

<b>BOAT</b> Name <b>DARING SISTERS</b> Sail Nr <b>CZE-656</b>	<b>GPH</b> <b>540.7</b>	<b>HULL</b> Length Overall <b>12.960m</b> Maximum Beam <b>3.910m</b> Displacement <b>7,639kg</b> Draft <b>2.742m</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>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>SWAN 42</b> Designer <b>SWAN NY/CLUB FRERS</b> Builder <b>NAUTOR</b> Series <b>01/2006</b> Age <b>01/2007</b> Age Allowance <b>0.390%</b> Offset File <b>SWAN42CS.OFF - 19/02/2015 20:04:48</b> Measurement by <b>MONTANER- NOCETI - 05/06/2018</b>		IMSL <b>11.838m</b> VCGD <b>-0.405m</b> Sink <b>24.42kg/mm</b> RL <b>11.260m</b> VCGM <b>-0.300m</b> WS <b>33.03m<sup>2</sup></b> LSM0 <b>11.528m</b> Displacement/Length ratio <b>4.9863</b>



World Leader in Rating Technology

**2018**  
ORC International  
Certificate

**Rating Office**

Offshore  
Racing  
Congress



World Leader In Rating Technology

<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>526.2</b>			<b>590.8</b>		
Time on Time	<b>1.1401</b>			<b>1.1425</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>608.4</b>	<b>481.9</b>	<b>434.1</b>	<b>782.2</b>	<b>591.7</b>	<b>526.3</b>
Time on Time	<b>1.1095</b>	<b>1.4008</b>	<b>1.5551</b>	<b>0.8630</b>	<b>1.1408</b>	<b>1.2825</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>889.2</b>	<b>731.2</b>	<b>656.3</b>	<b>629.3</b>	<b>617.1</b>	<b>607.9</b>	<b>596.4</b>
52°	<b>586.5</b>	<b>492.5</b>	<b>459.3</b>	<b>448.2</b>	<b>443.0</b>	<b>440.2</b>	<b>432.3</b>
60°	<b>556.5</b>	<b>475.3</b>	<b>448.4</b>	<b>436.5</b>	<b>430.7</b>	<b>427.3</b>	<b>419.4</b>
75°	<b>534.9</b>	<b>464.8</b>	<b>439.5</b>	<b>423.6</b>	<b>411.6</b>	<b>404.6</b>	<b>398.9</b>
90°	<b>541.6</b>	<b>464.0</b>	<b>438.8</b>	<b>419.8</b>	<b>402.1</b>	<b>387.0</b>	<b>369.4</b>
110°	<b>537.5</b>	<b>455.2</b>	<b>425.4</b>	<b>408.4</b>	<b>393.8</b>	<b>380.2</b>	<b>356.1</b>
120°	<b>551.7</b>	<b>460.1</b>	<b>427.1</b>	<b>400.2</b>	<b>379.7</b>	<b>364.3</b>	<b>336.6</b>
135°	<b>612.3</b>	<b>493.5</b>	<b>444.6</b>	<b>416.8</b>	<b>388.0</b>	<b>359.6</b>	<b>306.5</b>
150°	<b>726.2</b>	<b>579.9</b>	<b>492.4</b>	<b>446.7</b>	<b>425.8</b>	<b>404.5</b>	<b>350.7</b>
Run VMG	<b>838.5</b>	<b>669.6</b>	<b>568.5</b>	<b>515.2</b>	<b>490.2</b>	<b>459.7</b>	<b>404.9</b>

**Certificate**

Number **65601**  
ORC Ref **ITA00004488**  
Issued On **29/08/2018**  
VPP Ver. **2018 1.00**  
Valid until **31/12/2018**

**Crew Weight**

Default **843kg**  
Maximum **950kg**  
Minimum\* **713kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>546.4</b>	<b>1.0981</b>
Double H.OSN	<b>534.2</b>	<b>1.1232</b>
Non Spin GPH	<b>578.6</b>	<b>1.0370</b>
Non Spin OSN	<b>564.0</b>	<b>1.0639</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>863.8</b>	<b>700.4</b>	<b>612.4</b>	<b>572.2</b>	<b>553.7</b>	<b>533.8</b>	<b>500.6</b>
Circular Random	<b>735.5</b>	<b>597.3</b>	<b>525.0</b>	<b>484.2</b>	<b>459.0</b>	<b>441.3</b>	<b>414.5</b>
Coastal / Long Distance	<b>861.3</b>	<b>659.3</b>	<b>555.8</b>	<b>500.5</b>	<b>471.5</b>	<b>444.6</b>	<b>398.1</b>
Non Spinnaker	<b>805.1</b>	<b>646.5</b>	<b>560.9</b>	<b>510.7</b>	<b>479.2</b>	<b>458.0</b>	<b>429.8</b>

