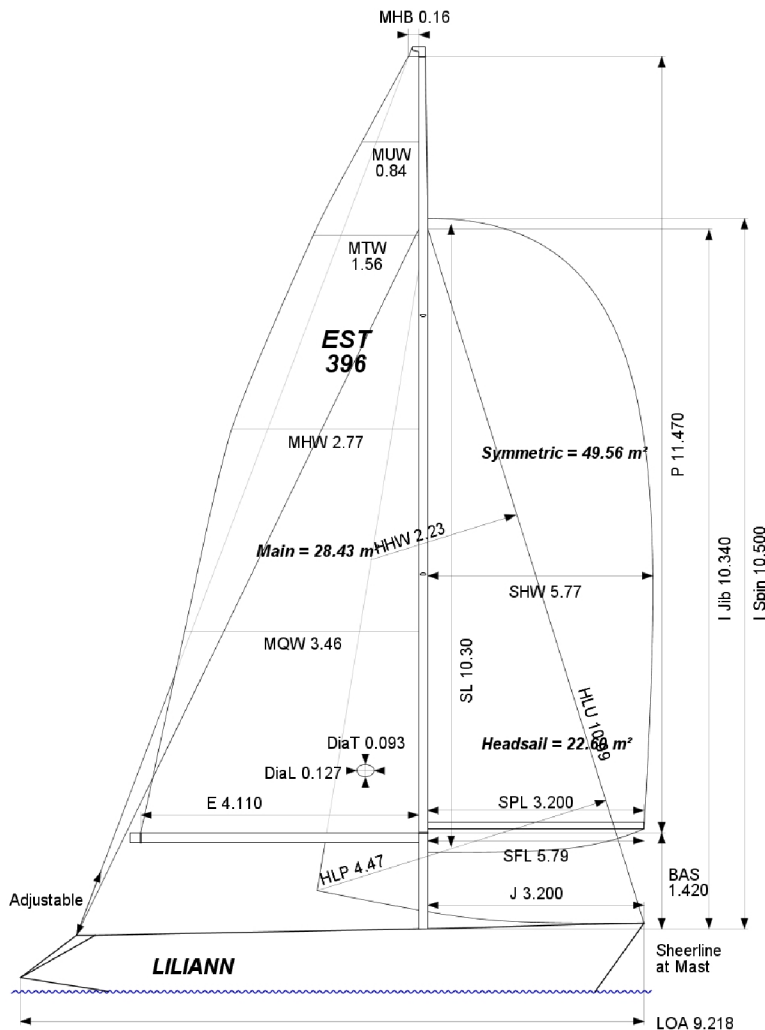
Symmetric: **Yes 49.56**  
Asymmetric: **No**  
Flying H/S: **No**  
Spin. Pole: **Yes**

**Class Division Length**

**CDL = 7.401**

**Stability (Estimated)**

Limit Positive Stab.: **117.9°**  
Stability Index: **111.6**



<b>BOAT</b> Name <b>LILIANN</b> Sail Nr <b>EST 396</b>		<b>GPH</b> <b>669.3</b>	<b>HULL</b> Data File <b>EST396</b> LOA <b>9.218m</b> Offset File <b>S-CAVIAR.BOF</b> MB <b>3.188m</b> Displacement <b>2,730kg</b> Draft <b>1.704m</b>		
<b>CLASS</b> Class <b>ONE OFF</b> Designer <b>P NORLIN</b> Builder <b>JANSSON-ZARINS</b> Series <b>06/1982</b> Age Date <b>06/1982</b> Age Allowance <b>0.487%</b>		IMS Division <b>Performance</b> Dynamic All. <b>0.001%</b> Plan Review Construction <b>Cored</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>7.387m</b> VCGD <b>-0.100m</b> Sink <b>11.10kg/mm</b> RL <b>7.426m</b> VCGM <b>-0.057m</b> WS <b>15.33m²</b> LSM0 <b>7.232m</b> Displacement/Length ratio <b>7.2175</b>			
<b>PROPELLER</b> Installation <b>Shaft exposed</b> PRD <b>0.330</b> Type <b>Folding 2 blades</b> PBW <b>0.085</b> PIPA <b>0.0011</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>652.8</b>	<b>724.4</b>			
Time on Time	<b>0.9191</b>	<b>0.9318</b>			
Triple Number	Low Medium High	Low Medium High			
Time on Distance	<b>750.7 597.7 540.6</b>	<b>964.6 725.6 643.2</b>			
Time on Time	<b>0.8992 1.1294 1.2486</b>	<b>0.6998 0.9303 1.0495</b>			

