

<b>BOAT</b> Name <b>Zer0emission</b> Sail Nr <b>FIN-1</b>	<b>GPH</b> <b>440.9</b>	<b>HULL</b> Length Overall <b>15.858m</b> Maximum Beam <b>4.386m</b> Displacement <b>7,320kg</b> Draft <b>3.369m</b> Plan Review IMS Reg. Division <b>Performance</b> Dynamic Allowance <b>0.000%</b> Hull Construction <b>Carbon, Aramid</b> Carbon Rudder <b>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>TP 52</b> Designer <b>Reichel Pugh</b> Builder <b>Oracle</b> Series <b>01/2008</b> Age <b>01/2008</b> Age Allowance <b>0.390%</b> Offset File <b>HURAKAN2019.off - 13/08/2019</b> Measurement by - <b>12/08/2019</b>		IMSL <b>15.259m</b> VCGD <b>-1.161m</b> Sink <b>31.48kg/mm</b> RL <b>15.455m</b> VCGM <b>-1.177m</b> WS <b>40.54m<sup>2</sup></b> LSM0 <b>14.863m</b> Displacement/Length ratio <b>2.2294</b>



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2020**  
ORC International  
Certificate

**Rating Office**

Offshore  
Racing  
Congress



World Leader In Rating Technology

SCORING OPTIONS						
Time on Distance	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	<b>430.1</b>			<b>487.9</b>		
Time on Time	<b>1.3951</b>			<b>1.3835</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>503.1</b>	<b>393.8</b>	<b>336.0</b>	<b>654.4</b>	<b>496.1</b>	<b>417.3</b>
Time on Time	<b>1.3416</b>	<b>1.7140</b>	<b>2.0089</b>	<b>1.0315</b>	<b>1.3606</b>	<b>1.6176</b>

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>728.8</b>	<b>603.9</b>	<b>559.4</b>	<b>537.1</b>	<b>519.2</b>	<b>507.9</b>	<b>501.3</b>
52°	<b>470.6</b>	<b>403.5</b>	<b>385.6</b>	<b>375.8</b>	<b>368.1</b>	<b>356.7</b>	<b>347.3</b>
60°	<b>438.8</b>	<b>387.6</b>	<b>370.0</b>	<b>357.8</b>	<b>349.1</b>	<b>338.0</b>	<b>325.2</b>
75°	<b>417.1</b>	<b>373.7</b>	<b>345.4</b>	<b>329.5</b>	<b>319.1</b>	<b>311.8</b>	<b>292.0</b>
90°	<b>419.3</b>	<b>375.2</b>	<b>338.0</b>	<b>311.2</b>	<b>296.3</b>	<b>285.5</b>	<b>271.4</b>
110°	<b>452.8</b>	<b>382.3</b>	<b>350.7</b>	<b>325.0</b>	<b>297.9</b>	<b>268.7</b>	<b>237.0</b>
120°	<b>466.3</b>	<b>386.7</b>	<b>344.3</b>	<b>319.9</b>	<b>295.9</b>	<b>271.9</b>	<b>236.1</b>
135°	<b>521.3</b>	<b>410.0</b>	<b>365.8</b>	<b>323.4</b>	<b>286.4</b>	<b>262.4</b>	<b>226.8</b>
150°	<b>627.3</b>	<b>485.4</b>	<b>413.9</b>	<b>368.9</b>	<b>336.1</b>	<b>296.4</b>	<b>233.2</b>
Run VMG	<b>724.3</b>	<b>560.5</b>	<b>477.9</b>	<b>430.6</b>	<b>388.1</b>	<b>342.2</b>	<b>269.3</b>

**Certificate**

Number **00001**  
ORC Ref **03290000NU6**  
Issued On **04/08/2020**  
VPP Ver. **2020 1.02**  
Valid until **31/12/2020**

Selected Courses							
Windward / Leeward	<b>726.5</b>	<b>582.2</b>	<b>518.7</b>	<b>483.9</b>	<b>453.6</b>	<b>425.1</b>	<b>385.3</b>
Circular Random	<b>607.4</b>	<b>491.4</b>	<b>428.7</b>	<b>390.4</b>	<b>364.1</b>	<b>344.1</b>	<b>314.0</b>
Coastal / Long Distance	<b>726.3</b>	<b>547.5</b>	<b>465.4</b>	<b>413.9</b>	<b>378.6</b>	<b>345.1</b>	<b>295.0</b>
Non Spinnaker	<b>661.9</b>	<b>531.9</b>	<b>460.5</b>	<b>416.8</b>	<b>387.2</b>	<b>365.6</b>	<b>334.5</b>

