

<b>BOAT</b> Name <b>PERLA</b> Sail Nr <b>ECU-403</b>	<b>GPH</b> <b>631,0</b>	<b>HULL</b> Length Overall <b>11,500m</b> Maximum Beam <b>3,243m</b> Displacement <b>4.314kg</b> Draft <b>1,885m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0,030%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Cored</b> Carbon Rudder <b>No</b> Crew Arm Extension
<b>GENERAL</b> Class <b>JEANNEAU37</b> Designer <b>JANNEAU</b> Builder <b>JANNEAU</b> Series <b>10/1988</b> Age <b>10/1988</b> Age Allowance <b>0,487%</b> Offset File <b>US18378P.off - 01/10/2017 05:00:34</b> Measurement by <b>P. GUTIERREZ - 01/10/2017</b>		IMSL <b>9,746m</b> VCGD <b>0,175m</b> Sink <b>17,41kg/mm</b> RL <b>8,224m</b> VCGM <b>0,166m</b> WS <b>22,85m<sup>2</sup></b> LSM0 <b>9,469m</b> Displacement/Length ratio <b>5,0812</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		
	Time On Distance	<b>614,8</b>			<b>690,2</b>	
Time On Time	<b>0,9759</b>			<b>0,9780</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>726,4</b>	<b>557,9</b>	<b>495,3</b>	<b>952,0</b>	<b>694,3</b>	<b>599,1</b>
Time on Time	<b>0,9293</b>	<b>1,2098</b>	<b>1,3627</b>	<b>0,7090</b>	<b>0,9722</b>	<b>1,1267</b>

TIME ALLOWANCES	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1052,6</b>	<b>869,5</b>	<b>776,1</b>	<b>736,3</b>	<b>717,1</b>	<b>708,0</b>	<b>701,5</b>
52°	<b>681,4</b>	<b>569,0</b>	<b>521,6</b>	<b>507,1</b>	<b>500,2</b>	<b>496,1</b>	<b>490,5</b>
60°	<b>638,7</b>	<b>539,9</b>	<b>504,1</b>	<b>491,5</b>	<b>484,7</b>	<b>480,6</b>	<b>474,9</b>
75°	<b>603,7</b>	<b>520,2</b>	<b>490,0</b>	<b>472,0</b>	<b>460,8</b>	<b>453,8</b>	<b>447,5</b>
90°	<b>604,7</b>	<b>519,0</b>	<b>487,3</b>	<b>465,7</b>	<b>445,3</b>	<b>430,2</b>	<b>417,5</b>
110°	<b>649,2</b>	<b>534,1</b>	<b>490,3</b>	<b>461,7</b>	<b>435,4</b>	<b>421,0</b>	<b>398,3</b>
120°	<b>675,1</b>	<b>550,7</b>	<b>498,2</b>	<b>469,6</b>	<b>440,8</b>	<b>412,2</b>	<b>378,3</b>
135°	<b>758,9</b>	<b>611,0</b>	<b>526,6</b>	<b>489,9</b>	<b>463,5</b>	<b>435,7</b>	<b>381,0</b>
150°	<b>917,0</b>	<b>716,5</b>	<b>597,8</b>	<b>524,1</b>	<b>490,1</b>	<b>465,1</b>	<b>413,6</b>
Run VMG	<b>1058,9</b>	<b>827,3</b>	<b>690,1</b>	<b>597,8</b>	<b>538,2</b>	<b>499,3</b>	<b>449,6</b>

**Certificate**  
Number **FVEC1**  
ORC Ref **ECU00005598**  
Issued On **04/10/2017**  
VPP Ver. **2017 1.00**  
Valid until **31/03/2018**

**Crew Weight**  
Declared **586kg**  
Default\* **637kg**  
Non Manual Pwr **No**

**Special Scoring**  
ToD ToT  
Non Spin GPH **649,6 0,9236**  
Non Spin OSN **632,9 0,9480**

Selected Courses	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Windward / Leeward	<b>1055,7</b>	<b>848,4</b>	<b>733,1</b>	<b>667,1</b>	<b>627,6</b>	<b>603,6</b>	<b>575,6</b>
Circular Random	<b>872,7</b>	<b>702,9</b>	<b>611,9</b>	<b>559,2</b>	<b>526,6</b>	<b>505,1</b>	<b>477,7</b>
Ocean for PCS	<b>1082,3</b>	<b>831,4</b>	<b>690,2</b>	<b>604,0</b>	<b>548,1</b>	<b>508,8</b>	<b>454,0</b>
Non Spinnaker	<b>905,1</b>	<b>726,1</b>	<b>629,5</b>	<b>573,1</b>	<b>538,1</b>	<b>514,9</b>	<b>484,5</b>