**Sails Limitations**

Headsails	Spinnakers
<b>6</b>	<b>4</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>42.3°</b>	<b>40.8°</b>	<b>39.3°</b>	<b>37.9°</b>	<b>37.5°</b>	<b>37.0°</b>	<b>36.9°</b>
Beat VMG	<b>4.05</b>	<b>4.92</b>	<b>5.49</b>	<b>5.72</b>	<b>5.83</b>	<b>5.92</b>	<b>6.04</b>
52°	<b>6.14</b>	<b>7.31</b>	<b>7.84</b>	<b>8.03</b>	<b>8.13</b>	<b>8.18</b>	<b>8.33</b>
60°	<b>6.47</b>	<b>7.57</b>	<b>8.03</b>	<b>8.25</b>	<b>8.36</b>	<b>8.42</b>	<b>8.58</b>
75°	<b>6.73</b>	<b>7.75</b>	<b>8.19</b>	<b>8.50</b>	<b>8.75</b>	<b>8.90</b>	<b>9.03</b>
90°	<b>6.65</b>	<b>7.76</b>	<b>8.21</b>	<b>8.58</b>	<b>8.95</b>	<b>9.30</b>	<b>9.75</b>
110°	<b>6.70</b>	<b>7.91</b>	<b>8.46</b>	<b>8.81</b>	<b>9.14</b>	<b>9.47</b>	<b>10.11</b>
120°	<b>6.53</b>	<b>7.82</b>	<b>8.43</b>	<b>9.00</b>	<b>9.48</b>	<b>9.88</b>	<b>10.70</b>
135°	<b>5.88</b>	<b>7.30</b>	<b>8.10</b>	<b>8.64</b>	<b>9.28</b>	<b>10.01</b>	<b>11.74</b>
150°	<b>4.96</b>	<b>6.21</b>	<b>7.31</b>	<b>8.06</b>	<b>8.45</b>	<b>8.90</b>	<b>10.27</b>
Run VMG	<b>4.29</b>	<b>5.38</b>	<b>6.33</b>	<b>6.99</b>	<b>7.34</b>	<b>7.83</b>	<b>8.89</b>
Gybe Angles	<b>143.3°</b>	<b>145.6°</b>	<b>149.3°</b>	<b>151.9°</b>	<b>151.8°</b>	<b>176.1°</b>	<b>143.3°</b>

**Class Division Length**

CDL = **11.550**

**Storm Sails Areas**

Heavy Weather Jib **44.08**  
Storm Jib (JL=11.75) **16.33**  
Storm Trysail **17.47**

**Owner**

<b>BOAT</b>	
Name <b>DARING SISTERS</b>	Sail Nr <b>CZE-656</b>
File <b>CZE656</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>		
Inclining Test <b>Current Inclining</b>		
Flotation date <b>16/06/2018</b>	SG <b>1.0260</b>	
FFM <b>1.461</b>	FF <b>1.463</b>	SFFP <b>0.474</b>
FAM <b>1.115</b>	FA <b>1.115</b>	SAFP <b>12.543</b>
W1 <b>102.0</b>	PD1 <b>540.2</b>	WD <b>14.480</b>
W2 <b>102.0</b>	PD2 <b>540.8</b>	GSA <b>1.0</b>
W3 <b>102.0</b>	PD3 <b>539.3</b>	RSA <b>1.0</b>
W4 <b>102.0</b>	PD4 <b>541.0</b>	PLM <b>9000.0</b>
LCF from stem on CL / on sheer		<b>7.173 / 7.421</b>
Maximum beam station from stem		<b>8.347</b>
RM Measured		<b>215.3kg·m</b>
RM Default		<b>214.9kg·m</b>
Limit of positive stability / Stab.Index		<b>133.4° / 136.0</b>
Freeboard at mast at 5.330		<b>1.239</b>



