

<b>BOAT</b>
Name <b>MAMMA AIUTO</b> Sail Nr <b>GRE-1743</b>

<b>GPH</b>
<b>559.3</b>

<b>HULL</b>
Length Overall <b>10.320m</b>
Maximum Beam <b>3.008m</b>
Displacement <b>2,671kg</b>
Draft <b>2.524m</b>
IMS Reg. Division <b>Performance</b>
Dynamic Allowance <b>0.001%</b>
Fwd Accommodation <b>No</b>
Hull Construction <b>Cored</b>
Carbon Rudder <b>Yes</b>
Crew Arm Extension
IMSL <b>10.028m</b> VCGD <b>-0.261m</b> Sink <b>15.22kg/mm</b>
RL <b>9.439m</b> VCGM <b>-0.258m</b> WS <b>19.95m<sup>2</sup></b>
LSM0 <b>9.616m</b> Displacement/Length ratio <b>3.0039</b>



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Certificate

<b>GENERAL</b>
Class <b>M34</b>
Designer <b>JOUBERT/NIVELT</b>
Builder <b>ARCHAMBAULT</b>
Series <b>10/2010</b>
Age <b>01/2011</b>
Age Allowance <b>0.292%</b>
Offset File <b>M34.off - 02/09/2011 14:02:52</b>
Measurement by - <b>31/07/2015</b>

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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>546.6</b>			<b>614.9</b>		
Time on Time	<b>1.0978</b>			<b>1.0977</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>622.8</b>	<b>502.4</b>	<b>444.5</b>	<b>800.8</b>	<b>622.1</b>	<b>540.6</b>
Time on Time	<b>1.0839</b>	<b>1.3435</b>	<b>1.5186</b>	<b>0.8429</b>	<b>1.0851</b>	<b>1.2486</b>



<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>911.7</b>	<b>751.4</b>	<b>703.4</b>	<b>687.3</b>	<b>675.5</b>	<b>664.6</b>	<b>671.1</b>
52°	<b>599.8</b>	<b>510.8</b>	<b>491.1</b>	<b>483.9</b>	<b>480.1</b>	<b>472.5</b>	<b>471.1</b>
60°	<b>566.6</b>	<b>494.8</b>	<b>475.8</b>	<b>467.6</b>	<b>463.3</b>	<b>455.9</b>	<b>449.8</b>
75°	<b>542.2</b>	<b>484.3</b>	<b>455.8</b>	<b>439.9</b>	<b>431.1</b>	<b>426.3</b>	<b>410.2</b>
90°	<b>546.7</b>	<b>485.3</b>	<b>451.9</b>	<b>420.6</b>	<b>401.6</b>	<b>391.7</b>	<b>381.8</b>
110°	<b>538.9</b>	<b>471.8</b>	<b>445.7</b>	<b>422.6</b>	<b>401.3</b>	<b>380.1</b>	<b>335.0</b>
120°	<b>552.9</b>	<b>474.0</b>	<b>432.0</b>	<b>406.3</b>	<b>386.9</b>	<b>365.4</b>	<b>324.4</b>
135°	<b>623.3</b>	<b>501.6</b>	<b>454.3</b>	<b>407.7</b>	<b>363.4</b>	<b>333.3</b>	<b>292.4</b>
150°	<b>745.0</b>	<b>588.7</b>	<b>504.3</b>	<b>459.3</b>	<b>419.8</b>	<b>376.3</b>	<b>294.0</b>
Run VMG	<b>860.2</b>	<b>679.8</b>	<b>582.7</b>	<b>531.0</b>	<b>484.8</b>	<b>434.5</b>	<b>339.5</b>

<b>Certificate</b>
Number <b>001126</b>
ORC Ref <b>GRE01015675</b>
Issued On <b>16/05/2019</b>
VPP Ver. <b>2019 1.01</b>
Valid until <b>28/02/2020</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>886.0</b>	<b>715.6</b>	<b>643.1</b>	<b>609.2</b>	<b>580.1</b>	<b>549.5</b>	<b>505.3</b>
Circular Random	<b>756.2</b>	<b>617.0</b>	<b>544.1</b>	<b>501.7</b>	<b>473.9</b>	<b>453.1</b>	<b>421.2</b>
Coastal / Long Distance	<b>883.4</b>	<b>674.6</b>	<b>581.6</b>	<b>527.9</b>	<b>491.4</b>	<b>455.8</b>	<b>400.3</b>
Non Spinnaker	<b>833.2</b>	<b>671.1</b>	<b>584.0</b>	<b>532.7</b>	<b>499.9</b>	<b>477.3</b>	<b>446.8</b>