**Sails Limitations**  
Headsails **5** | Spinnakers **3**

Velocity Prediction in Knots for True Wind Speeds	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>44,0°</b>	<b>43,0°</b>	<b>42,3°</b>	<b>40,6°</b>	<b>39,6°</b>	<b>39,2°</b>	<b>39,4°</b>
Beat VMG	<b>3,42</b>	<b>4,14</b>	<b>4,64</b>	<b>4,89</b>	<b>5,02</b>	<b>5,08</b>	<b>5,13</b>
52°	<b>5,28</b>	<b>6,33</b>	<b>6,90</b>	<b>7,10</b>	<b>7,20</b>	<b>7,26</b>	<b>7,34</b>
60°	<b>5,64</b>	<b>6,67</b>	<b>7,14</b>	<b>7,33</b>	<b>7,43</b>	<b>7,49</b>	<b>7,58</b>
75°	<b>5,96</b>	<b>6,92</b>	<b>7,35</b>	<b>7,63</b>	<b>7,81</b>	<b>7,93</b>	<b>8,04</b>
90°	<b>5,95</b>	<b>6,94</b>	<b>7,39</b>	<b>7,73</b>	<b>8,08</b>	<b>8,37</b>	<b>8,62</b>
110°	<b>5,55</b>	<b>6,74</b>	<b>7,34</b>	<b>7,80</b>	<b>8,27</b>	<b>8,55</b>	<b>9,04</b>
120°	<b>5,33</b>	<b>6,54</b>	<b>7,23</b>	<b>7,67</b>	<b>8,17</b>	<b>8,73</b>	<b>9,52</b>
135°	<b>4,74</b>	<b>5,89</b>	<b>6,84</b>	<b>7,35</b>	<b>7,77</b>	<b>8,26</b>	<b>9,45</b>
150°	<b>3,93</b>	<b>5,02</b>	<b>6,02</b>	<b>6,87</b>	<b>7,34</b>	<b>7,74</b>	<b>8,70</b>
Run VMG	<b>3,40</b>	<b>4,35</b>	<b>5,22</b>	<b>6,02</b>	<b>6,69</b>	<b>7,21</b>	<b>8,01</b>
Gybe Angles	<b>145,1°</b>	<b>149,7°</b>	<b>150,5°</b>	<b>156,8°</b>	<b>174,8°</b>	<b>180,0°</b>	<b>180,0°</b>

**Class Division Length**  
CDL = **8,986**

**Storm Sails Areas**  
Heavy Weather Jib **19,27**  
Storm Jib (JL=7,76) **7,14**  
Storm Trysail **11,64**

**Owner**  
JUAN MANUEL MEIRA


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

Signature

<b>BOAT</b>	
Name <b>PERLA</b>	Sail Nr <b>ECU-403</b>
File <b>ECU403</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>01/10/2017</b>		SG <b>1,0253</b>	
FFM <b>1,199</b>	FF <b>1,199</b>	SFFP <b>0,451</b>	
FAM <b>0,923</b>	FA <b>0,924</b>	SAFP <b>9,723</b>	
W1 <b>50,0</b>	PD1 <b>529,4</b>	WD <b>11,140</b>	
W2 <b>50,0</b>	PD2 <b>529,2</b>	GSA <b>1,0</b>	
W3 <b>50,0</b>	PD3 <b>531,3</b>	RSA <b>1,0</b>	
W4 <b>50,0</b>	PD4 <b>530,5</b>	PLM <b>9000,0</b>	
LCF from stem on CL / on sheer		<b>6,061 / 6,254</b>	
Maximum beam station from stem		<b>5,941</b>	
RM Measured		<b>82,7kg·m</b>	
RM Default		<b>99,5kg·m</b>	
Limit of positive stability / Stab.Index		<b>107,4° / 107,6</b>	
Freeboard at mast at 3,720		<b>1,086</b>	

