

<b>BOAT</b> Name <b>SPIRIT</b> Sail Nr <b>SWE 550</b>	<b>GPH</b> <b>563.5</b>	<b>HULL</b> Length Overall <b>12.450m</b> Maximum Beam <b>3.216m</b> Displacement <b>6,279kg</b> Draft <b>2.377m</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>GRAND SOLEIL 42 R</b> Designer <b>BOTIN-CARKEEK</b> Builder <b>DEL PARDO</b> Series <b>04/2003</b> Age <b>06/2003</b> Age Allowance <b>0.487%</b> Offset File <b>EST550.OFF - 22/05/2018 11:48:06</b> Measurement by - <b>27/06/2015</b>		IMSL <b>11.071m</b> VCGD <b>-0.117m</b> Sink <b>22.92kg/mm</b> RL <b>10.560m</b> VCGM <b>-0.150m</b> WS <b>29.37m<sup>2</sup></b> LSM0 <b>10.750m</b> Displacement/Length ratio <b>5.0543</b>



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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>548.3</b>			<b>613.4</b>		
Time on Time	<b>1.0942</b>			<b>1.1004</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>643.5</b>	<b>499.8</b>	<b>445.9</b>	<b>833.2</b>	<b>616.1</b>	<b>537.0</b>
Time on Time	<b>1.0489</b>	<b>1.3506</b>	<b>1.5137</b>	<b>0.8101</b>	<b>1.0956</b>	<b>1.2570</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>929.2</b>	<b>760.5</b>	<b>676.3</b>	<b>649.8</b>	<b>638.2</b>	<b>627.0</b>	<b>620.1</b>
52°	<b>611.6</b>	<b>508.7</b>	<b>469.9</b>	<b>459.2</b>	<b>454.4</b>	<b>451.4</b>	<b>444.2</b>
60°	<b>578.3</b>	<b>489.6</b>	<b>458.2</b>	<b>446.9</b>	<b>441.5</b>	<b>438.5</b>	<b>429.6</b>
75°	<b>552.9</b>	<b>478.1</b>	<b>449.3</b>	<b>432.0</b>	<b>421.7</b>	<b>416.0</b>	<b>409.0</b>
90°	<b>557.8</b>	<b>480.3</b>	<b>449.2</b>	<b>428.5</b>	<b>409.6</b>	<b>395.2</b>	<b>381.9</b>
110°	<b>576.2</b>	<b>478.1</b>	<b>440.7</b>	<b>415.4</b>	<b>399.5</b>	<b>385.7</b>	<b>364.9</b>
120°	<b>594.6</b>	<b>488.7</b>	<b>446.9</b>	<b>418.7</b>	<b>391.4</b>	<b>370.5</b>	<b>345.1</b>
135°	<b>664.0</b>	<b>535.1</b>	<b>469.9</b>	<b>439.1</b>	<b>412.4</b>	<b>386.0</b>	<b>331.2</b>
150°	<b>791.2</b>	<b>631.8</b>	<b>530.6</b>	<b>471.2</b>	<b>442.1</b>	<b>417.3</b>	<b>368.3</b>
Run VMG	<b>913.6</b>	<b>729.5</b>	<b>612.6</b>	<b>538.4</b>	<b>491.3</b>	<b>455.9</b>	<b>407.9</b>

**Certificate**  
Number **550**  
ORC Ref **AR00000110**  
Issued On **10/07/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**  
Default **763kg**  
Maximum **790kg**  
Minimum\* **593kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**  
ToD ToT  
Non Spin GPH **592.1 1.0133**  
Non Spin OSN **576.2 1.0412**

<b>Selected Courses</b>							
Windward / Leeward	<b>921.4</b>	<b>745.0</b>	<b>644.5</b>	<b>594.1</b>	<b>564.8</b>	<b>541.5</b>	<b>514.0</b>
Circular Random	<b>774.5</b>	<b>625.8</b>	<b>546.8</b>	<b>501.3</b>	<b>473.2</b>	<b>454.2</b>	<b>428.7</b>
Coastal / Long Distance	<b>920.6</b>	<b>700.5</b>	<b>582.4</b>	<b>519.0</b>	<b>484.2</b>	<b>454.7</b>	<b>409.7</b>
Non Spinnaker	<b>825.9</b>	<b>662.1</b>	<b>573.7</b>	<b>522.1</b>	<b>489.9</b>	<b>468.5</b>	<b>440.4</b>

