

<b>BOAT</b> Name <b>Marine Vergin</b> Sail Nr <b>RUS 3326</b>	<b>GPH</b> <b>706.5</b>	<b>HULL</b> Length Overall <b>6.141m</b> Maximum Beam <b>2.142m</b> Displacement <b>697kg</b> Draft <b>1.508m</b> Plan Review IMS Reg. Division <b>Sportboat</b> Dynamic Allowance <b>0.000%</b> Hull Construction <b>Solid</b> Carbon Rudder <b>No</b> Crew Arm Extension <b>0.50</b>
<b>GENERAL</b> Class <b>SB20 ONE DESIGN</b> Designer <b>TONY CASTRO</b> Builder <b>LASER</b> Series <b>08/2003</b> Age <b>01/2006</b> Age Allowance <b>0.487%</b> Offset File <b>lasb3.OD - 10/01/2020 00:00:00</b> Measurement by - <b>16/03/2012</b>		IMSLS <b>5.936m</b> VCGD <b>-0.192m</b> Sink <b>6.43kg/mm</b> RL <b>6.085m</b> VCGM <b>-0.172m</b> WS <b>8.47m<sup>2</sup></b> LSM0 <b>5.747m</b> Displacement/Length ratio <b>3.6721</b>



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SCORING OPTIONS						
Time on Distance	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	<b>689.1</b>			<b>780.2</b>		
Time on Time	<b>0.8707</b>			<b>0.8652</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>787.4</b>	<b>636.1</b>	<b>555.2</b>	<b>1003.4</b>	<b>785.1</b>	<b>682.2</b>
Time on Time	<b>0.8572</b>	<b>1.0612</b>	<b>1.2158</b>	<b>0.6727</b>	<b>0.8598</b>	<b>0.9895</b>

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1181.1</b>	<b>988.6</b>	<b>885.7</b>	<b>856.0</b>	<b>851.7</b>	<b>854.0</b>	<b>855.0</b>
52°	<b>778.2</b>	<b>672.5</b>	<b>633.0</b>	<b>614.8</b>	<b>608.5</b>	<b>606.1</b>	<b>595.5</b>
60°	<b>738.6</b>	<b>652.7</b>	<b>617.8</b>	<b>591.8</b>	<b>581.5</b>	<b>576.4</b>	<b>562.2</b>
75°	<b>712.6</b>	<b>639.9</b>	<b>601.7</b>	<b>563.7</b>	<b>538.6</b>	<b>527.4</b>	<b>516.6</b>
90°	<b>678.6</b>	<b>612.4</b>	<b>584.3</b>	<b>555.6</b>	<b>517.0</b>	<b>485.6</b>	<b>461.3</b>
110°	<b>670.6</b>	<b>598.2</b>	<b>542.0</b>	<b>508.5</b>	<b>484.5</b>	<b>459.4</b>	<b>416.0</b>
120°	<b>686.3</b>	<b>607.3</b>	<b>545.6</b>	<b>489.9</b>	<b>454.2</b>	<b>428.7</b>	<b>376.3</b>
135°	<b>755.3</b>	<b>640.4</b>	<b>580.4</b>	<b>523.2</b>	<b>465.8</b>	<b>411.9</b>	<b>311.4</b>
150°	<b>885.0</b>	<b>712.1</b>	<b>636.8</b>	<b>591.3</b>	<b>539.6</b>	<b>485.6</b>	<b>333.8</b>
Run VMG	<b>1021.9</b>	<b>822.3</b>	<b>734.8</b>	<b>675.3</b>	<b>623.1</b>	<b>560.7</b>	<b>385.5</b>

**Certificate**  
Number **3326.1**  
ORC Ref **035700000S6**  
Issued On **21/08/2020**  
VPP Ver. **2020 1.00**  
Valid until **31/12/2020**

**Crew Weight**  
Default 312kg  
Maximum **270kg**  
Minimum\* **185kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**  
ToD ToT  
Non Spin GPH **759.9 0.7896**  
Non Spin OSN **733.6 0.8179**

Selected Courses							
Windward / Leeward	<b>1101.5</b>	<b>905.4</b>	<b>810.3</b>	<b>765.6</b>	<b>737.4</b>	<b>707.3</b>	<b>620.2</b>
Circular Random	<b>951.3</b>	<b>779.3</b>	<b>688.1</b>	<b>633.6</b>	<b>596.3</b>	<b>566.4</b>	<b>513.5</b>
Coastal / Long Distance	<b>1093.5</b>	<b>853.6</b>	<b>735.9</b>	<b>664.6</b>	<b>617.6</b>	<b>573.6</b>	<b>484.3</b>
Non Spinnaker	<b>1046.8</b>	<b>845.6</b>	<b>737.6</b>	<b>674.2</b>	<b>633.8</b>	<b>605.4</b>	<b>563.4</b>

