

<b>BOAT</b> Name <b>CLUB SWAN 50</b> Sail Nr <b>MNA-50</b>	<b>GPH</b> <b>468.8</b>	<b>HULL</b> Length Overall <b>15.235m</b> Maximum Beam <b>4.194m</b> Displacement <b>8 150kg</b> Draft <b>3.459m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0.001%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Carbon</b> Carbon Rudder <b>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>Club Swan 50</b> Designer <b>Juan Kouyoumddjian</b> Builder <b>OY Nautor AB</b> Series <b>10/2016</b> Age <b>05/2017</b> Age Allowance <b>0.098%</b> Offset File <b>CLUBSWAN50.OD - 11/05/2019</b> Measurement by <b>Andrew Yates - 30/04/2019</b>		IMSL <b>14.809m</b> VCGD <b>-0.729m</b> Sink <b>32.63kg/mm</b> RL <b>14.097m</b> VCGM <b>-0.633m</b> WS <b>42.41m<sup>2</sup></b> LSM0 <b>14.466m</b> Displacement/Length ratio <b>2.6922</b>



**2019 (Test)**  
ORC International  
One Design Certificate

<b>Rating Office</b>

<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>457.6</b>			<b>517.3</b>		
Time on Time	<b>1.3111</b>			<b>1.3048</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>530.1</b>	<b>418.8</b>	<b>365.5</b>	<b>689.0</b>	<b>523.1</b>	<b>449.1</b>
Time on Time	<b>1.2734</b>	<b>1.6119</b>	<b>1.8466</b>	<b>0.9797</b>	<b>1.2905</b>	<b>1.5031</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>759.7</b>	<b>630.4</b>	<b>584.3</b>	<b>562.4</b>	<b>543.0</b>	<b>531.2</b>	<b>528.1</b>
52°	<b>494.5</b>	<b>421.8</b>	<b>402.8</b>	<b>394.1</b>	<b>388.0</b>	<b>379.5</b>	<b>374.3</b>
60°	<b>463.9</b>	<b>405.3</b>	<b>389.2</b>	<b>380.4</b>	<b>374.2</b>	<b>365.0</b>	<b>354.9</b>
75°	<b>442.1</b>	<b>393.7</b>	<b>370.9</b>	<b>357.0</b>	<b>347.9</b>	<b>341.8</b>	<b>324.3</b>
90°	<b>447.5</b>	<b>395.8</b>	<b>367.2</b>	<b>341.9</b>	<b>327.2</b>	<b>317.7</b>	<b>305.2</b>
110°	<b>476.8</b>	<b>400.0</b>	<b>372.7</b>	<b>350.1</b>	<b>332.3</b>	<b>308.9</b>	<b>272.2</b>
120°	<b>494.2</b>	<b>405.3</b>	<b>367.7</b>	<b>341.5</b>	<b>323.6</b>	<b>303.7</b>	<b>270.1</b>
135°	<b>551.8</b>	<b>435.8</b>	<b>388.9</b>	<b>353.4</b>	<b>318.1</b>	<b>287.1</b>	<b>251.7</b>
150°	<b>663.3</b>	<b>519.5</b>	<b>438.6</b>	<b>391.4</b>	<b>364.6</b>	<b>332.4</b>	<b>267.8</b>
Run VMG	<b>765.9</b>	<b>599.9</b>	<b>506.5</b>	<b>454.5</b>	<b>421.0</b>	<b>383.8</b>	<b>309.2</b>