**Sails Limitations**  
Headsails **6** Spinnakers **4**

<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>42.6°</b>	<b>41.4°</b>	<b>39.6°</b>	<b>38.7°</b>	<b>38.2°</b>	<b>37.7°</b>	<b>38.1°</b>
Beat VMG	<b>3.87</b>	<b>4.73</b>	<b>5.32</b>	<b>5.54</b>	<b>5.64</b>	<b>5.74</b>	<b>5.81</b>
52°	<b>5.89</b>	<b>7.08</b>	<b>7.66</b>	<b>7.84</b>	<b>7.92</b>	<b>7.97</b>	<b>8.10</b>
60°	<b>6.23</b>	<b>7.35</b>	<b>7.86</b>	<b>8.06</b>	<b>8.15</b>	<b>8.21</b>	<b>8.38</b>
75°	<b>6.51</b>	<b>7.53</b>	<b>8.01</b>	<b>8.33</b>	<b>8.54</b>	<b>8.65</b>	<b>8.80</b>
90°	<b>6.45</b>	<b>7.49</b>	<b>8.01</b>	<b>8.40</b>	<b>8.79</b>	<b>9.11</b>	<b>9.43</b>
110°	<b>6.25</b>	<b>7.53</b>	<b>8.17</b>	<b>8.67</b>	<b>9.01</b>	<b>9.33</b>	<b>9.87</b>
120°	<b>6.05</b>	<b>7.37</b>	<b>8.06</b>	<b>8.60</b>	<b>9.20</b>	<b>9.72</b>	<b>10.43</b>
135°	<b>5.42</b>	<b>6.73</b>	<b>7.66</b>	<b>8.20</b>	<b>8.73</b>	<b>9.33</b>	<b>10.87</b>
150°	<b>4.55</b>	<b>5.70</b>	<b>6.79</b>	<b>7.64</b>	<b>8.14</b>	<b>8.63</b>	<b>9.78</b>
Run VMG	<b>3.94</b>	<b>4.93</b>	<b>5.88</b>	<b>6.69</b>	<b>7.33</b>	<b>7.90</b>	<b>8.83</b>
Gybe Angles	<b>141.7°</b>	<b>146.6°</b>	<b>148.6°</b>	<b>155.4°</b>	<b>167.8°</b>	<b>180.0°</b>	<b>180.0°</b>

**Class Division Length**  
CDL = **10.817**

**Storm Sails Areas**  
Heavy Weather Jib **32.80**  
Storm Jib (JL=10.14) **12.15**  
Storm Trysail **16.92**

**Owner**

<b>BOAT</b>	
Name <b>SPIRIT</b>	Sail Nr <b>SWE 550</b>
File <b>SPIRIT_SWE550GS4</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>08/07/2019</b>		SG <b>1.0050</b>	
FFM <b>1.336</b>	FF <b>1.339</b>	SFFP <b>0.100</b>	
FAM <b>1.114</b>	FA <b>1.119</b>	SAFP <b>11.988</b>	
W1 <b>72.4</b>	PD1 <b>58.0</b>	WD <b>5.623</b>	
W2 <b>72.4</b>	PD2 <b>58.9</b>	GSA <b>10.0</b>	
W3 <b>72.4</b>	PD3 <b>60.2</b>	RSA <b>10.0</b>	
W4 <b>72.4</b>	PD4 <b>55.3</b>	PLM <b>3230.0</b>	
LCF from stem on CL / on sheer		<b>6.616 / 6.788</b>	
Maximum beam station from stem		<b>7.940</b>	
RM Measured		<b>198.2kg-m</b>	
RM Default		<b>186.1kg-m</b>	
Limit of positive stability / Stab.Index		<b>128.1° / 134.5</b>	
Freeboard at mast at 4.628		<b>1.209</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>16.030</b>	E <b>6.030</b>	MDT1 <b>0.123</b>	MW <b>0.239</b>
IG <b>15.520</b>	J <b>4.520</b>	MDL1 <b>0.245</b>	GO <b>0.258</b>
ISP <b>15.610</b>	SFJ <b>0.108</b>	MDT2 <b>0.083</b>	BD <b>0.291</b>
BAS <b>1.690</b>	SPL <b>4.620</b>	MDL2 <b>0.190</b>	MWT <b>216.10</b>
FSP <b>0.074</b>	TPS	TL <b>1.730</b>	MCG <b>5.234</b>