**Sails Limitations**  
Headsails **5** Spinnakers **4**

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>42.0°</b>	<b>41.3°</b>	<b>38.3°</b>	<b>37.5°</b>	<b>37.5°</b>	<b>37.9°</b>	<b>39.0°</b>
Beat VMG	<b>3.05</b>	<b>3.64</b>	<b>4.06</b>	<b>4.21</b>	<b>4.23</b>	<b>4.22</b>	<b>4.21</b>
52°	<b>4.63</b>	<b>5.35</b>	<b>5.69</b>	<b>5.86</b>	<b>5.92</b>	<b>5.94</b>	<b>6.05</b>
60°	<b>4.87</b>	<b>5.52</b>	<b>5.83</b>	<b>6.08</b>	<b>6.19</b>	<b>6.25</b>	<b>6.40</b>
75°	<b>5.05</b>	<b>5.63</b>	<b>5.98</b>	<b>6.39</b>	<b>6.68</b>	<b>6.83</b>	<b>6.97</b>
90°	<b>5.30</b>	<b>5.88</b>	<b>6.16</b>	<b>6.48</b>	<b>6.96</b>	<b>7.41</b>	<b>7.80</b>
110°	<b>5.37</b>	<b>6.02</b>	<b>6.64</b>	<b>7.08</b>	<b>7.43</b>	<b>7.84</b>	<b>8.65</b>
120°	<b>5.25</b>	<b>5.93</b>	<b>6.60</b>	<b>7.35</b>	<b>7.93</b>	<b>8.40</b>	<b>9.57</b>
135°	<b>4.77</b>	<b>5.62</b>	<b>6.20</b>	<b>6.88</b>	<b>7.73</b>	<b>8.74</b>	<b>11.56</b>
150°	<b>4.07</b>	<b>5.06</b>	<b>5.65</b>	<b>6.09</b>	<b>6.67</b>	<b>7.41</b>	<b>10.78</b>
Run VMG	<b>3.52</b>	<b>4.38</b>	<b>4.90</b>	<b>5.33</b>	<b>5.78</b>	<b>6.42</b>	<b>9.34</b>
Gybe Angles	<b>146.0°</b>	<b>149.3°</b>	<b>150.5°</b>	<b>176.0°</b>	<b>144.5°</b>	<b>143.0°</b>	<b>142.0°</b>

**Class Division Length**  
CDL = **6.005**

**Storm Sails Areas**  
Heavy Weather Jib **7.66**  
Storm Jib (JL=4.90) **2.84**  
Storm Trysail **4.46**

**Owner**

<b>BOAT</b>	
Name <b>Marine Vergin</b>	Sail Nr <b>RUS 3326</b>
File <b>RU3326_Marine</b>	Data in <b>meters/kilograms</b>

<b>RIG</b>	
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>
Inner Stay <b>None Fitted</b>	Runners/Checkstays <b>0</b>
Carbon Mast <b>No</b>	Jib Furler <b>No</b>
Fiber Rigging <b>No</b>	Main Furler <b>No</b>
Non-Circular Rigging <b>No</b>	
Articulated Bowsprit <b>No</b>	
P <b>7.950</b>	E <b>3.200</b>
IG <b>7.340</b>	J <b>2.180</b>
ISP <b>8.940</b>	SFJ <b>0.050</b>
BAS <b>0.940</b>	SPL <b>0.000</b>
FSD	TPS <b>4.050</b>
MDT1 <b>0.070</b>	MW <b>0.090</b>
MDL1 <b>0.100</b>	GO <b>0.145</b>
MDT2 <b>0.070</b>	BD <b>0.140</b>
MDL2 <b>0.082</b>	MWT <b>31.10</b>
TL <b>1.400</b>	MCG <b>3.290</b>

<b>INCLINING TEST AND FREEBOARDS</b>		
Inclining Test <b>Current Inclining</b>		
Flotation date <b>18/05/2016</b>		SG <b>1.0260</b>
FFM <b>0.705</b>	FF <b>0.705</b>	SFFP <b>0.270</b>
FAM <b>0.472</b>	FA <b>0.472</b>	SAFP <b>6.071</b>
W1 <b>17.9</b>	PD1 <b>568.3</b>	WD <b>6.160</b>
W2 <b>17.9</b>	PD2 <b>566.3</b>	GSA <b>1.0</b>
W3 <b>17.9</b>	PD3 <b>569.1</b>	RSA <b>1.0</b>
W4 <b>17.9</b>	PD4 <b>565.9</b>	PLM <b>9000.0</b>
LCF from stem on CL / on sheer		<b>3.501 / 3.642</b>
Maximum beam station from stem		<b>4.000</b>
RM Measured		<b>15.3kg-m</b>
RM Default		<b>15.6kg-m</b>
Limit of positive stability / Stab.Index		<b>108.6° / 99.6</b>
Freeboard at mast at 2.230		<b>0.591</b>



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**IMS Measurement Certificate**

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

<b>PROPELLER</b>	
Type <b>No Propeller</b>	

<b>Certificate</b>	
Number <b>3326.1</b>	
ORC Ref <b>035700000S6</b>	
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VPP Ver. <b>2020 1.00</b>	
Valid until <b>31/12/2020</b>	

