

<b>BOAT</b> Name <b>BRAVISSIMO</b> Sail Nr <b>ECU-2007</b>	<b>GPH</b> <b>562,9</b>	<b>HULL</b> Length Overall <b>12,668m</b> Maximum Beam <b>3,096m</b> Displacement <b>5.831kg</b> Draft <b>2,432m</b> IMS Reg. Division <b>Performance</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>04/2004</b> Age <b>04/2004</b> Age Allowance <b>0,422%</b> Offset File <b>GS42M ov.off - 25/09/2011 12:35:40</b> Measurement by <b>P. GUTIERREZ - 27/09/2017</b>		IMSL <b>10,772m</b> VCGD <b>-0,348m</b> Sink <b>22,78kg/mm</b> RL <b>10,166m</b> VCGM <b>-0,165m</b> WS <b>29,31m<sup>2</sup></b> LSMO <b>10,210m</b> Displacement/Length ratio <b>5,4786</b>



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**2017**  
ORC International  
Certificate

**Rating Office**  
Federación Ecuatoriana  
de Vela  
Patricio D. Gutiérrez - RO  
gutierrez@yca.org.ar



SCORING OPTIONS	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	Low	Medium	High	Low	Medium	High
Time On Distance	<b>548,4</b>			<b>618,1</b>		
Time On Time	<b>1,0941</b>			<b>1,0921</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>647,3</b>	<b>497,8</b>	<b>441,5</b>	<b>847,8</b>	<b>621,8</b>	<b>538,8</b>
Time on Time	<b>1,0428</b>	<b>1,3560</b>	<b>1,5290</b>	<b>0,7962</b>	<b>1,0856</b>	<b>1,2527</b>

TIME ALLOWANCES	Wind Velocity						
	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>958,8</b>	<b>778,0</b>	<b>693,4</b>	<b>662,3</b>	<b>647,1</b>	<b>633,0</b>	<b>629,5</b>
52°	<b>619,8</b>	<b>507,8</b>	<b>468,2</b>	<b>457,1</b>	<b>451,3</b>	<b>445,6</b>	<b>439,7</b>
60°	<b>578,8</b>	<b>482,5</b>	<b>451,9</b>	<b>441,8</b>	<b>436,1</b>	<b>431,9</b>	<b>422,4</b>
75°	<b>544,8</b>	<b>467,4</b>	<b>437,6</b>	<b>420,5</b>	<b>412,0</b>	<b>406,7</b>	<b>396,0</b>
90°	<b>545,0</b>	<b>467,2</b>	<b>437,0</b>	<b>412,3</b>	<b>392,4</b>	<b>381,9</b>	<b>373,3</b>
110°	<b>572,1</b>	<b>470,9</b>	<b>432,9</b>	<b>407,0</b>	<b>391,5</b>	<b>377,9</b>	<b>347,2</b>
120°	<b>593,5</b>	<b>482,7</b>	<b>440,7</b>	<b>410,3</b>	<b>380,9</b>	<b>364,6</b>	<b>338,4</b>
135°	<b>668,0</b>	<b>532,3</b>	<b>465,2</b>	<b>434,3</b>	<b>406,3</b>	<b>378,9</b>	<b>320,2</b>
150°	<b>800,0</b>	<b>632,5</b>	<b>528,8</b>	<b>469,0</b>	<b>437,5</b>	<b>411,5</b>	<b>360,2</b>
Run VMG	<b>923,8</b>	<b>730,3</b>	<b>610,6</b>	<b>535,8</b>	<b>488,4</b>	<b>452,2</b>	<b>402,1</b>

**Certificate**  
Number **FVEC4**  
ORC Ref **ECU00005607**  
Issued On **04/10/2017**  
VPP Ver. **2017 1.00**  
Valid until **31/03/2018**

**Crew Weight**  
Declared **780kg**  
Default\* **709kg**  
Non Manual Pwr **No**

**Special Scoring**  
ToD ToT  
Non Spin GPH **589,0** **1,0187**  
Non Spin OSN **574,5** **1,0444**

Selected Courses	Windward / Leeward						
	941,3	754,2	652,0	599,0	567,7	542,6	515,8
Circular Random	<b>778,8</b>	<b>626,9</b>	<b>545,8</b>	<b>498,9</b>	<b>469,8</b>	<b>450,1</b>	<b>423,5</b>
Ocean for PCS	<b>963,5</b>	<b>740,5</b>	<b>615,2</b>	<b>538,9</b>	<b>489,1</b>	<b>454,0</b>	<b>404,7</b>
Non Spinnaker	<b>825,5</b>	<b>660,1</b>	<b>570,5</b>	<b>517,9</b>	<b>485,0</b>	<b>463,2</b>	<b>435,3</b>