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.439</b>		
Type <b>Folding 2 blades</b>	PBW		
Twin Screw <b>No</b>	PIPA <b>0.0037</b>		
ST1 <b>0.052</b>	ST3 <b>0.200</b>	ST5 <b>0.278</b>	
ST2 <b>0.200</b>	ST4 <b>0.112</b>	EDL <b>1.092</b>	

<b>COMMENTS</b>	
Ex. SWE 22241, ex EST-550	

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



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

<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>	
	0.240	1.45	2.35	3.79	4.97	57.40	58.77	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
<b>Symmetric</b>	<b>SLU</b>	<b>SLE</b>	<b>SL</b>	<b>SHW</b>	<b>SFL</b>				
	15.55	15.55	15.55	8.54	8.23	109.86		SL · (SFL + 4·SHW) / 6	
<b>Asymmetric</b>									
Not Available									

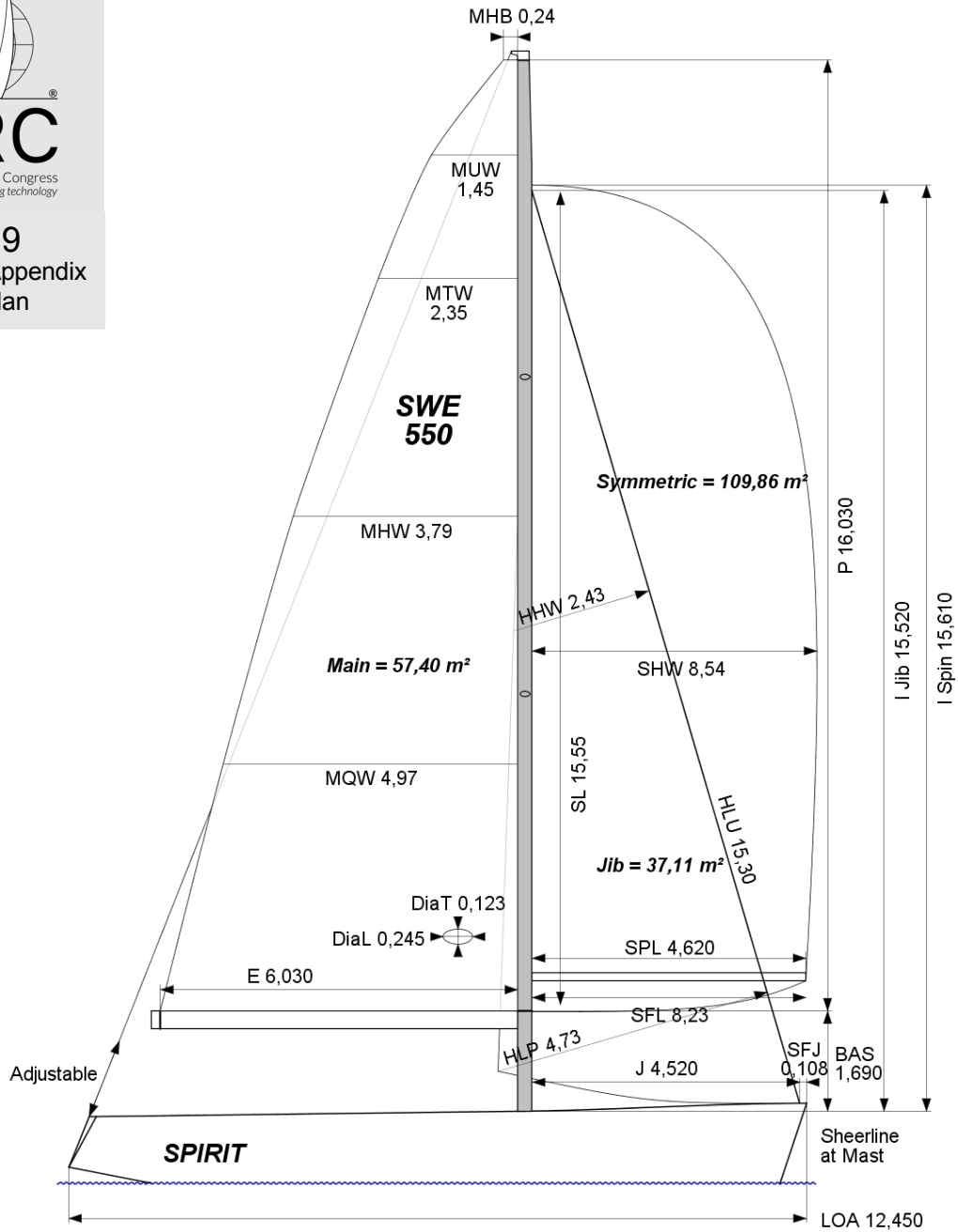
<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
<b>HHB</b>	<b>HUW</b>	<b>HTW</b>	<b>HHW</b>	<b>HQW</b>	<b>HLP</b>	<b>HLU</b>	<b>Area</b>	<b>Btn</b>	<b>Fly</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.12	0.66	1.26	2.43	3.63	4.73	15.30	37.12	Y		28/06/2018	Unknow	
0.11	0.63	1.22	2.37	3.52	4.70	15.40	36.53	Y		28/06/2018	Unknow	helehall
0.11	0.61	1.16	2.30	3.51	4.48	14.20	32.75	Y			Unknow	
0.07	0.55	1.08	2.10	3.16	4.20	13.30	28.12			19/07/2012	Unknow	