**Crew Weight**

Default **1,211kg**  
Maximum **1,250kg**  
Minimum\* **938kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

ToD	ToT
Non Spin GPH <b>474.3</b>	<b>1.2650</b>
Non Spin OSN <b>466.4</b>	<b>1.2863</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>43.9°</b>	<b>41.6°</b>	<b>40.1°</b>	<b>38.8°</b>	<b>37.5°</b>	<b>37.1°</b>	<b>36.9°</b>
Beat VMG	<b>4.94</b>	<b>5.96</b>	<b>6.44</b>	<b>6.70</b>	<b>6.93</b>	<b>7.09</b>	<b>7.18</b>
52°	<b>7.65</b>	<b>8.92</b>	<b>9.34</b>	<b>9.58</b>	<b>9.78</b>	<b>10.09</b>	<b>10.37</b>
60°	<b>8.20</b>	<b>9.29</b>	<b>9.73</b>	<b>10.06</b>	<b>10.31</b>	<b>10.65</b>	<b>11.07</b>
75°	<b>8.63</b>	<b>9.63</b>	<b>10.42</b>	<b>10.93</b>	<b>11.28</b>	<b>11.55</b>	<b>12.33</b>
90°	<b>8.59</b>	<b>9.59</b>	<b>10.65</b>	<b>11.57</b>	<b>12.15</b>	<b>12.61</b>	<b>13.26</b>
110°	<b>7.95</b>	<b>9.42</b>	<b>10.27</b>	<b>11.08</b>	<b>12.09</b>	<b>13.40</b>	<b>15.19</b>
120°	<b>7.72</b>	<b>9.31</b>	<b>10.45</b>	<b>11.25</b>	<b>12.17</b>	<b>13.24</b>	<b>15.25</b>
135°	<b>6.91</b>	<b>8.78</b>	<b>9.84</b>	<b>11.13</b>	<b>12.57</b>	<b>13.72</b>	<b>15.88</b>
150°	<b>5.74</b>	<b>7.42</b>	<b>8.70</b>	<b>9.76</b>	<b>10.71</b>	<b>12.15</b>	<b>15.44</b>
Run VMG	<b>4.97</b>	<b>6.42</b>	<b>7.53</b>	<b>8.36</b>	<b>9.28</b>	<b>10.52</b>	<b>13.37</b>
Gybe Angles	<b>141.0°</b>	<b>141.0°</b>	<b>147.0°</b>	<b>151.5°</b>	<b>144.3°</b>	<b>142.5°</b>	<b>145.0°</b>

**Sails Limitations**

Headsails	Spinnakers
<b>7</b>	<b>5</b>

**Class Division Length**

CDL = **15.358**

**Storm Sails Areas**

Heavy Weather Jib **52.92**  
Storm Jib (JL=12.87) **19.60**  
Storm Trysail **25.89**

**Owner**

<b>BOAT</b>	
Name <b>Zer0emission</b>	Sail Nr <b>FIN-1</b>
File <b>L-0001</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Boom Inclining</b>	LCFD	<b>1.000</b>	
Flotation date <b>12/08/2019</b>	SG	<b>1.0050</b>	
FFM <b>1.460</b>	FF <b>1.467</b>	SFFP	<b>0.845</b>
FAM <b>1.162</b>	FA <b>1.166</b>	SAFP	<b>15.817</b>
W1 <b>194.5</b>	PD1 <b>277.9</b>	WD	<b>7.030</b>
W2 <b>194.5</b>	PD2 <b>271.7</b>	GSA	<b>1.0</b>
W3 <b>194.5</b>	PD3 <b>268.1</b>	RSA	<b>1.0</b>
W4 <b>194.5</b>	PD4 <b>341.9</b>	PLM	<b>9000.0</b>
LCF from stem on CL / on sheer		<b>8.565 / 8.875</b>	
Maximum beam station from stem		<b>11.540</b>	
RM Measured		<b>375.1kg-m</b>	
RM Default		<b>351.0kg-m</b>	
Limit of positive stability / Stab.Index		<b>146.0° / 144.9</b>	
Freeboard at mast at 6.535		<b>1.276</b>	