<b>Crew Weight</b>
Default <b>651kg</b>
Maximum <b>600kg</b>
Minimum* <b>450kg</b>
*when applied by the NoR and SI
Non Manual Pwr <b>No</b>

<b>Special Scoring</b>	
ToD	ToT
Non Spin GPH <b>601.9</b>	<b>0.9968</b>
Non Spin OSN <b>588.2</b>	<b>1.0201</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>42.3°</b>	<b>40.8°</b>	<b>38.9°</b>	<b>38.2°</b>	<b>38.0°</b>	<b>38.1°</b>	<b>39.0°</b>
Beat VMG	<b>3.95</b>	<b>4.79</b>	<b>5.12</b>	<b>5.24</b>	<b>5.33</b>	<b>5.42</b>	<b>5.36</b>
52°	<b>6.00</b>	<b>7.05</b>	<b>7.33</b>	<b>7.44</b>	<b>7.50</b>	<b>7.62</b>	<b>7.64</b>
60°	<b>6.35</b>	<b>7.28</b>	<b>7.57</b>	<b>7.70</b>	<b>7.77</b>	<b>7.90</b>	<b>8.00</b>
75°	<b>6.64</b>	<b>7.43</b>	<b>7.90</b>	<b>8.18</b>	<b>8.35</b>	<b>8.44</b>	<b>8.78</b>
90°	<b>6.58</b>	<b>7.42</b>	<b>7.97</b>	<b>8.56</b>	<b>8.96</b>	<b>9.19</b>	<b>9.43</b>
110°	<b>6.68</b>	<b>7.63</b>	<b>8.08</b>	<b>8.52</b>	<b>8.97</b>	<b>9.47</b>	<b>10.75</b>
120°	<b>6.51</b>	<b>7.59</b>	<b>8.33</b>	<b>8.86</b>	<b>9.30</b>	<b>9.85</b>	<b>11.10</b>
135°	<b>5.78</b>	<b>7.18</b>	<b>7.92</b>	<b>8.83</b>	<b>9.91</b>	<b>10.80</b>	<b>12.31</b>
150°	<b>4.83</b>	<b>6.12</b>	<b>7.14</b>	<b>7.84</b>	<b>8.58</b>	<b>9.57</b>	<b>12.25</b>
Run VMG	<b>4.19</b>	<b>5.30</b>	<b>6.18</b>	<b>6.78</b>	<b>7.43</b>	<b>8.29</b>	<b>10.60</b>
Gybe Angles	<b>142.4°</b>	<b>144.2°</b>	<b>150.2°</b>	<b>150.9°</b>	<b>147.3°</b>	<b>144.8°</b>	<b>144.9°</b>

<b>Sails Limitations</b>	
Headsails <b>5</b>	Spinnakers <b>3</b>

<b>Class Division Length</b>
<b>CDL = 9.734</b>

<b>Storm Sails Areas</b>	
Heavy Weather Jib <b>23.96</b>	
Storm Jib (JL=8.66) <b>8.88</b>	
Storm Trysail <b>11.64</b>	

**Owner**

<b>BOAT</b>							
Name	MAMMA AIUTO		Sail Nr	GRE-1743			
File	GR1743		Data in	meters/kilograms			
<b>RIG</b>							
Forestay Tension	Aft	Spreaders		2			
Inner Stay	None Fitted	Runners		0			
Carbon Mast	Yes	Jumper Struts		None			
Taper Hollows	No	Jib Furler		No			
Fiber Rigging	No	Main Furler		No			
Lenticular Rigging	No	Without Backstay		No			
Articulated Bowsprit	No						
P	13.855	E	4.800	MDT1	0.099	MW	0.197
IG	13.320	J	4.020	MDL1	0.198	GO	0.197
ISP	15.365	SFJ	0.100	MDT2	0.095	BD	0.220
BAS	1.350	SPL		MDL2	0.152	MWT	105.00
FSP	0.064	TPS	5.620	TL	1.810	MCG	5.300

<b>INCLINING TEST AND FREEBOARDS</b>						
Inclining Test <b>Current Inclining</b>						
Flotation date				30/07/2015	SG	1.0280
FFM	1.314	FF	1.313	SFFP	0.514	
FAM	0.918	FA	0.924	SAFP	10.284	
W1	60.0	PD1	271.0	WD	9.350	
W2	60.0	PD2	271.0	GSA	50.0	
W3	60.0	PD3	271.0	RSA	5542.0	
W4	60.0	PD4	271.0	PLM	2026.0	
LCF from stem on CL / on sheer				5.752 / 5.927		
Maximum beam station from stem				8.569		
RM Measured				72.7kg-m		
RM Default				77.4kg-m		
Limit of positive stability / Stab.Index				131.6° / 127.5		
Freeboard at mast at 4.120				1.073		