<b>Certificate</b> Number <b>CS500D</b> ORC Ref <b>N/A</b> Issued On <b>14/05/2019</b> VPP Ver. <b>2019 1.01</b> <b>Invalid for Racing</b>
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<b>Crew Weight</b> Default <b>1 166kg</b> Maximum <b>980kg</b> Minimum* <b>735kg</b> <i>*when applied by the NoR and SI</i> Non Manual Pwr <b>No</b>
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<b>Special Scoring</b> ToD ToT Double H.GPH <b>478.6 1.2536</b> Double H.OSN <b>469.7 1.2775</b> Non Spin GPH <b>502.6 1.1938</b> Non Spin OSN <b>493.7 1.2152</b>
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<b>Selected Courses</b>							
Windward / Leeward	<b>762.8</b>	<b>615.1</b>	<b>545.4</b>	<b>508.5</b>	<b>482.0</b>	<b>457.5</b>	<b>418.7</b>
Circular Random	<b>641.3</b>	<b>520.1</b>	<b>455.6</b>	<b>417.4</b>	<b>392.1</b>	<b>373.2</b>	<b>344.5</b>
Coastal / Long Distance	<b>763.1</b>	<b>578.4</b>	<b>490.9</b>	<b>438.1</b>	<b>406.1</b>	<b>375.9</b>	<b>327.8</b>
Non Spinnaker	<b>699.4</b>	<b>562.4</b>	<b>487.8</b>	<b>442.7</b>	<b>413.0</b>	<b>391.8</b>	<b>362.8</b>

<b>Sails Limitations</b> Headsails <b>7</b> Spinnakers <b>5</b>
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<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>43.1°</b>	<b>41.2°</b>	<b>39.5°</b>	<b>38.6°</b>	<b>37.9°</b>	<b>37.2°</b>	<b>37.4°</b>
Beat VMG	<b>4.74</b>	<b>5.71</b>	<b>6.16</b>	<b>6.40</b>	<b>6.63</b>	<b>6.78</b>	<b>6.82</b>
52°	<b>7.28</b>	<b>8.53</b>	<b>8.94</b>	<b>9.13</b>	<b>9.28</b>	<b>9.49</b>	<b>9.62</b>
60°	<b>7.76</b>	<b>8.88</b>	<b>9.25</b>	<b>9.46</b>	<b>9.62</b>	<b>9.86</b>	<b>10.14</b>
75°	<b>8.14</b>	<b>9.15</b>	<b>9.71</b>	<b>10.08</b>	<b>10.35</b>	<b>10.53</b>	<b>11.10</b>
90°	<b>8.05</b>	<b>9.10</b>	<b>9.80</b>	<b>10.53</b>	<b>11.00</b>	<b>11.33</b>	<b>11.80</b>
110°	<b>7.55</b>	<b>9.00</b>	<b>9.66</b>	<b>10.28</b>	<b>10.83</b>	<b>11.66</b>	<b>13.23</b>
120°	<b>7.29</b>	<b>8.88</b>	<b>9.79</b>	<b>10.54</b>	<b>11.12</b>	<b>11.85</b>	<b>13.33</b>
135°	<b>6.52</b>	<b>8.26</b>	<b>9.26</b>	<b>10.19</b>	<b>11.32</b>	<b>12.54</b>	<b>14.30</b>
150°	<b>5.43</b>	<b>6.93</b>	<b>8.21</b>	<b>9.20</b>	<b>9.87</b>	<b>10.83</b>	<b>13.44</b>
Run VMG	<b>4.70</b>	<b>6.00</b>	<b>7.11</b>	<b>7.92</b>	<b>8.55</b>	<b>9.38</b>	<b>11.64</b>
Gybe Angles	<b>141.1°</b>	<b>141.6°</b>	<b>146.9°</b>	<b>152.4°</b>	<b>149.9°</b>	<b>147.1°</b>	<b>143.5°</b>

<b>Class Division Length</b> CDL = <b>14.455</b>
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<b>Storm Sails Areas</b> Heavy Weather Jib <b>53.43</b> Storm Jib (JL=12.94) <b>19.79</b> Storm Trysail <b>25.37</b>
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<b>Owner</b>          I certify that I understand my responsibilities under ORC Rules and Regulations Signature
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<b>BOAT</b>	
Name <b>CLUB SWAN 50</b>	Sail Nr <b>MNA-50</b>
File <b>CLUBSWAN50</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Club Estimated VCG</b>			
Flotation date <b>30/04/2019</b>		SG <b>1.0273</b>	
FFM <b>0.216</b>	FF <b>0.213</b>	SFFP <b>0.900</b>	
FAM <b>0.127</b>	FA <b>0.132</b>	SAFP <b>15.235</b>	
LCF from stem on CL / on sheer		<b>8.343 / 8.666</b>	
Maximum beam station from stem		<b>10.500</b>	
RM Measured		<b>360.7kg·m</b>	
RM Default		<b>348.1kg·m</b>	
Limit of positive stability / Stab.Index		<b>135.7° / 137.5</b>	
Freeboard at mast at 6.684		<b>1.336</b>	



