

<b>BOAT</b> Name <b>Daring Sisters</b> Sail Nr <b>CTE 656</b>	<b>GPH</b> <b>540.1</b>	<b>HULL</b> Length Overall <b>12.960m</b> Maximum Beam <b>3.910m</b> Displacement <b>7,673kg</b> Draft <b>2.743m</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 CS</b> Designer <b>Frers</b> Builder <b>Nautor</b> Series <b>01/2006</b> Age <b>01/2007</b> Age Allowance <b>0.422%</b> Offset File <b>SWAN42CS.OFF - 19/02/2015 20:04:48</b> Measurement by - <b>05/05/2019</b>		IMSL <b>11.845m</b> VCGD <b>-0.413m</b> Sink <b>24.47kg/mm</b> RL <b>11.313m</b> VCGM <b>-0.309m</b> WS <b>33.08m<sup>2</sup></b> LSM0 <b>11.540m</b> Displacement/Length ratio <b>4.9928</b>



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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>526.0</b>			<b>590.3</b>		
Time on Time	<b>1.1406</b>			<b>1.1435</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>606.8</b>	<b>481.7</b>	<b>434.1</b>	<b>781.0</b>	<b>591.1</b>	<b>525.8</b>
Time on Time	<b>1.1124</b>	<b>1.4012</b>	<b>1.5550</b>	<b>0.8643</b>	<b>1.1419</b>	<b>1.2838</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>887.2</b>	<b>731.1</b>	<b>655.5</b>	<b>627.8</b>	<b>615.2</b>	<b>606.3</b>	<b>593.8</b>
52°	<b>584.3</b>	<b>492.7</b>	<b>459.3</b>	<b>447.9</b>	<b>442.6</b>	<b>439.7</b>	<b>431.7</b>
60°	<b>553.5</b>	<b>475.7</b>	<b>448.5</b>	<b>436.4</b>	<b>430.4</b>	<b>426.9</b>	<b>419.2</b>
75°	<b>529.7</b>	<b>464.8</b>	<b>439.8</b>	<b>423.8</b>	<b>411.6</b>	<b>404.4</b>	<b>397.5</b>
90°	<b>534.1</b>	<b>463.8</b>	<b>438.9</b>	<b>420.3</b>	<b>402.6</b>	<b>387.4</b>	<b>369.1</b>
110°	<b>535.1</b>	<b>455.3</b>	<b>425.5</b>	<b>408.6</b>	<b>395.9</b>	<b>381.9</b>	<b>356.8</b>
120°	<b>548.5</b>	<b>460.1</b>	<b>427.5</b>	<b>400.6</b>	<b>380.1</b>	<b>365.3</b>	<b>338.0</b>
135°	<b>609.7</b>	<b>491.9</b>	<b>444.2</b>	<b>416.9</b>	<b>388.6</b>	<b>360.5</b>	<b>307.1</b>
150°	<b>724.6</b>	<b>579.2</b>	<b>492.3</b>	<b>447.0</b>	<b>426.2</b>	<b>405.1</b>	<b>352.0</b>
Run VMG	<b>836.7</b>	<b>668.8</b>	<b>568.5</b>	<b>515.5</b>	<b>490.7</b>	<b>460.3</b>	<b>406.5</b>

