



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

**2020  
ORC Club  
Certificate**

**Rating Office**

**Offshore  
Racing  
Congress**



**Certificate**

Number **EST619**  
Issued On **26/05/2020**  
ORC Ref **03580000IT7**  
VPP Ver. **2020 1.02**  
Valid until **31/12/2020**

**Crew Weight**

Default 788kg  
Maximum **660kg**  
Minimum\* **495kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Non Spin GPH	<b>651.1</b>	<b>0.9215</b>
Non Spin OSN	<b>631.1</b>	<b>0.9507</b>

**Sails Limitations**

Headsails **6** Spinnakers **4**

**Spinnaker configuration**  
Symmetric: **Yes 104.81**  
Asymmetric: **No**  
Flying H/S: **No**  
Spin. Pole: **Yes**

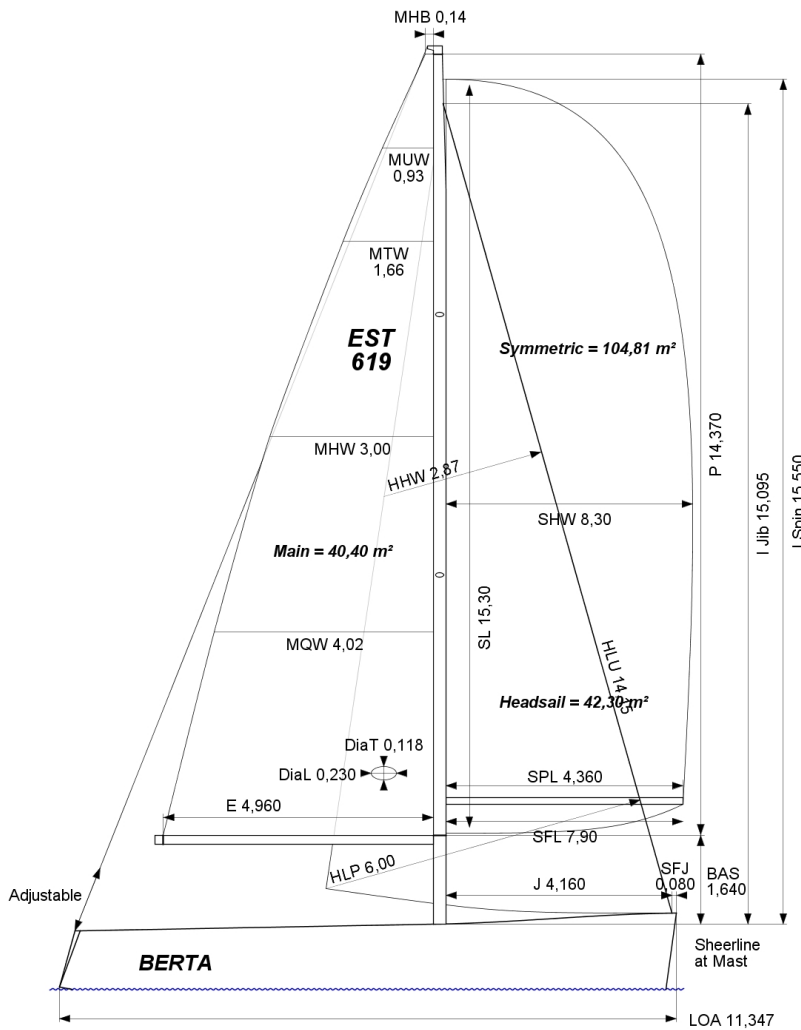
**Class Division Length**

**CDL = 9.842**

**Stability (Estimated)**

Limit Positive Stab.: **116.3°**  
Stability Index: **121.7**

**Owner**



BOAT		GPH	HULL			
Name <b>BERTA</b> Sail Nr <b>EST 619</b>		<b>619.7</b>	Data File <b>Est0619</b>	LOA <b>11.347m</b>		
			Offset File <b>CLel380sk.off</b>	MB <b>3.630m</b>		
			Displacement <b>7,770kg</b>	Draft <b>2.022m</b>		
<b>CLASS</b>			IMS Division <b>Cruiser/Racer</b>	Dynamic All. <b>0.287%</b>		
Class <b>Elan 380</b>			Plan Review	Construction <b>Solid</b>		
Designer <b>Humphreys</b>			Fiber Rigging <b>No</b>	Aramid Core <b>No</b>		
Builder <b>Elan</b>			Crew Arm Ex	Carbon Rudder <b>No</b>		
Series <b>04/2008</b>				Light Stanchions		
Age Date <b>07/2009</b>			IMSL <b>10.933m</b>	VCGD <b>0.269m</b>	Sink <b>23.10kg/mm</b>	
Age Allowance <b>0.390%</b>			RL <b>8.750m</b>	VCGM <b>0.044m</b>	WS <b>30.03m²</b>	
<b>COMMENTS</b>			LSM0 <b>10.993m</b>	Displacement/Length ratio <b>5.8489</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>0.410</b>	<b>NA</b>				
Type <b>Folding 2 blades</b>	PBW <b>0.120</b>					
	PIPA <b>0.0036</b>					
<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>601.4</b>			<b>670.4</b>		
Time on Time	<b>0.9977</b>			<b>1.0068</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>715.2</b>	<b>547.5</b>	<b>488.0</b>	<b>924.7</b>	<b>675.9</b>	<b>582.3</b>
Time on Time	<b>0.9438</b>	<b>1.2329</b>	<b>1.3831</b>	<b>0.7300</b>	<b>0.9986</b>	<b>1.1592</b>