<b>RIG</b>			
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>		
Inner Stay <b>None Fitted</b>	Runners <b>2</b>		
Carbon Mast <b>No</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>13,150</b>	E <b>5,058</b>	MDT1 <b>0,102</b>	MW <b>0,133</b>
IG <b>11,930</b>	J <b>3,720</b>	MDL1 <b>0,137</b>	GO <b>0,138</b>
ISP <b>11,850</b>	SFJ <b>0,000</b>	MDT2 <b>0,075</b>	BD <b>0,138</b>
BAS <b>1,430</b>	SPL <b>3,680</b>	MDL2 <b>0,118</b>	MWT
FSP <b>0,066</b>	TPS	TL <b>1,701</b>	MCG




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**IMS Measurement Certificate**

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 VPP Ver. **2017 1.00**  
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<b>MIZZEN RIG AND SAILS</b>	
N/A	

<b>PROPELLER</b>			
Installation <b>Shaft exposed</b>	PRD <b>0,382</b>		
Type <b>Folding 2 blades</b>	PBW <b>0,100</b>		
Twin Screw <b>No</b>	PIPA <b>0,0070</b>		
PSA <b>16,300</b>	PHL <b>0,139</b>	ST3 <b>0,122</b>	ESL <b>2,255</b>
PSD <b>0,026</b>	ST1 <b>0,028</b>	ST4 <b>0,051</b>	
PHD <b>0,072</b>	ST2 <b>0,122</b>	ST5 <b>0,300</b>	

<b>COMMENTS</b>	
EST Y FBDS + VELAS nuevo armador ex JANIMAR	

<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	1,07	1,97	3,28	4,22	39,73	40,73	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	11,61	11,61	11,61	7,06	6,84	67,88		SL · (SFL + 4·SHW) / 6	
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
0,07	0,70	1,34	2,68	4,09	5,60	12,05	33,05			04/06/2017	Unknow	NUEVA
0,08	0,72	1,39	2,77	4,16	5,58	11,64	32,43			04/09/2016	Carbon	NUEVA
0,08	0,64	1,22	2,40	3,61	5,00	11,62	28,44			02/06/2012	Unknow	
0,06	0,40	0,79	1,58	2,40	3,30	10,80	17,43	Y		18/08/2014	Kevlar	NUEVA