**Certificate**  
Number **038/19**  
ORC Ref **CRO00090383**  
Issued On **24/05/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**  
Default **844kg**  
Maximum **930kg**  
Minimum\* **698kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Non Spin GPH	<b>578.0</b>	<b>1.0381</b>
Non Spin OSN	<b>564.0</b>	<b>1.0639</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>862.0</b>	<b>700.0</b>	<b>612.0</b>	<b>571.7</b>	<b>553.0</b>	<b>533.3</b>	<b>500.2</b>
Circular Random	<b>733.3</b>	<b>596.3</b>	<b>524.5</b>	<b>484.0</b>	<b>458.9</b>	<b>441.3</b>	<b>414.6</b>
Coastal / Long Distance	<b>859.4</b>	<b>658.9</b>	<b>555.5</b>	<b>500.3</b>	<b>471.2</b>	<b>444.6</b>	<b>398.4</b>
Non Spinnaker	<b>802.9</b>	<b>645.5</b>	<b>560.4</b>	<b>510.4</b>	<b>479.1</b>	<b>457.9</b>	<b>429.5</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>42.4°</b>	<b>40.7°</b>	<b>39.2°</b>	<b>37.8°</b>	<b>37.3°</b>	<b>36.8°</b>	<b>36.7°</b>
Beat VMG	<b>4.06</b>	<b>4.92</b>	<b>5.49</b>	<b>5.73</b>	<b>5.85</b>	<b>5.94</b>	<b>6.06</b>
52°	<b>6.16</b>	<b>7.31</b>	<b>7.84</b>	<b>8.04</b>	<b>8.13</b>	<b>8.19</b>	<b>8.34</b>
60°	<b>6.50</b>	<b>7.57</b>	<b>8.03</b>	<b>8.25</b>	<b>8.36</b>	<b>8.43</b>	<b>8.59</b>
75°	<b>6.80</b>	<b>7.74</b>	<b>8.18</b>	<b>8.49</b>	<b>8.75</b>	<b>8.90</b>	<b>9.06</b>
90°	<b>6.74</b>	<b>7.76</b>	<b>8.20</b>	<b>8.57</b>	<b>8.94</b>	<b>9.29</b>	<b>9.75</b>
110°	<b>6.73</b>	<b>7.91</b>	<b>8.46</b>	<b>8.81</b>	<b>9.09</b>	<b>9.43</b>	<b>10.09</b>
120°	<b>6.56</b>	<b>7.82</b>	<b>8.42</b>	<b>8.99</b>	<b>9.47</b>	<b>9.85</b>	<b>10.65</b>
135°	<b>5.90</b>	<b>7.32</b>	<b>8.10</b>	<b>8.64</b>	<b>9.26</b>	<b>9.99</b>	<b>11.72</b>
150°	<b>4.97</b>	<b>6.22</b>	<b>7.31</b>	<b>8.05</b>	<b>8.45</b>	<b>8.89</b>	<b>10.23</b>
Run VMG	<b>4.30</b>	<b>5.38</b>	<b>6.33</b>	<b>6.98</b>	<b>7.34</b>	<b>7.82</b>	<b>8.86</b>
Gybe Angles	<b>143.0°</b>	<b>145.1°</b>	<b>149.3°</b>	<b>151.8°</b>	<b>151.8°</b>	<b>176.2°</b>	<b>143.3°</b>

**Class Division Length**  
CDL = **11.580**

**Storm Sails Areas**  
Heavy Weather Jib **44.51**  
Storm Jib (JL=11.81) **16.49**  
Storm Trysail **17.46**

**Owner**

<b>BOAT</b>		
Name <b>Daring Sisters</b>	Sail Nr <b>CTE 656</b>	
File <b>CZE656</b>	Data in <b>meters/kilograms</b>	

<b>INCLINING TEST AND FREEBOARDS</b>					
Inclining Test <b>Boom Inclining</b>			LCFD		
Flotation date <b>06/05/2019</b>			SG <b>1.0290</b>		
FFM <b>1.457</b>	FF <b>1.462</b>	SFFP <b>0.474</b>			
FAM <b>1.114</b>	FA <b>1.113</b>	SAFP <b>12.543</b>			
W1 <b>111.0</b>	PD1 <b>236.7</b>	WD <b>5.650</b>			
W2 <b>111.0</b>	PD2 <b>230.4</b>	GSA <b>1.0</b>			
W3 <b>111.0</b>	PD3 <b>221.7</b>	RSA <b>1.0</b>			
W4 <b>111.0</b>	PD4 <b>228.0</b>	PLM <b>9000.0</b>			
LCF from stem on CL / on sheer			<b>7.176 / 7.426</b>		
Maximum beam station from stem			<b>8.347</b>		
RM Measured			<b>215.6kg-m</b>		
RM Default			<b>214.9kg-m</b>		
Limit of positive stability / Stab.Index			<b>133.7° / 136.4</b>		
Freeboard at mast at 5.330			<b>1.238</b>		