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2020**  
**IMS Measurement**  
**Certificate**

<b>RIG</b>			
Forestay Tension <b>Aft &amp; Forward</b>	Spreaders	<b>3</b>	
Inner Stay <b>None Fitted</b>	Runners/Checkstays	<b>0</b>	
Carbon Mast <b>Yes</b>	Jib Furler	<b>No</b>	
Fiber Rigging <b>Yes</b>	Main Furler	<b>No</b>	
Non-Circular Rigging <b>No</b>			
Articulated Bowsprit <b>No</b>			
P <b>20.427</b>	E <b>7.240</b>	MDT1 <b>0.135</b>	MW <b>0.288</b>
IG <b>19.695</b>	J <b>6.190</b>	MDL1 <b>0.300</b>	GO <b>0.320</b>
ISP <b>22.414</b>	SFJ <b>0.345</b>	MDT2 <b>0.090</b>	BD <b>0.355</b>
BAS <b>2.140</b>	SPL <b>0.000</b>	MDL2 <b>0.140</b>	MWT <b>253.50</b>
FSD <b>0.034</b>	TPS <b>9.030</b>	TL <b>2.930</b>	MCG <b>7.278</b>

<b>Certificate</b>	
Number	<b>00001</b>
ORC Ref	<b>03290000NU6</b>
Issued On	<b>04/08/2020</b>
VPP Ver.	<b>2020 1.02</b>
Valid until	<b>31/12/2020</b>

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD	<b>0.460</b>	
Type <b>Folding 2 blades</b>	PBW	<b>0.115</b>	
Twin Screw <b>No</b>	PIPA	<b>0.0039</b>	
ST1 <b>0.050</b>	ST3 <b>0.180</b>	ST5	<b>0.270</b>
ST2 <b>0.180</b>	ST4 <b>0.112</b>	EDL	<b>1.057</b>

<b>COMMENTS</b>	
ADVERTISING LICENSE 2020 BY FSBF	

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



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

<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	2.00	2.78	3.72	5.01	6.05	98.87	101.74	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	

<b>Symmetric</b>									
Not Available									
<b>Asymmetric</b>									
on centerline	SLU	SLE	SL	SHW	SFL	Area	AS · (SFL + 4·SHW) / 6		
	25.60	21.40	23.50	13.90	14.26	273.62			

<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
<b>HBB</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>Flying</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.16	1.09	1.81	3.25	4.74	6.26	20.01	65.08	No			Unknow	
0.16	0.93	1.70	3.27	4.81	6.24	19.90	64.33	Y	No		Unknow	
0.12	0.81	1.49	2.77	3.95	5.02	17.05	45.65	No	12/06/2018		Unknow	

<b>MEASUREMENT INVENTORY</b>				
Measurer				
Date <b>12/08/2019</b>				
Comment				
<b>Internal Ballast total = 0.0</b>				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
1	Engine	Yanmar	50 kW	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