**2019**  
IMS Measurement  
Certificate

<b>RIG</b>					
Forestay Tension <b>Aft</b>	Spreaders <b>3</b>				
Inner Stay <b>None Fitted</b>	Runners <b>1</b>				
Carbon Mast <b>Yes</b>	Jumper Struts <b>None</b>				
Taper Hollows <b>No</b>	Jib Furler <b>No</b>				
Fiber Rigging <b>Yes</b>	Main Furler <b>No</b>				
Lenticular Rigging <b>No</b>	Without Backstay <b>No</b>				
Articulated Bowsprit <b>No</b>					
P <b>20.050</b>	E <b>7.230</b>	MDT1 <b>0.161</b>	MW <b>0.315</b>		
IG <b>19.786</b>	J <b>6.340</b>	MDL1 <b>0.324</b>	GO <b>0.349</b>		
ISP <b>22.170</b>	SFJ <b>0.344</b>	MDT2 <b>0.118</b>	BD <b>0.300</b>		
BAS <b>1.990</b>	SPL	MDL2 <b>0.209</b>	MWT <b>249.20</b>		
FSP <b>0.000</b>	TPS <b>8.240</b>	TL <b>2.116</b>	MCG <b>7.690</b>		

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.444</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.120</b>		
Twin Screw <b>No</b>	PIPA <b>0.0044</b>		
ST1 <b>0.065</b>	ST3 <b>0.180</b>	ST5 <b>0.354</b>	
ST2 <b>0.180</b>	ST4 <b>0.112</b>	EDL <b>3.670</b>	

<b>Certificate</b>	
Number <b>CS50D</b>	
ORC Ref <b>N/A</b>	
Issued On <b>14/05/2019</b>	
VPP Ver. <b>2019 1.01</b>	
<b>Invalid for Racing</b>	

<b>COMMENTS</b>	

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

<b>CENTERBOARD</b>	
N/A	

<b>SAILS (Maximum Areas)</b>									
<b>Mainsail</b>	<b>MHB</b>	<b>MUW</b>	<b>MTW</b>	<b>MHW</b>	<b>MQW</b>	<b>Area</b>	<b>Area (r)</b>	<b>Formula</b>	
	1.280	2.18	3.12	4.67	5.95	90.26	92.43	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
<b>Symmetric</b>									
Not Available									
<b>Asymmetric on centerline</b>	<b>SLU</b>	<b>SLE</b>	<b>SL</b>	<b>SHW</b>	<b>SFL</b>	<b>Area</b>	<b>Formula</b>		
	24.96	19.91	22.43	12.62	12.67	236.13	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>
0.07	0.96	1.78	3.31	4.85	6.27	20.50	66.98	Y		30/04/2019	Unknow	CR

<b>MEASUREMENT INVENTORY</b>				
Measurer	Date	Comment		
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

