

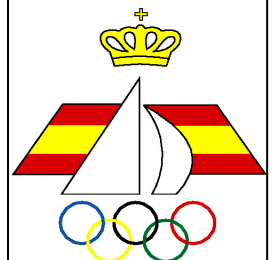


World Leader in Rating Technology

2016  
ORC Club  
Certificate

**Oficina de Rating**

R.F.E.V.  
Luis de salazar,9  
28002 Madrid



**Certificado**

Número **002101**  
Emitido el **18/03/2016**  
ORC Ref **ESP00017225**  
VPP ver. **2016 1.01**  
Válido **31/12/2016**

**Peso de tripulación**

Declarado **400kg**  
Defecto\* **543kg**  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>674,0</b>	<b>0,8902</b>
Double H.OSN	<b>661,2</b>	<b>0,9075</b>
Non Spin GPH	<b>685,0</b>	<b>0,8759</b>
Non Spin OSN	<b>669,9</b>	<b>0,8957</b>
N/S Perf. Line	<b>54,8</b>	<b>0,629</b>

**Limitaciones en velas**

Headsails **1** Spinnakers **3**  
**V.de Dacron**

**Configuración de spinnaker**

Symmetric: **Sí** **68,84**  
Asimétrico **No**  
Flying H/S: **No**  
Spin. Pole: **Sí**

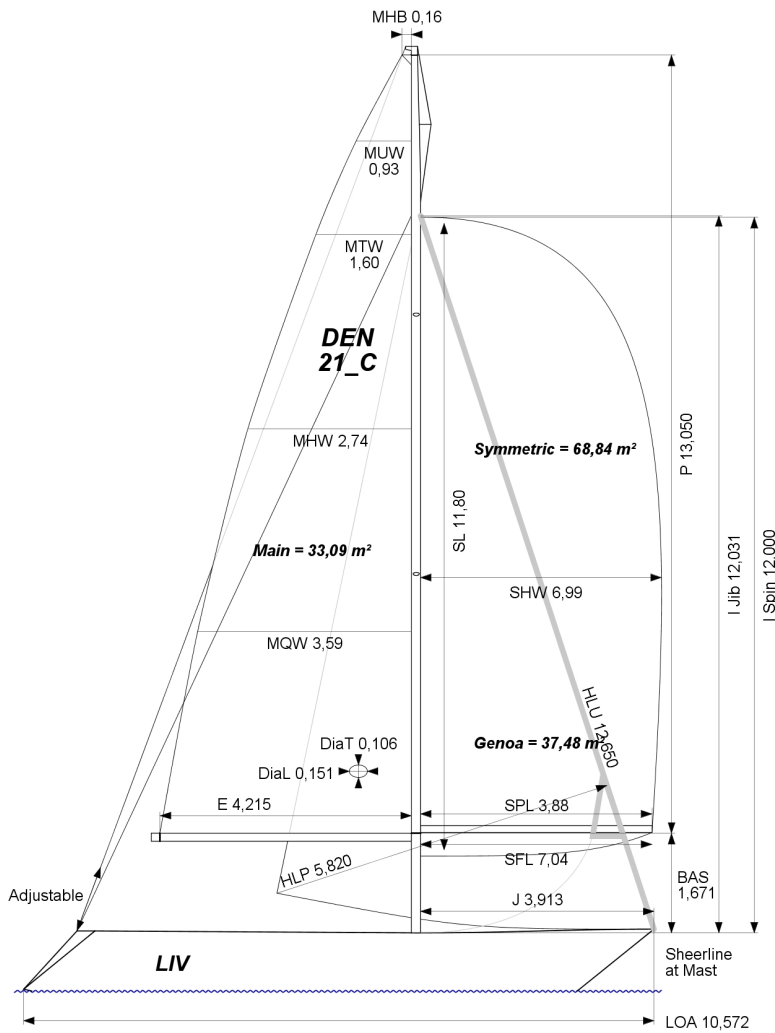
**Class Division Length**

CDL = **7,780**

**Stability**

LPS (Estimated): **124,9°**  
Stability Index: **129,6**  
OSR Category: **N/A**

**Armador**



BARCO	GPH	CASCO
Nombre <b>LIV</b> Nº de <b>DEN-21_C</b>	<b>668,4</b>	Data File <b>DEN21_C.dxt</b> LOA <b>10,572m</b> Fichero de <b>ATHENA34.OFF</b> MangaM <b>2,930m</b> Desplazam. <b>4.554kg</b> Calado <b>1,768m</b>
<b>CLASE</b> Clase <b>ATHENA34</b> Diseñador <b>SOEDERGREN</b> Astillero Serie <b>01/1982</b> Fecha de botadura <b>01/1982</b> Compensación edad <b>0,488%</b>		IMS Division <b>Crucero/Regat</b> Dynamic All. <b>0,070%</b> Fwd Accom. <b>Sí</b> Construction <b>Núcleo</b> Jarcia PBO <b>No</b> Aramid Core <b>No</b> Crew Arm Ex Timón carbono <b>No</b> Light Stanchions
<b>COMMENTS</b>		IMSL <b>8,458m</b> VCGD <b>-0,157m</b> Sink <b>14,45kg/mm</b> RL <b>7,100m</b> VCGM <b>-0,090m</b> WS <b>20,70m<sup>2</sup></b> LSM0 <b>8,472m</b> Displacement/Length ratio <b>7,4892</b>
<b>PROPULSOR</b> Instalación <b>Strut</b> PRD <b>0,425</b> Tipo <b>Folding 2 blades</b> PBW <b>0,105</b> Área <b>0,0033</b>		Water Ballast <b>0</b> Trim Tab <b>No</b>
		<b>CENTERBOARD</b> <b>N/A</b>