World Leader in Rating Technology

**2018**

**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>17.240</b>	E <b>5.790</b>	MDT1 <b>0.138</b>	MW <b>0.264</b>	
IG <b>17.890</b>	J <b>5.000</b>	MDL1 <b>0.264</b>	GO <b>0.314</b>	
ISP <b>19.240</b>	SFJ <b>0.330</b>	MDT2 <b>0.106</b>	BD <b>0.200</b>	
BAS <b>1.920</b>	SPL <b>0.000</b>	MDL2 <b>0.200</b>	MWT <b>232.00</b>	
FSP <b>0.068</b>	TPS <b>7.300</b>	TL <b>1.000</b>	MCG <b>6.100</b>	

<b>Certificate</b>	
Number <b>65601</b>	
ORC Ref <b>ITA00004488</b>	
Issued On <b>29/08/2018</b>	
VPP Ver. <b>2018 1.00</b>	
Valid until <b>31/12/2018</b>	

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

<b>PROPELLER</b>		
Installation <b>Strut</b>	PRD <b>0.440</b>	
Type <b>Folding 2 blades</b>	PBW <b>0.110</b>	
Twin Screw <b>No</b>	PIPA <b>0.0038</b>	
ST1 <b>0.070</b>	ST3 <b>0.190</b>	ST5 <b>0.280</b>
ST2 <b>0.190</b>	ST4 <b>0.105</b>	EDL <b>1.570</b>

<b>COMMENTS</b>	

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



World Leader In Rating Technology

<b>CENTERBOARD</b>	
<b>N/A</b>	

<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.170	1.49	2.46	3.79	4.86	61.10	62.52	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric	SLU	SLE	SL	SHW	SFL	Area	Formula		
	22.27	18.08	20.18	10.77	11.24	182.65	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)												
<b>HHB</b>	<b>HUW</b>	<b>HTW</b>	<b>HHW</b>	<b>HQW</b>	<b>HLP</b>	<b>HLU</b>	<b>Area</b>	<b>Btn</b>	<b>Fly</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.11	0.76	1.45	2.69	3.91	5.29	18.09	48.50	Y	N	30/04/2018	Carbon	M
0.11	0.77	1.47	2.68	3.89	5.31	18.05	48.41	Y	N	30/04/2018	Carbon	L
0.11	0.65	1.25	2.47	3.77	5.24	18.12	46.13	Y	N	30/04/2018	Carbon	H
0.10	0.43	0.78	1.56	2.43	3.40	16.18	26.47	Y		30/04/2001	Carbon	#4