<b>COMMENTS</b>	

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

<b>CENTERBOARD</b>	
N/A	



**COPY ONLY**  
**Invalid for Racing**

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<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.23	0.81	1.43	2.32	2.90	16.61	17.28	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	AS · (SFL + 4·SHW) / 6		
	9.55	9.55	9.55	5.64	5.40	44.50			

<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Flying	Meas.Date	Material	Comment
0.04	0.42	0.72	1.32	1.84	2.22	7.13	8.87	N	No		Unknow	

<b>MEASUREMENT INVENTORY</b>				
Measurer				
Date				
Comment				
<b>Internal Ballast total = 0.0</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>	
A	Engine	OUTBOARD ENGINE	Min. 12 Kg	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

<b>MEASUREMENT INVENTORY</b>				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>

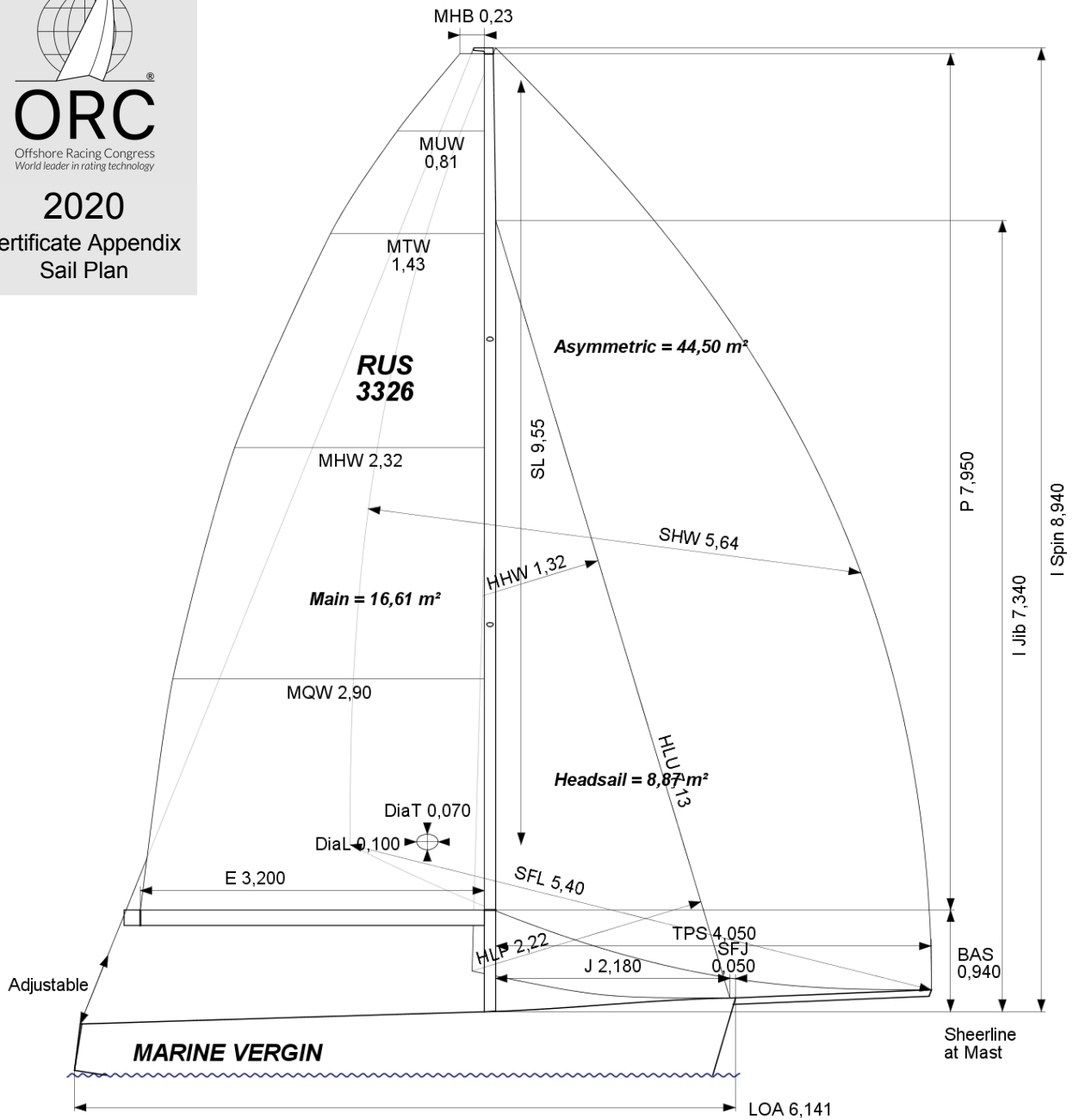


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Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL (1)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	0.23	0.81	1.43	2.32	2.90	16.61					* Copied from legacy

**HEADSAILS (1)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
A	0.04	0.42	0.72	1.32	1.84	2.22	7.13	102%	8.87	N	No					Unknow

**SYMMETRIC SPINNAKERS (0)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
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**ASYMMETRIC SPINNAKERS (1)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	9.55	9.55	9.55	5.64	5.40	44.51	asym					* Copied from legacy *