	OFFSHORE COSTERA / LARGA DISTANCIA			INSHORE Barlovento / Sotavento		
	Tiempo sobre Distan.	<b>654,2</b>			<b>728,8</b>	
Tiempo sobre Tiempo	<b>0,9171</b>			<b>0,9262</b>		
Performance Line	PLT <b>0,674</b>	PLD <b>74,3</b>		PLT <b>0,884</b>	PLD <b>278,1</b>	
Triple número	Flojo <b>0,9005</b>	Medio <b>1,1314</b>	Fuerte <b>1,2485</b>	Flojo <b>0,6947</b>	Medio <b>0,9208</b>	Fuerte <b>1,0527</b>



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# 2016

## ORC Club Certificate Appendix

### BARCO

Nombre **LIV** N° de certificado **002101**  
 N° de vela **DEN-21\_C** Emitido el **18/03/2016**

### TIME ALLOWANCES

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1074,2</b>	<b>913,9</b>	<b>832,3</b>	<b>792,4</b>	<b>770,9</b>	<b>762,2</b>	<b>749,3</b>
52°	<b>704,5</b>	<b>599,7</b>	<b>559,8</b>	<b>546,3</b>	<b>539,7</b>	<b>535,8</b>	<b>530,1</b>
60°	<b>663,5</b>	<b>572,0</b>	<b>542,3</b>	<b>531,0</b>	<b>525,0</b>	<b>521,4</b>	<b>516,4</b>
75°	<b>627,0</b>	<b>553,7</b>	<b>528,3</b>	<b>513,3</b>	<b>504,3</b>	<b>498,7</b>	<b>494,1</b>
90°	<b>629,2</b>	<b>554,4</b>	<b>527,8</b>	<b>510,0</b>	<b>494,4</b>	<b>481,7</b>	<b>470,5</b>
110°	<b>675,4</b>	<b>566,1</b>	<b>528,1</b>	<b>503,9</b>	<b>487,1</b>	<b>477,1</b>	<b>461,2</b>
120°	<b>698,4</b>	<b>579,4</b>	<b>534,5</b>	<b>509,6</b>	<b>485,8</b>	<b>463,6</b>	<b>443,2</b>
135°	<b>772,1</b>	<b>635,8</b>	<b>558,1</b>	<b>526,6</b>	<b>503,6</b>	<b>480,0</b>	<b>436,0</b>
150°	<b>915,3</b>	<b>728,8</b>	<b>618,5</b>	<b>554,1</b>	<b>525,6</b>	<b>503,8</b>	<b>459,6</b>
Run VMG	<b>1056,9</b>	<b>841,4</b>	<b>711,9</b>	<b>622,8</b>	<b>562,8</b>	<b>531,3</b>	<b>488,0</b>

### Selected Courses

Windward / Leeward	<b>1065,6</b>	<b>877,7</b>	<b>772,1</b>	<b>707,6</b>	<b>666,9</b>	<b>646,7</b>	<b>618,7</b>
Circular Random	<b>904,6</b>	<b>737,3</b>	<b>649,4</b>	<b>599,4</b>	<b>569,3</b>	<b>549,8</b>	<b>525,0</b>
Ocean for PCS	<b>1113,4</b>	<b>867,5</b>	<b>730,0</b>	<b>646,7</b>	<b>592,9</b>	<b>555,7</b>	<b>504,4</b>
Non Spinnaker	<b>934,8</b>	<b>758,6</b>	<b>665,1</b>	<b>611,4</b>	<b>578,7</b>	<b>557,5</b>	<b>531,2</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>42,9°</b>	<b>42,5°</b>	<b>42,4°</b>	<b>41,0°</b>	<b>39,9°</b>	<b>39,5°</b>	<b>39,1°</b>
Beat VMG	<b>3,35</b>	<b>3,94</b>	<b>4,33</b>	<b>4,54</b>	<b>4,67</b>	<b>4,72</b>	<b>4,80</b>
52°	<b>5,11</b>	<b>6,00</b>	<b>6,43</b>	<b>6,59</b>	<b>6,67</b>	<b>6,72</b>	<b>6,79</b>
60°	<b>5,43</b>	<b>6,29</b>	<b>6,64</b>	<b>6,78</b>	<b>6,86</b>	<b>6,90</b>	<b>6,97</b>
75°	<b>5,74</b>	<b>6,50</b>	<b>6,81</b>	<b>7,01</b>	<b>7,14</b>	<b>7,22</b>	<b>7,29</b>
90°	<b>5,72</b>	<b>6,49</b>	<b>6,82</b>	<b>7,06</b>	<b>7,28</b>	<b>7,47</b>	<b>7,65</b>
110°	<b>5,33</b>	<b>6,36</b>	<b>6,82</b>	<b>7,14</b>	<b>7,39</b>	<b>7,55</b>	<b>7,81</b>
120°	<b>5,15</b>	<b>6,21</b>	<b>6,74</b>	<b>7,06</b>	<b>7,41</b>	<b>7,77</b>	<b>8,12</b>
135°	<b>4,66</b>	<b>5,66</b>	<b>6,45</b>	<b>6,84</b>	<b>7,15</b>	<b>7,50</b>	<b>8,26</b>
150°	<b>3,93</b>	<b>4,94</b>	<b>5,82</b>	<b>6,50</b>	<b>6,85</b>	<b>7,15</b>	<b>7,83</b>
Run VMG	<b>3,41</b>	<b>4,28</b>	<b>5,06</b>	<b>5,78</b>	<b>6,40</b>	<b>6,78</b>	<b>7,38</b>
Gybe Angles	<b>146,7°</b>	<b>152,0°</b>	<b>152,4°</b>	<b>162,6°</b>	<b>180,0°</b>	<b>180,0°</b>	<b>180,0°</b>