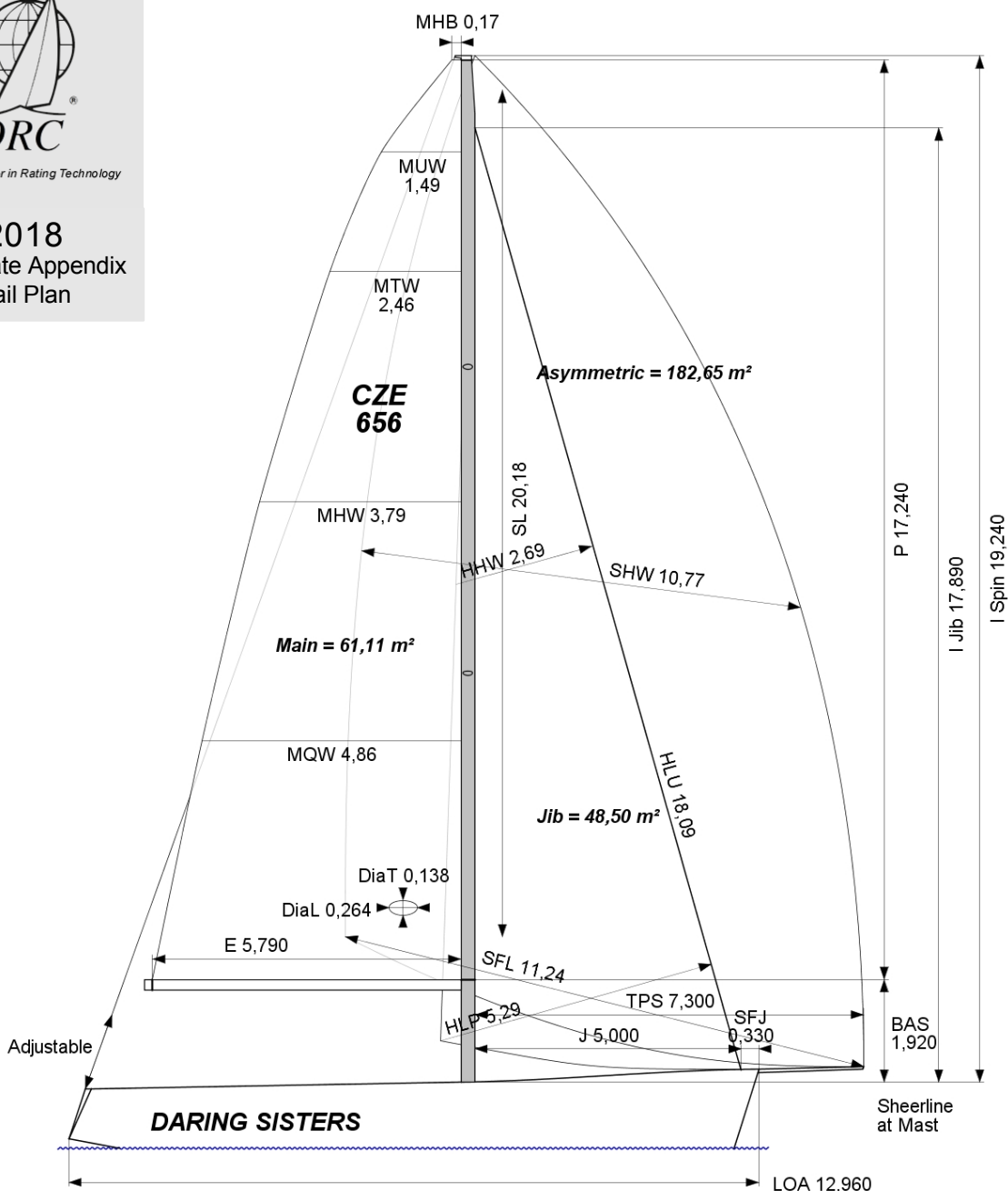
<b>MEASUREMENT INVENTORY</b>				
Measurer <b>F. NOCETI FIV 120</b>				
Date <b>16/06/2018</b>				
Comment				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
A	Engine	VOLVO	D2-40 29 KW	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

<b>MEASUREMENT INVENTORY</b>						
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG Condtn Description</b>
A	Tank	WATER	PVC	320.0	6.95	0-0 2 EMPTY
B	Tank	DIESEL	PVC	70.0	5.60	0-0 EMPTY
C	Tank	DIESEL	PVC	70.0	5.60	20-0 L DX
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>		
A	Battery	70.0	6.40	N. 2 SERVIZI		
B	Battery	15.0	9.45	N. 1 50AH		
A	Misc	8.0	12.08	WEBASTO DX		



World Leader in Rating Technology

2018  
Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL (2)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
B	0.170	1.49	2.46	3.79	4.86	61.11	MENAKA	30/05/2018		Carbon	
A	0.200	1.47	2.43	3.78	4.85	60.91	755	30/04/2018		Carbon	

**HEADSAILS (4)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
Medium	0.11	0.76	1.45	2.69	3.91	5.29	18.09	106%	48.50	Y	N	755	30/04/2018	NORTH	Carbon	M
Light	0.11	0.77	1.47	2.68	3.89	5.31	18.05	106%	48.41	Y	N	755	30/04/2018	NORTH	Carbon	L
Heavy	0.11	0.65	1.25	2.47	3.77	5.24	18.12	105%	46.13	Y	N	755	30/04/2018	NORTH	Carbon	H
J#4	0.10	0.43	0.78	1.56	2.43	3.40	16.18	68%	26.47	Y		755	30/04/2001	NORTH	Carbon	#4

**SYMMETRIC SPINNAKERS (0)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
----	-----	-----	----	-----	-----	------	----------	-----------	-------------	----------	---------

**ASYMMETRIC SPINNAKERS (3)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
B	22.27	18.08	20.17	10.77	11.24	182.65	asym	755	30/04/2018	NORTH	Unknown	A2
A	21.66	17.90	19.78	10.96	11.19	181.42	asym	755	30/04/2018	NORTH	Unknown	A1
B	21.18	17.88	19.53	10.81	10.91	176.26	asym	755	30/04/2018	NORTH	Unknown	A4