# 2020

## ORC Club Certificate Appendix

<b>BOAT</b>	
Name	<b>LILIANN</b>
Certificate Number	<b>002/20</b>
Sail Nr	<b>EST 396</b>
Issued On	<b>05/06/2020</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1065.3</b>	<b>893.4</b>	<b>805.4</b>	<b>774.9</b>	<b>762.9</b>	<b>758.3</b>	<b>757.7</b>
52°	<b>704.1</b>	<b>605.1</b>	<b>569.6</b>	<b>554.9</b>	<b>548.3</b>	<b>544.8</b>	<b>542.9</b>
60°	<b>667.0</b>	<b>586.4</b>	<b>557.2</b>	<b>541.3</b>	<b>532.3</b>	<b>527.2</b>	<b>524.2</b>
75°	<b>642.3</b>	<b>573.7</b>	<b>546.3</b>	<b>526.7</b>	<b>511.2</b>	<b>500.7</b>	<b>492.1</b>
90°	<b>651.4</b>	<b>573.7</b>	<b>540.4</b>	<b>518.1</b>	<b>501.9</b>	<b>485.7</b>	<b>465.5</b>
110°	<b>671.0</b>	<b>571.9</b>	<b>534.8</b>	<b>505.6</b>	<b>480.9</b>	<b>462.2</b>	<b>442.1</b>
120°	<b>696.3</b>	<b>584.3</b>	<b>541.8</b>	<b>511.6</b>	<b>484.2</b>	<b>460.5</b>	<b>422.9</b>
135°	<b>774.5</b>	<b>633.3</b>	<b>566.3</b>	<b>533.4</b>	<b>504.6</b>	<b>477.9</b>	<b>429.5</b>
150°	<b>914.7</b>	<b>730.0</b>	<b>620.0</b>	<b>562.7</b>	<b>532.3</b>	<b>505.2</b>	<b>457.0</b>
Run VMG	<b>1056.2</b>	<b>843.1</b>	<b>712.1</b>	<b>627.0</b>	<b>570.2</b>	<b>538.5</b>	<b>487.2</b>
<b>Selected Courses</b>							
Windward / Leeward	<b>1060.8</b>	<b>868.3</b>	<b>758.7</b>	<b>700.9</b>	<b>666.6</b>	<b>648.4</b>	<b>622.4</b>
Circular Random	<b>905.9</b>	<b>738.4</b>	<b>650.3</b>	<b>600.2</b>	<b>569.8</b>	<b>549.9</b>	<b>524.0</b>
Coastal / Long Distance	<b>1060.3</b>	<b>818.3</b>	<b>690.1</b>	<b>620.7</b>	<b>582.5</b>	<b>551.7</b>	<b>500.1</b>
Non Spinnaker	<b>946.9</b>	<b>767.2</b>	<b>671.6</b>	<b>616.7</b>	<b>583.3</b>	<b>561.6</b>	<b>534.0</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>41.6°</b>	<b>40.9°</b>	<b>39.0°</b>	<b>38.3°</b>	<b>37.9°</b>	<b>37.7°</b>	<b>38.3°</b>
Beat VMG	<b>3.38</b>	<b>4.03</b>	<b>4.47</b>	<b>4.65</b>	<b>4.72</b>	<b>4.75</b>	<b>4.75</b>
52°	<b>5.11</b>	<b>5.95</b>	<b>6.32</b>	<b>6.49</b>	<b>6.57</b>	<b>6.61</b>	<b>6.63</b>
60°	<b>5.40</b>	<b>6.14</b>	<b>6.46</b>	<b>6.65</b>	<b>6.76</b>	<b>6.83</b>	<b>6.87</b>
75°	<b>5.60</b>	<b>6.27</b>	<b>6.59</b>	<b>6.84</b>	<b>7.04</b>	<b>7.19</b>	<b>7.32</b>
90°	<b>5.53</b>	<b>6.27</b>	<b>6.66</b>	<b>6.95</b>	<b>7.17</b>	<b>7.41</b>	<b>7.73</b>
110°	<b>5.36</b>	<b>6.29</b>	<b>6.73</b>	<b>7.12</b>	<b>7.49</b>	<b>7.79</b>	<b>8.14</b>
120°	<b>5.17</b>	<b>6.16</b>	<b>6.64</b>	<b>7.04</b>	<b>7.44</b>	<b>7.82</b>	<b>8.51</b>
135°	<b>4.65</b>	<b>5.68</b>	<b>6.36</b>	<b>6.75</b>	<b>7.13</b>	<b>7.53</b>	<b>8.38</b>
150°	<b>3.94</b>	<b>4.93</b>	<b>5.81</b>	<b>6.40</b>	<b>6.76</b>	<b>7.13</b>	<b>7.88</b>
Run VMG	<b>3.41</b>	<b>4.27</b>	<b>5.06</b>	<b>5.74</b>	<b>6.31</b>	<b>6.69</b>	<b>7.39</b>
Gybe Angles	<b>147.0°</b>	<b>151.0°</b>	<b>153.0°</b>	<b>168.0°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>