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>LBS 7</b>				
Date <b>08/07/2019</b>				
Comment				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
	Anchor			
	Anchor			
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
1	Engine	Yanmar	3JH3E 40 hp	
<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</b>	<b>Condtn</b>	<b>Description</b>	
1	Tank	Fuel	plastic	40.0	8.60		0-0	Fuel tank	
2	Tank	Water	plastic bag	100.0	5.60		0-0	Fresh water	
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>					
b2	Ballast	239.0	7.98	-0.28 lead blocks below cockpit					
b1	Ballast	366.0	7.13	-0.30 lead blocks at companionway					
bat2	Battery	102.0	6.33	-0.20					
bat1	Battery	75.0	7.30	-0.20					
2	Misc		10.20	Heater Vebastu					
1	Misc		8.00	Webasto AirTop5000					



**2019**  
Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

MAINSAIL (2)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
MN-15	0.24	1.45	2.35	3.79	4.97	57.40		28/06/2018	North Sails	Unknown						
8	0.22	1.34	2.33	3.75	4.95	56.86		15/05/2017	Lindfors	Carbon						
HEADSAILS (4)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
LM J	0.12	0.66	1.26	2.43	3.63	4.73	15.30	105%	37.12	Y			28/06/2018	North Sails	Unknown	
JMH12	0.11	0.63	1.22	2.37	3.52	4.70	15.40	104%	36.53	Y			28/06/2018	North Sails	Unknown	helehall
J3	0.11	0.61	1.16	2.30	3.51	4.48	14.20	99%	32.75	Y				Lindfors	Unknown	
J6	0.07	0.55	1.08	2.10	3.16	4.20	13.30	93%	28.12				19/07/2012		Unknown	
SYMMETRIC SPINNAKERS (4)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	15.55	15.55	15.55	8.54	8.23	109.87		06/05/2015		Unknown						
S4v13	15.50	15.50	15.50	8.32	8.31	107.45		03/06/2013	North	Unknown	uus2013					
S3	15.52	15.52	15.52	8.31	8.02	106.73		28/06/2018	Lindfors	Nylon						
2009	15.36	15.36	15.36	8.01	7.53	101.30				Unknown						
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				