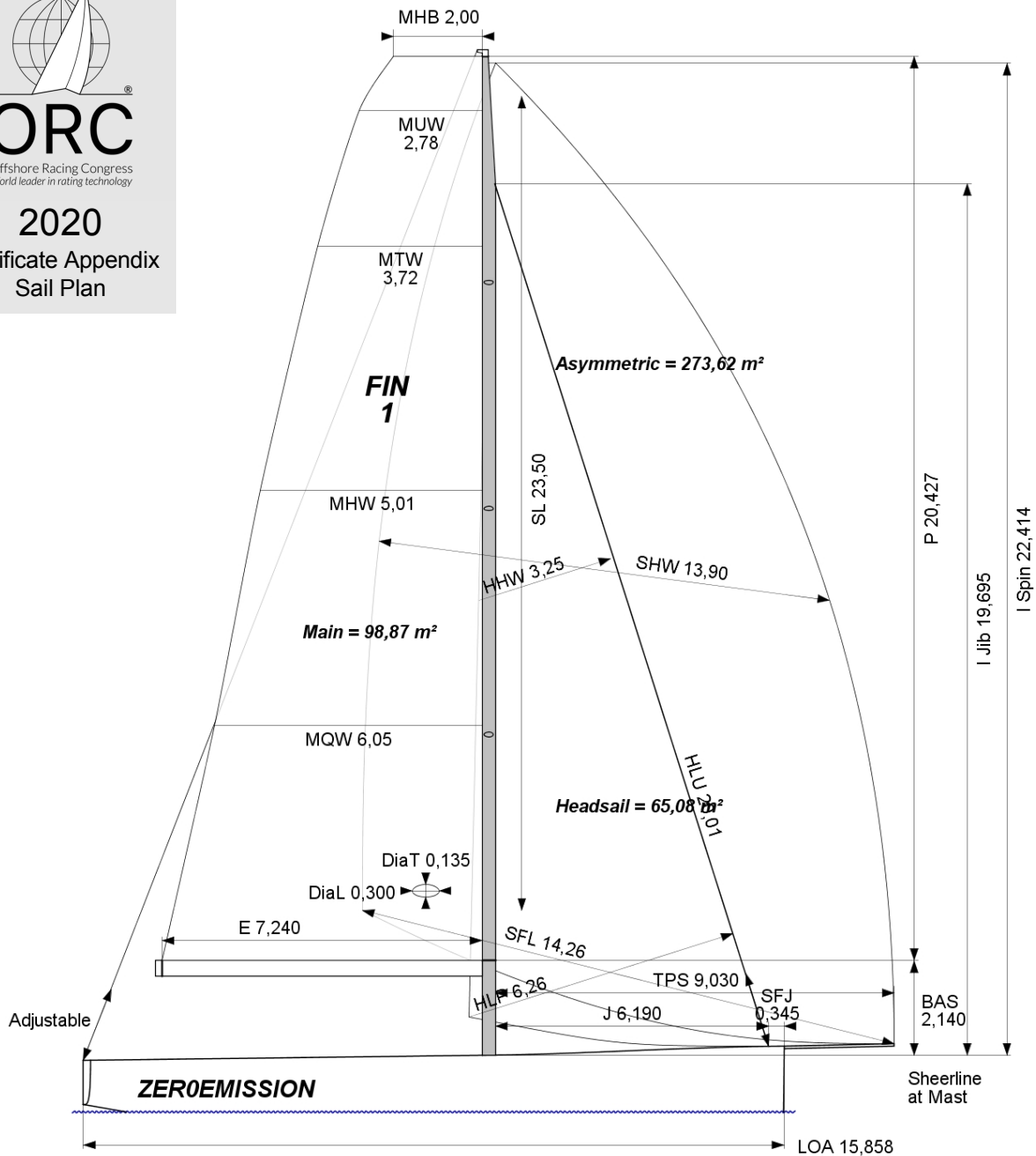
<b>MEASUREMENT INVENTORY</b>								
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG</b>	<b>Condtn</b>	<b>Description</b>
1	Tank Fuel		PVC	40.0	10.30	0.00	<del>18.0</del>	
2	Tank Fuel		PVC	40.0	10.60	0.00	<del>0.0</del>	Empty
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>				
1	Battery	9.90		Start CCA 800				
2	Battery	9.90		Domestic 2*69 Ah				



**ORC**

Offshore Racing Congress  
World leader in rating technology

**2020**  
Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

MAINSAIL (2)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	2.00	2.78	3.72	5.01	6.05	98.87				Unknown						
E	1.98	2.58	3.54	4.96	6.13	97.80		26/06/2017	NORTH	Unknown						
HEADSAILS (3)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
3	0.16	1.09	1.81	3.25	4.74	6.26	20.01	101%	65.08		No					Unknow
1	0.16	0.93	1.70	3.27	4.81	6.24	19.90	101%	64.33	Y	No					Unknow
2	0.12	0.81	1.49	2.77	3.95	5.02	17.05	81%	45.65		No		12/06/2018			Unknow
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
M	25.60	21.40	23.50	13.90	14.26	273.62	asym		21/07/2015		Unknown					
1	25.10	22.05	23.58	13.36	13.50	263.02	asym				Unknown					