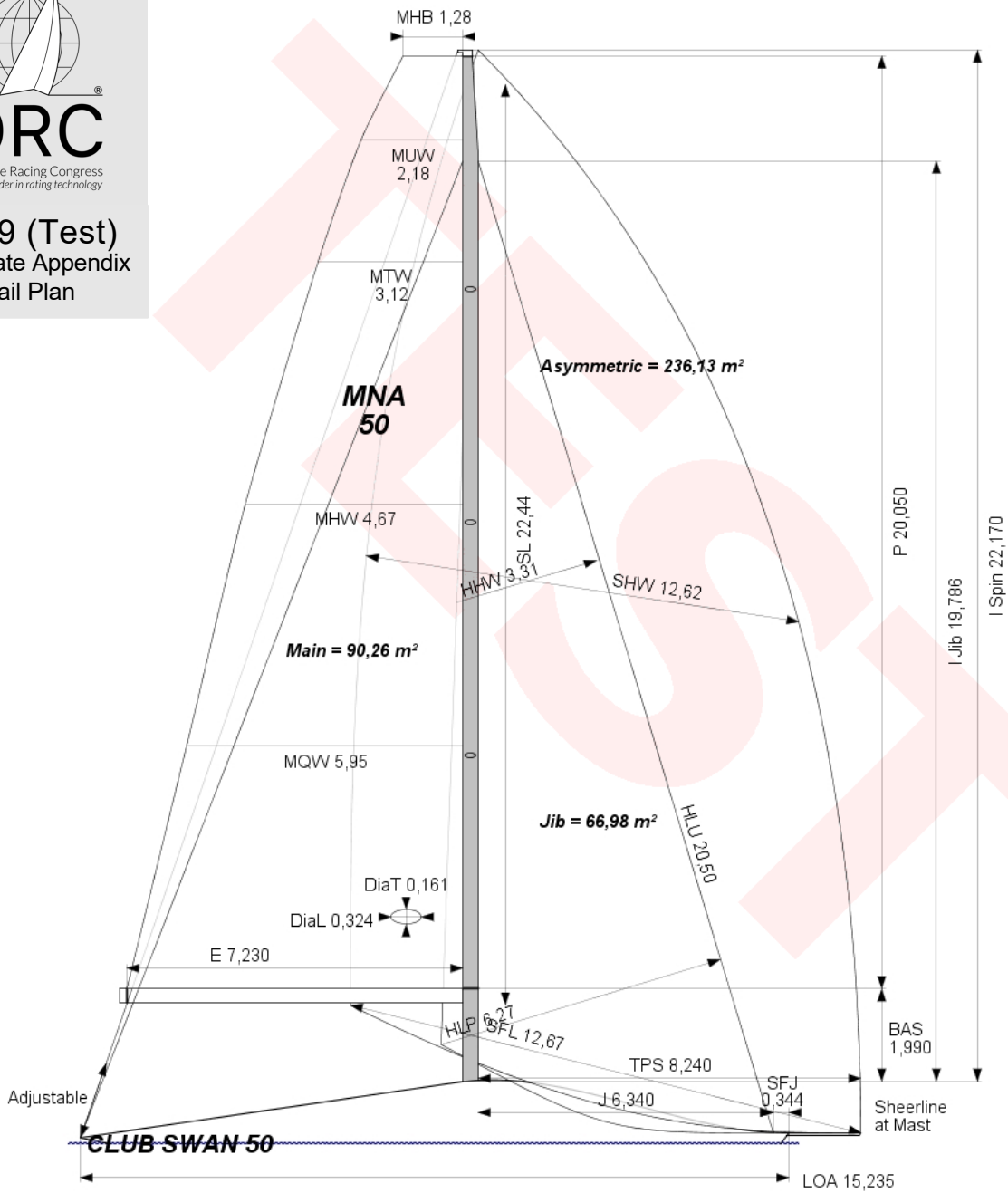
<b>MEASUREMENT INVENTORY</b>							
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG Condn</b>	<b>Description</b>
1	Tank	Water	Water	237.0	3.65		0-0
2	Tank	Fuel	Fuel	170.0	11.94		56-0
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>			
1	Battery	23.0	11.23	Service Battery			



**ORC**

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**2019 (Test)  
Certificate Appendix  
Sail Plan**



SAILS INVENTORY																
<b>MAINSAIL (1)</b>																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	1.28	2.18	3.12	4.67	5.95	90.15		30/04/2019		Unknown	CR					
<b>HEADSAILS (1)</b>																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovr	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.07	0.96	1.78	3.31	4.85	6.27	20.50	99%	66.98	Y			30/04/2019		Unknow	CR
<b>SYMMETRIC SPINNAKERS (0)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
<b>ASYMMETRIC SPINNAKERS (1)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
1	24.96	19.91	22.44	12.62	12.67	236.13	asym		30/04/2019		Unknown	CR				