Sails Limitations	
Headsails	Spinnakers
<b>6</b>	<b>4</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>43,1°</b>	<b>41,9°</b>	<b>40,4°</b>	<b>39,7°</b>	<b>39,2°</b>	<b>39,7°</b>
Beat VMG	<b>3,75</b>	<b>4,63</b>	<b>5,19</b>	<b>5,44</b>	<b>5,56</b>	<b>5,69</b>	<b>5,72</b>
52°	<b>5,81</b>	<b>7,09</b>	<b>7,69</b>	<b>7,88</b>	<b>7,98</b>	<b>8,08</b>	<b>8,19</b>
60°	<b>6,22</b>	<b>7,46</b>	<b>7,97</b>	<b>8,15</b>	<b>8,25</b>	<b>8,34</b>	<b>8,52</b>
75°	<b>6,61</b>	<b>7,70</b>	<b>8,23</b>	<b>8,56</b>	<b>8,74</b>	<b>8,85</b>	<b>9,09</b>
90°	<b>6,61</b>	<b>7,70</b>	<b>8,24</b>	<b>8,73</b>	<b>9,17</b>	<b>9,43</b>	<b>9,64</b>
110°	<b>6,29</b>	<b>7,65</b>	<b>8,32</b>	<b>8,84</b>	<b>9,20</b>	<b>9,53</b>	<b>10,37</b>
120°	<b>6,07</b>	<b>7,46</b>	<b>8,17</b>	<b>8,77</b>	<b>9,45</b>	<b>9,87</b>	<b>10,64</b>
135°	<b>5,39</b>	<b>6,76</b>	<b>7,74</b>	<b>8,29</b>	<b>8,86</b>	<b>9,50</b>	<b>11,24</b>
150°	<b>4,50</b>	<b>5,69</b>	<b>6,81</b>	<b>7,68</b>	<b>8,23</b>	<b>8,75</b>	<b>9,99</b>
Run VMG	<b>3,90</b>	<b>4,93</b>	<b>5,90</b>	<b>6,72</b>	<b>7,37</b>	<b>7,96</b>	<b>8,95</b>
Gybe Angles	<b>141,4°</b>	<b>145,4°</b>	<b>148,0°</b>	<b>154,8°</b>	<b>166,1°</b>	<b>180,0°</b>	<b>180,0°</b>

**Class Division Length**  
CDL = **10,470**

**Storm Sails Areas**  
Heavy Weather Jib **33,11**  
Storm Jib (JL=10,18) **12,26**  
Storm Trysail **16,99**

**Owner**  
Camilo Saman  
KM 6.5 VIA SAMBORONDON  
LA CASTELLANAGuayaquil

I certify that I understand my responsibilities under ORC Rules and Regulations

Signature

<b>BOAT</b>	
Name <b>BRAVISSIMO</b>	Sail Nr <b>ECU-2007</b>
File <b>ECU2007</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>		
Inclining Test <b>Current Inclining</b>		
Flotation date <b>27/09/2017</b>	SG <b>1,0253</b>	
FFM <b>1,425</b>	FF <b>1,424</b>	SFFP <b>0,183</b>
FAM <b>1,095</b>	FA <b>1,097</b>	SAFP <b>12,383</b>
W1 <b>100,0</b>	PD1 <b>436,0</b>	WD <b>10,840</b>
W2 <b>100,0</b>	PD2 <b>437,9</b>	GSA <b>1,0</b>
W3 <b>100,0</b>	PD3 <b>438,0</b>	RSA <b>1,0</b>
W4 <b>100,0</b>	PD4 <b>437,8</b>	PLM <b>9000,0</b>
LCF from stem on CL / on sheer		<b>6,755 / 6,917</b>
Maximum beam station from stem		<b>7,310</b>
RM Measured		<b>195,2kg·m</b>
RM Default		<b>181,3kg·m</b>
Limit of positive stability / Stab.Index		<b>130,6° / 137,1</b>
Freeboard at mast at 4,850		<b>1,254</b>



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**IMS Measurement Certificate**

<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>16,460</b>	E <b>5,900</b>	MDT1 <b>0,130</b>	MW <b>0,250</b>
IG <b>15,660</b>	J <b>4,690</b>	MDL1 <b>0,250</b>	GO <b>0,250</b>
ISP <b>15,700</b>	SFJ <b>0,160</b>	MDT2 <b>0,085</b>	BD <b>0,265</b>
BAS <b>1,700</b>	SPL <b>4,700</b>	MDL2 <b>0,121</b>	MWT <b>204,50</b>
FSP <b>0,065</b>	TPS	TL <b>2,440</b>	MCG <b>5,360</b>