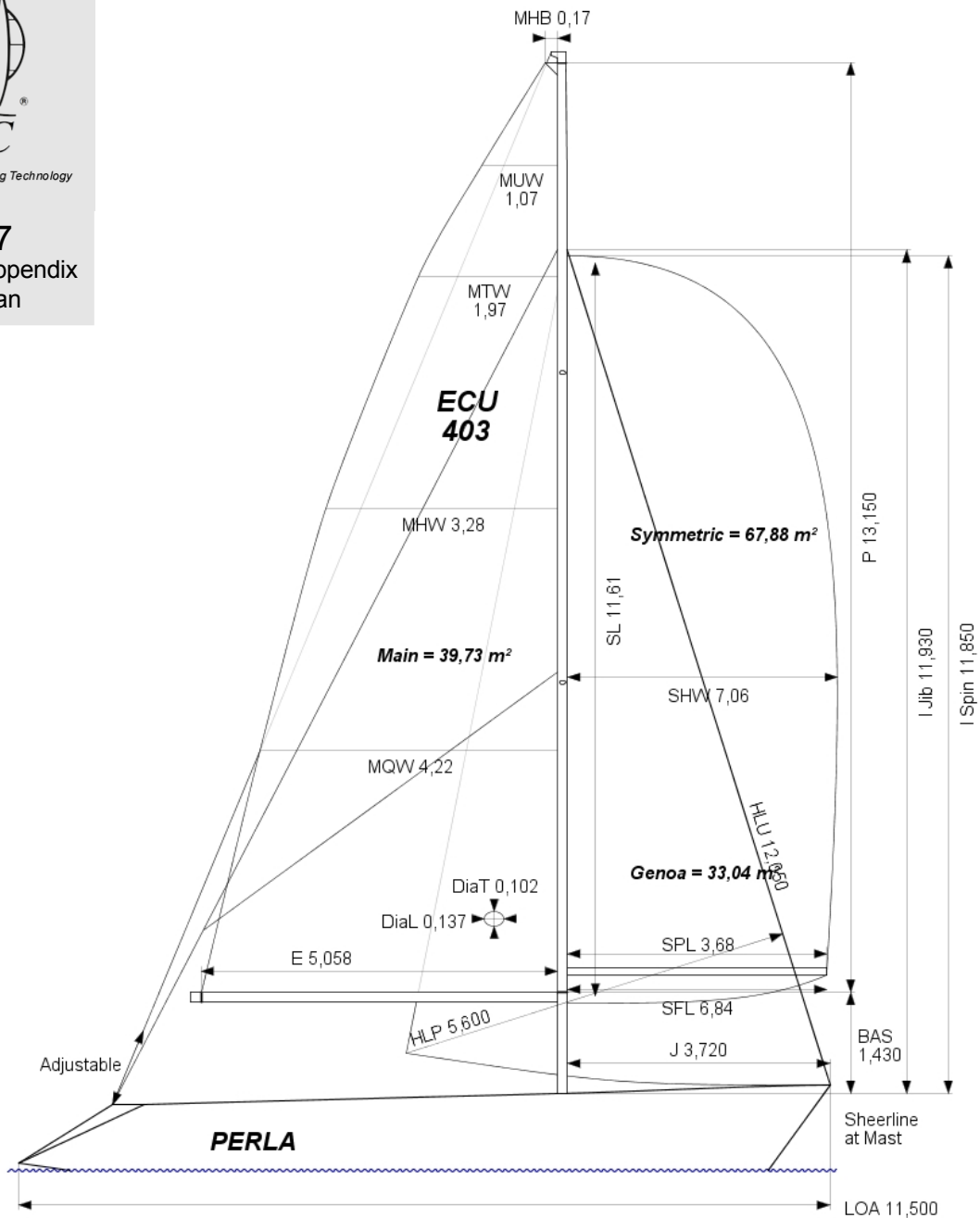
<b>MEASUREMENT INVENTORY</b>				
Measurer <b>PATRICIO GUTIERREZ P G</b>				
Date <b>01/10/2017</b>				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
C4	Engine	YANMAR	20 HP	
<i>Id</i>	<i>Item</i>	<i>Weight Description</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</i>	<i>Condtn Description</i>
C5	Tank	PETROLEO	INOX	20,0	8,20	0,00	5-0
E6	Tank	AGUA	FLEX	25,0	5,20	0,00	0-0
B6	Tank	AGUA	FLEX	25,0	5,20	0,00	0-0
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>			
C5	Battery	13,0	5,70	0,00 12 V - 55 AMP			
B3	Battery	15,0	7,20	0,00 12 V - 75 AMP			
B3	Battery	15,0	7,20	0,00 12 V - 75 AMP			



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Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL (1)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measur	Meas.Date	Manufacture	Material	Comment
M1	0,170	1,07	1,97	3,28	4,22	39,73	A V M	04/09/2016	NORTH	Carbon	NUEVA

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measur	Meas.Date	Manufacture	Material	Comment
G2	0,07	0,70	1,34	2,68	4,09	5,60	12,05	151%	33,05			A V M	04/06/2017	NORTH	Unknow	NUEVA
G1	0,08	0,72	1,39	2,77	4,16	5,58	11,64	150%	32,43			A V M	04/09/2016	NORTH	Carbon	NUEVA
KM	0,08	0,64	1,22	2,40	3,61	5,00	11,62	134%	28,44			F	02/06/2012		Unknow	NUEVA
J	0,06	0,40	0,79	1,58	2,40	3,30	10,80	89%	17,43	Y		DECLAR	18/08/2014		Kevlar	NUEVA

**SYMMETRIC SPINNAKERS (4)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measur	Meas.Date	Manufacture	Material	Comment
S075	11,61	11,61	11,61	7,06	6,84	67,88	F CARLIER	02/06/2012		Nylon	
S1	11,68	11,68	11,68	7,00	6,71	67,57	A V M	28/04/2016	ELVSTROM	Nylon	USADA
S2	11,62	11,62	11,62	6,69	6,44	64,30	F CARLIER	02/06/2012		Nylon	
S5	11,80	11,80	11,80	6,15	6,50	61,16	A V M	04/06/2017	NORTH	Nylon	NUEVA

**ASYMMETRIC SPINNAKERS (0)**

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