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<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>17.230</b>	E <b>5.790</b>	MDT1 <b>0.138</b>	MW <b>0.264</b>		
IG <b>17.975</b>	J <b>5.000</b>	MDL1 <b>0.264</b>	GO <b>0.314</b>		
ISP <b>19.430</b>	SFJ <b>0.330</b>	MDT2 <b>0.106</b>	BD <b>0.200</b>		
BAS <b>1.915</b>	SPL <b>0.200</b>	MDL2 <b>0.200</b>	MWT <b>232.00</b>		
FSP <b>0.068</b>	TPS <b>7.300</b>	TL <b>1.100</b>	MCG <b>6.100</b>		

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

<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>	

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<b>COMMENTS</b>	

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

<b>CENTERBOARD</b>	
N/A	

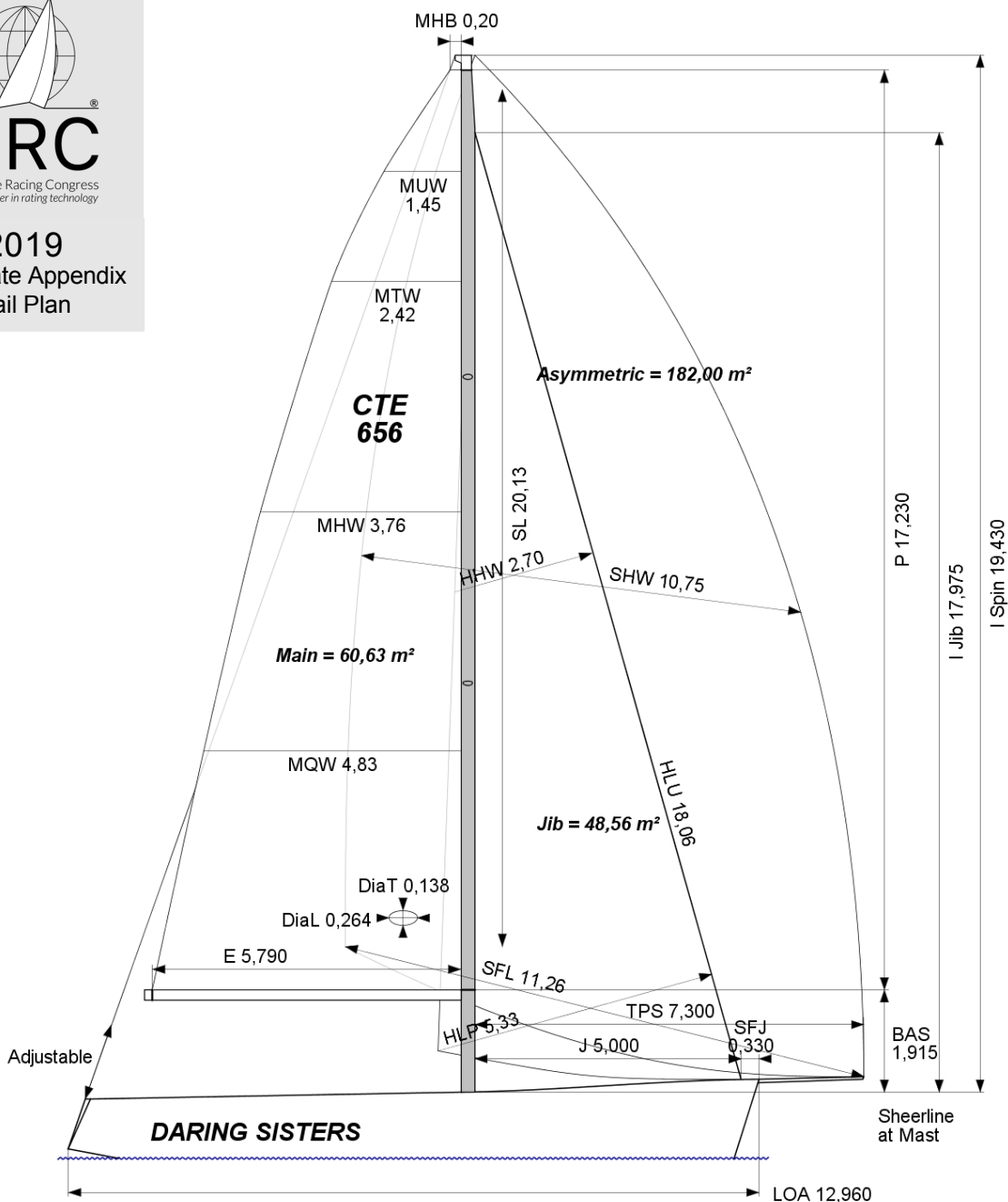


<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.200	1.45	2.42	3.76	4.83	60.63	61.97	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL	Area	Formula		
	22.19	18.06	20.13	10.75	11.26	182.00	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	0.78	1.47	2.70	3.88	5.33	18.06	48.56	Y		13/03/2019	Unknow	Light
0.11	0.75	1.44	2.67	3.88	5.31	17.98	48.01	Y		13/03/2019	Unknow	Medium
0.11	0.65	1.25	2.47	3.77	5.24	18.12	46.13	Y		30/04/2018	Unknow	Heavy J3
0.10	0.64	1.23	2.43	3.72	5.17	17.94	45.02			30/04/2019	Unknow	J4
0.06	0.61	1.18	2.26	3.35	4.44	13.34	30.08			27/03/2019	Unknow	Staysail

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>ESP 851</b>				
Date <b>06/05/2019</b>				
Comment <b>Boom Inclining</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>	