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

<b>PROPELLER</b>		
Installation <b>Strut</b>	PRD <b>0,483</b>	
Type <b>Folding 2 blades</b>	PBW <b>0,128</b>	
Twin Screw <b>No</b>	PIPA <b>0,0036</b>	
ST1 <b>0,047</b>	ST3 <b>0,180</b>	ST5 <b>0,300</b>
ST2 <b>0,180</b>	ST4 <b>0,111</b>	EDL <b>1,225</b>

<b>COMMENTS</b>	
CAMBIO DE ARMADOR MEDICION NUEVA VELA MAYOR Y GENOA	

<b>MOVEABLE BALLAST</b>	
N/A	

<b>CENTERBOARD</b>	
N/A	

<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0,170	1,20	2,14	3,72	4,92	56,96	58,07	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	109,02		SL · (SFL + 4·SHW) / 6	
	15,72	15,72	15,72	8,27	8,53				
Asymmetric Not Available									

<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	Fly	Meas.Date	Material	Comment
0,06	0,68	1,34	2,55	3,79	4,97	15,75	40,01			30/09/2009	Unknow	
0,09	0,74	1,40	2,63	3,84	4,97	15,28	39,55			28/02/2014	Carbon	
0,09	0,69	1,33	2,55	3,76	4,91	15,45	39,01			26/09/2017	Kevlar	NUEVA
0,08	0,66	1,25	2,47	3,69	4,97	15,15	37,63	Y		26/09/2017	Carbon	NUEVA
0,08	0,66	1,25	2,47	3,69	4,92	15,15	37,50	Y		03/06/2012	Unknow	
0,06	0,73	1,28	2,43	3,58	4,64	13,70	32,99	Y		03/10/2017	Kevlar	NUEVA

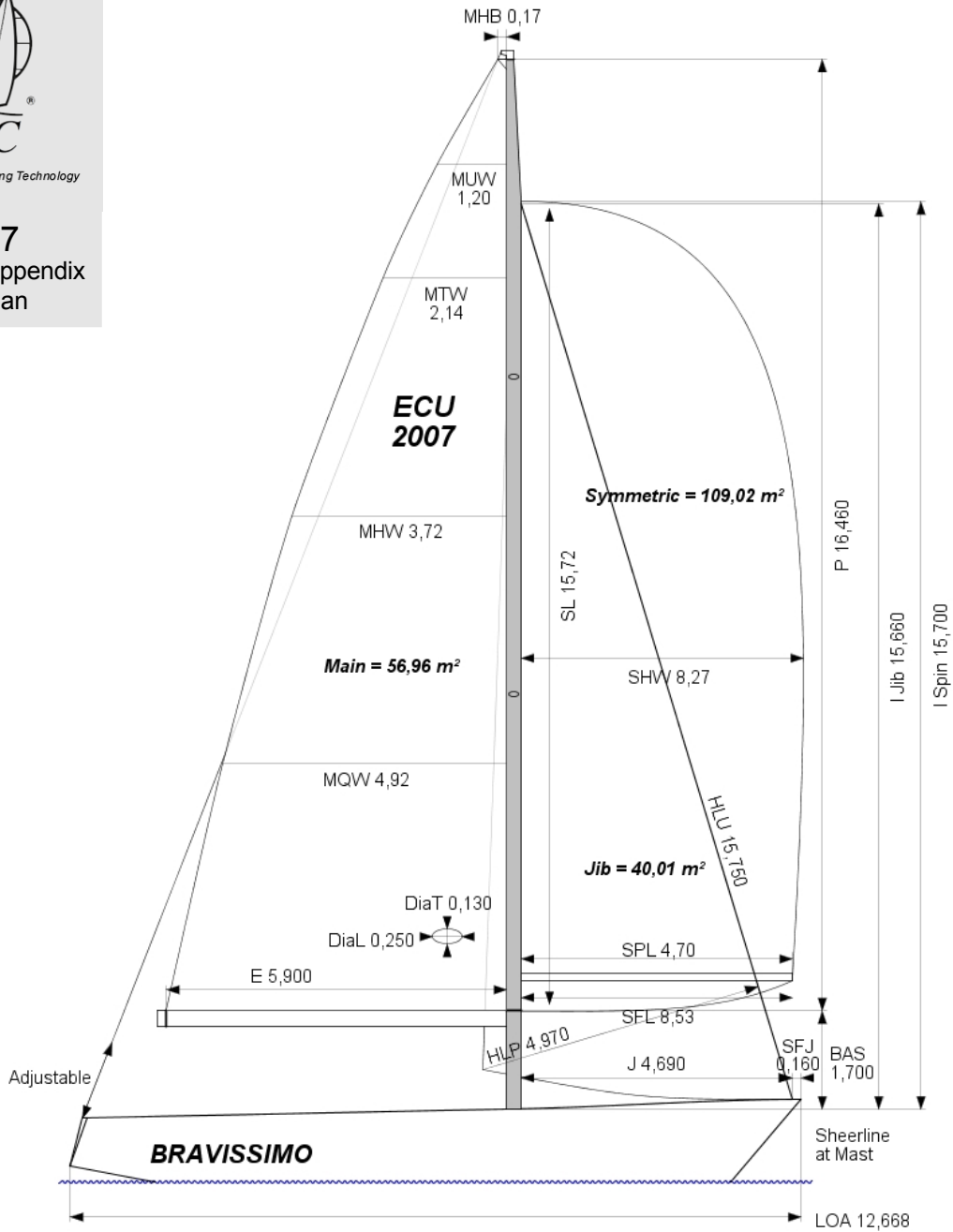
<b>MEASUREMENT INVENTORY</b>				
Measurer <b>PATRICIO GUTIERREZ P G</b>				
Date <b>27/09/2017</b>				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
5	Engine	YANMAR	38HP	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Description</i>	