# 2020

## ORC Club Certificate Appendix

<b>BOAT</b>			
Name	<b>BERTA</b>	Certificate Number	<b>EST619</b>
Sail Nr	<b>EST 619</b>	Issued On	<b>26/05/2020</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1058.0</b>	<b>875.7</b>	<b>771.7</b>	<b>713.8</b>	<b>690.5</b>	<b>680.0</b>	<b>679.2</b>
52°	<b>688.2</b>	<b>582.1</b>	<b>520.5</b>	<b>494.6</b>	<b>484.2</b>	<b>479.8</b>	<b>477.3</b>
60°	<b>648.8</b>	<b>553.0</b>	<b>503.3</b>	<b>482.4</b>	<b>471.9</b>	<b>467.1</b>	<b>463.8</b>
75°	<b>619.6</b>	<b>531.2</b>	<b>491.4</b>	<b>472.3</b>	<b>459.9</b>	<b>450.6</b>	<b>442.0</b>
90°	<b>625.9</b>	<b>532.7</b>	<b>487.1</b>	<b>469.7</b>	<b>455.5</b>	<b>442.8</b>	<b>421.6</b>
110°	<b>635.5</b>	<b>525.3</b>	<b>478.6</b>	<b>456.3</b>	<b>438.7</b>	<b>426.7</b>	<b>408.9</b>
120°	<b>652.5</b>	<b>537.3</b>	<b>483.7</b>	<b>459.1</b>	<b>439.0</b>	<b>419.0</b>	<b>391.8</b>
135°	<b>719.2</b>	<b>586.1</b>	<b>508.5</b>	<b>473.9</b>	<b>452.9</b>	<b>432.4</b>	<b>391.2</b>
150°	<b>851.9</b>	<b>676.4</b>	<b>573.5</b>	<b>507.3</b>	<b>475.3</b>	<b>455.3</b>	<b>416.7</b>
Run VMG	<b>983.7</b>	<b>781.1</b>	<b>662.0</b>	<b>580.9</b>	<b>527.0</b>	<b>487.8</b>	<b>446.9</b>
<b>Selected Courses</b>							
Windward / Leeward	<b>1020.9</b>	<b>828.4</b>	<b>716.8</b>	<b>647.4</b>	<b>608.7</b>	<b>583.9</b>	<b>563.1</b>
Circular Random	<b>856.6</b>	<b>690.4</b>	<b>601.0</b>	<b>549.1</b>	<b>517.5</b>	<b>497.4</b>	<b>474.1</b>
Coastal / Long Distance	<b>1017.2</b>	<b>777.7</b>	<b>644.7</b>	<b>565.6</b>	<b>526.1</b>	<b>496.7</b>	<b>452.5</b>
Non Spinnaker	<b>913.8</b>	<b>730.6</b>	<b>630.6</b>	<b>571.6</b>	<b>535.3</b>	<b>512.1</b>	<b>484.8</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>43.5°</b>	<b>41.3°</b>	<b>41.3°</b>	<b>40.5°</b>	<b>39.4°</b>	<b>39.0°</b>	<b>39.4°</b>
Beat VMG	<b>3.40</b>	<b>4.11</b>	<b>4.67</b>	<b>5.04</b>	<b>5.21</b>	<b>5.29</b>	<b>5.30</b>
52°	<b>5.23</b>	<b>6.18</b>	<b>6.92</b>	<b>7.28</b>	<b>7.43</b>	<b>7.50</b>	<b>7.54</b>
60°	<b>5.55</b>	<b>6.51</b>	<b>7.15</b>	<b>7.46</b>	<b>7.63</b>	<b>7.71</b>	<b>7.76</b>
75°	<b>5.81</b>	<b>6.78</b>	<b>7.33</b>	<b>7.62</b>	<b>7.83</b>	<b>7.99</b>	<b>8.15</b>
90°	<b>5.75</b>	<b>6.76</b>	<b>7.39</b>	<b>7.66</b>	<b>7.90</b>	<b>8.13</b>	<b>8.54</b>
110°	<b>5.67</b>	<b>6.85</b>	<b>7.52</b>	<b>7.89</b>	<b>8.21</b>	<b>8.44</b>	<b>8.80</b>
120°	<b>5.52</b>	<b>6.70</b>	<b>7.44</b>	<b>7.84</b>	<b>8.20</b>	<b>8.59</b>	<b>9.19</b>
135°	<b>5.01</b>	<b>6.14</b>	<b>7.08</b>	<b>7.60</b>	<b>7.95</b>	<b>8.32</b>	<b>9.20</b>
150°	<b>4.23</b>	<b>5.32</b>	<b>6.28</b>	<b>7.10</b>	<b>7.57</b>	<b>7.91</b>	<b>8.64</b>
Run VMG	<b>3.66</b>	<b>4.61</b>	<b>5.44</b>	<b>6.20</b>	<b>6.83</b>	<b>7.38</b>	<b>8.06</b>
Gybe Angles	<b>145.0°</b>	<b>149.5°</b>	<b>151.0°</b>	<b>155.0°</b>	<b>170.0°</b>	<b>180.0°</b>	<b>180.0°</b>