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

<b>PROPELLER</b>					
Installation	Strut	PRD	0.405		
Type	Folding 2 blades	PBW	0.100		
Twin Screw	No	PIPA	0.0038		
ST1	0.065	ST3	0.180	ST5	0.300
ST2	0.180	ST4	0.110	EDL	1.770

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<b>COMMENTS</b>				
ex "SODEBO" (FRA-12)				

<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	
	0.190	1.19	1.99	3.07	3.95	40.11	41.01	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			AS · (SFL + 4·SHW) / 6	
	16.75	14.51	15.63	9.43	9.29	122.46			

<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HBB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0.07	0.60	1.15	2.20	3.23	4.29	13.07	28.55	Y		22/07/2015	Carbon	#1 (J 1-2)
0.07	0.60	1.15	2.20	3.23	4.27	13.02	28.40	Y		22/07/2015	Carbon	#1 (J 1-1-1)
0.07	0.58	1.13	2.19	3.24	4.29	13.02	28.37	Y		22/07/2015	Kevlar	#1 (J 1-1)
0.06	0.59	1.12	2.18	3.24	4.21	12.97	28.05	Y		31/07/2015	Kevlar	Light #1
0.06	0.52	1.02	2.05	3.12	4.14	12.95	26.81	Y		31/07/2015	Kevlar	Medium #2
0.06	0.50	1.03	2.05	3.11	4.17	12.25	25.39	Y		22/07/2015	Carbon	#2 (J 2-2)
0.06	0.51	1.01	2.02	3.05	4.12	12.31	25.14	Y		31/07/2015	Kevlar	#2 (J 2-1)
0.05	0.45	0.93	1.89	2.88	3.89	11.33	21.71	Y		31/07/2015	Kevlar	Heavy #3
0.06	0.44	0.91	1.81	2.73	3.65	10.73	19.54	Y		31/07/2015	Carbon	#3 (J 3-2)
0.06	0.43	0.91	1.80	2.71	3.68	10.72	19.49	Y		31/07/2015	Carbon	#3 (J 3-A2)
					2.45	6.42	8.01			31/07/2015	Dacron	Storm Jib

<b>MEASUREMENT INVENTORY</b>				
Measurer	GRE-17			
Date	30/07/2015			
Comment				
Id	Item	Weight	Distance	VCG Description
1	Engine			Volvo Penta
Id	Item	Weight	Distance	VCG Description