<b>MEASUREMENT INVENTORY</b>						
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG Condtm Description</i>
6A	Tank	AGUA	ODERE	120,0	5,64	0,0 A BABOR
6B	Tank	FUEL	ALUMINIO	80,0	8,64	15,0 EN CRUJIA A POPA
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>		
C7	Ballast	80,0	6,20	8 PIEZAS DE PLOMO CENTRALES		
1B	Ballast	52,0	5,89	6 PIEZAS DE PLOMO		
1E	Ballast	52,0	5,89	6 PZAS DE PLOMO		
1D	Ballast	136,0	6,99	5 PZAS DE PLOMO LADO ESTRIBOR BAT		
1C	Ballast	136,0	6,99	5 PZAS DE PLOMO LADO BABOR BATERIAS		
C5	Battery	60,0	7,99	3 BAT. X 12V - 72 AMP		
9D	Misc	5,0	4,82	GATA HIDRUALICA MPASTIL		
9C	Misc	10,0	6,54	0,70	CONSERVADORA	
9B	Misc	5,0	6,54	0,70	LAVADERO ACERO	
9A	Misc	5,0	7,04	0,70	COCINA	



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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
M3	0,170	1,20	2,14	3,72	4,92	56,94	P GUTIERREZ	26/09/2017	UK	Kevlar	NEGRO

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
U-L	0,06	0,68	1,34	2,55	3,79	4,97	15,75	106%	40,01			C	30/09/2009	NORTH	Unknow	
M-H	0,09	0,74	1,40	2,63	3,84	4,97	15,28	106%	39,55			G LIZA	28/02/2014	UK	Carbon	
JT	0,09	0,69	1,33	2,55	3,76	4,91	15,45	105%	39,01			P	26/09/2017	ELVSTROM	Kevlar	NUEVA
M	0,08	0,66	1,25	2,47	3,69	4,97	15,15	106%	37,63	Y		P	26/09/2017	ELVSTROM	Carbon	NUEVA
L	0,08	0,66	1,25	2,47	3,69	4,92	15,15	105%	37,50	Y		F	03/06/2012	ELVSTROM	Unknow	
C3	0,06	0,73	1,28	2,43	3,58	4,64	13,70	99%	32,99	Y		DECLAR	03/10/2017	ELVSTROM	Kevlar	NUEVA

**SYMMETRIC SPINNAKERS (4)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
S 1	15,72	15,72	15,72	8,27	8,53	109,02	DECLARADO	21/01/2010	NORTH	Unknown	
S1.5	15,49	15,49	15,49	8,41	8,40	108,53	A VELASTEGUI	20/04/2016	ELVSTROM	Nylon	REMEDICION
S 2 C	15,44	15,44	15,44	8,49	8,10	108,23	C HERMAN	16/10/2009	NORTH	Unknown	
S 3 B	15,43	15,43	15,43	8,32	8,10	106,42	C HERMAN	16/10/2009		Unknown	

**ASYMMETRIC SPINNAKERS (0)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
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