01	Engine	Volvo	D2-40	
<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</i>	<i>Condtn Description</i>
2	Tank	Diesel	PVC	70.0	5.60		35-0
3	Tank	Water	PVC	320.0	6.95		0-0
01	Tank	Diesel	PCV	70.0	5.60		35-0
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>			
02	Battery		9.45	Engine			
01	Battery		6.40	2 Service			



**SAILS INVENTORY**

**MAINSAIL (1)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.20	1.45	2.42	3.76	4.83	60.63		13/03/2019	North Sails	Unknown	inshore

**HEADSAILS (5)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.11	0.78	1.47	2.70	3.88	5.33	18.06	107%	48.56	Y			13/03/2019	North Sails	Unknown	Light
2	0.11	0.75	1.44	2.67	3.88	5.31	17.98	106%	48.01	Y			13/03/2019	North Sails	Unknown	Medium
3	0.11	0.65	1.25	2.47	3.77	5.24	18.12	105%	46.13	Y			30/04/2018	North Sails	Unknown	Heavy J3
4	0.10	0.64	1.23	2.43	3.72	5.17	17.94	103%	45.02				30/04/2019	North Sails	Unknown	J4
5	0.06	0.61	1.18	2.26	3.35	4.44	13.34	89%	30.08				27/03/2019	North Sails	Unknown	Staysail

**SYMMETRIC SPINNAKERS (0)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
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**ASYMMETRIC SPINNAKERS (4)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
2	22.19	18.06	20.13	10.75	11.26	182.00	asym		06/05/2019	NORTH	Unknown	A2
1	21.66	17.90	19.78	10.96	11.19	181.42	asym		30/04/2018	NORTH	Unknown	A1
3	21.18	17.88	19.53	10.81	10.91	176.26	asym		30/04/2018	NORTH	Unknown	A4
4	19.69	17.88	18.79	6.95	9.23	115.94	asym		11/10/2018		Unknown	C0