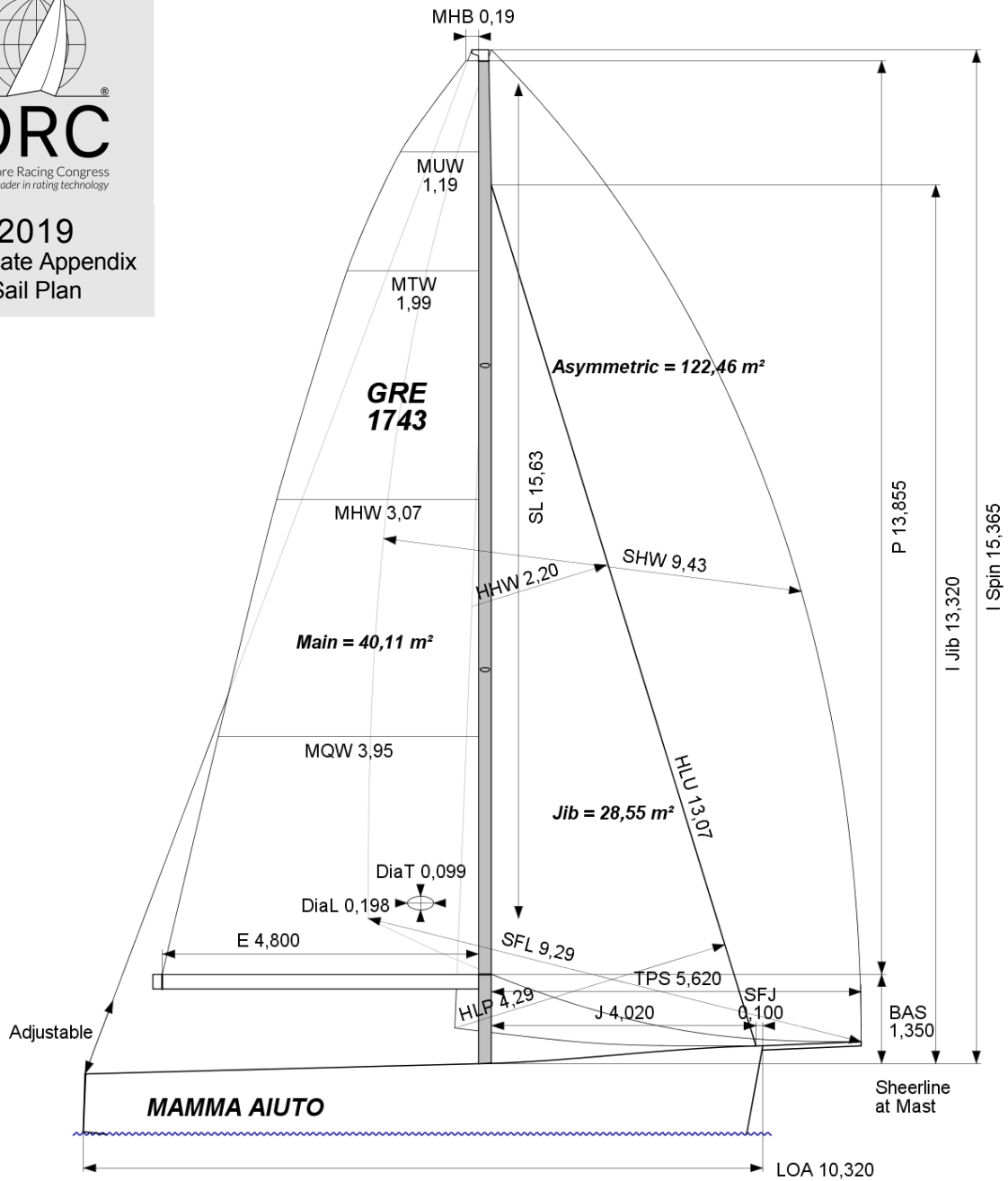
<b>MEASUREMENT INVENTORY</b>							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
1	Tank	Diesel	Plastic	50.0	7.00	-0.20	50.0
Id	Item	Weight	Distance	VCG Description			
1	Ballast	9.6	4.60	-0.40 2 X Plumb weights			
2	Battery	37.8	5.70	-0.20 1 X 130 Ah			
1	Battery	12.0	5.60	-0.20 1 X 40 Ah			



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Sail Plan



SAILS INVENTORY																
MAINSAIL (3)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	0.19	1.19	1.99	3.07	3.95	40.03		22/07/2015	North Sails	Carbon						
3	0.21	1.19	1.98	3.06	3.95	39.99		22/07/2015	North Sails	Kevlar						
HEADSAILS (11)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
01	0.07	0.60	1.15	2.20	3.23	4.29	13.07	107%	28.55	Y			22/07/2015	North Sails	Carbon	#1 (J 1-2)
02	0.07	0.60	1.15	2.20	3.23	4.27	13.02	106%	28.40	Y			22/07/2015	North Sails	Carbon	#1 (J 1-1-1)
06	0.07	0.58	1.13	2.19	3.24	4.29	13.02	107%	28.37	Y			22/07/2015	North Sails	Kevlar	#1 (J 1-1)
08	0.06	0.59	1.12	2.18	3.24	4.21	12.97	105%	28.05	Y			31/07/2015	Star Voiles	Kevlar	Light #1
09	0.06	0.52	1.02	2.05	3.12	4.14	12.95	103%	26.81	Y			31/07/2015	Star Voiles	Kevlar	Medium #2
03	0.06	0.50	1.03	2.05	3.11	4.17	12.25	104%	25.39	Y			22/07/2015	North Sails	Carbon	#2 (J 2-2)
07	0.06	0.51	1.01	2.02	3.05	4.12	12.31	102%	25.14	Y			31/07/2015	North Sails	Kevlar	#2 (J 2-1)
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (4)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
1	16.75	14.51	15.63	9.43	9.29	122.47	asym		21/07/2015	North Sails	Nylon					
3	16.73	14.49	15.61	9.41	9.37	122.31	asym		21/07/2015	North Sails	Nylon					
2	16.78	14.49	15.64	9.33	9.30	121.49	asym		21/07/2015	North Sails	Nylon					
4	14.42	12.69	13.55	5.76	7.66	69.36	asym		21/07/2015	North Sails	Nylon					