

<b>BOAT</b>
Name <b>CHARRO V</b> Sail Nr <b>ESP-2717</b>

<b>GPH</b>
<b>615,5</b>

<b>HULL</b>	
Length Overall	<b>11,953 m</b>
Maximum Beam	<b>3,750 m</b>
Displacement	<b>5.468 kg</b>
Draft	<b>2,102 m</b>
IMS Reg. Division	<b>Cruiser/Racer</b>
Dynamic Allowance	<b>0,000%</b>
Fwd Accommodation	<b>Yes</b>
Hull Construction	<b>Solid</b>
Carbon Rudder	<b>No</b>
Crew Arm Extension	
IMS L	<b>9,700</b>
VCGD	<b>0,042</b>
VCGM	<b>0,028</b>
Sink	<b>18,26 kg/mm</b>
Wetted Area	<b>24,96 m<sup>2</sup></b>



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**2014**  
ORC International  
Certificate

<b>GENERAL</b>
Class <b>FIRST CLASS 12</b>
Designer <b>FINOT</b>
Builder <b>BENETEAU</b>
Series <b>02/1987</b>
Age <b>02/1987</b>
Age Allowance <b>0,487%</b>
Offset File <b>I0092.OFF - 4/8/2014 14:01:22</b>
Measurement by <b>C.S.ARJONA - 20/07/2013</b>

<b>SCORING OPTIONS</b>						
	<b>OFFSHORE</b>			<b>INSHORE</b>		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	<b>601,1</b>			<b>673,1</b>		
Time On Time	<b>0,9982</b>			<b>1,0029</b>		
Performance Line	PLT	PLD		PLT	PLD	
	<b>0,860</b>	<b>105,5</b>		<b>0,831</b>	<b>190,5</b>	
Triple Number	Low	Medium	High	Low	Medium	High
	<b>0,9558</b>	<b>1,2367</b>	<b>1,3985</b>	<b>0,7301</b>	<b>0,9932</b>	<b>1,1643</b>

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<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1020,2</b>	<b>855,9</b>	<b>764,6</b>	<b>720,1</b>	<b>695,7</b>	<b>680,4</b>	<b>675,2</b>
52°	<b>661,4</b>	<b>555,5</b>	<b>509,1</b>	<b>492,4</b>	<b>483,7</b>	<b>478,2</b>	<b>472,5</b>
60°	<b>619,6</b>	<b>526,0</b>	<b>491,0</b>	<b>476,1</b>	<b>467,1</b>	<b>461,4</b>	<b>455,2</b>
75°	<b>583,8</b>	<b>506,2</b>	<b>476,9</b>	<b>458,4</b>	<b>444,1</b>	<b>435,4</b>	<b>427,2</b>
90°	<b>586,5</b>	<b>507,0</b>	<b>476,7</b>	<b>455,9</b>	<b>437,9</b>	<b>423,5</b>	<b>404,9</b>
110°	<b>633,4</b>	<b>522,2</b>	<b>479,2</b>	<b>451,6</b>	<b>428,4</b>	<b>415,3</b>	<b>398,4</b>
120°	<b>656,3</b>	<b>537,7</b>	<b>486,9</b>	<b>459,1</b>	<b>434,4</b>	<b>412,6</b>	<b>386,2</b>
135°	<b>733,6</b>	<b>598,4</b>	<b>518,5</b>	<b>481,3</b>	<b>455,9</b>	<b>432,1</b>	<b>390,1</b>
150°	<b>880,4</b>	<b>697,4</b>	<b>587,6</b>	<b>516,8</b>	<b>481,5</b>	<b>456,8</b>	<b>412,8</b>
Run VMG	<b>1016,6</b>	<b>805,4</b>	<b>677,2</b>	<b>586,5</b>	<b>523,1</b>	<b>485,9</b>	<b>437,9</b>

<b>Certificate</b>	
Number	<b>271701</b>
ORC Ref	<b>ESP00008761</b>
Issued On	<b>3/8/2014</b>
VPP Ver	<b>2014 1.01</b>
Valid until	<b>31/12/2014</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>1018,4</b>	<b>830,6</b>	<b>720,9</b>	<b>653,3</b>	<b>609,4</b>	<b>583,1</b>	<b>556,5</b>
Circular Random	<b>848,0</b>	<b>685,1</b>	<b>597,4</b>	<b>545,9</b>	<b>513,8</b>	<b>492,6</b>	<b>466,8</b>
Ocean for PCS	<b>904,8</b>	<b>716,1</b>	<b>610,6</b>	<b>545,7</b>	<b>502,6</b>	<b>471,8</b>	<b>428,3</b>
Non Spinnaker	<b>884,5</b>	<b>711,2</b>	<b>617,1</b>	<b>561,2</b>	<b>526,1</b>	<b>502,8</b>	<b>474,5</b>

<b>Crew Weight</b>	
Declared	<b>560 kg</b>
Default*	<b>656 kg</b>
Non Manual Pwr	<b>No</b>

<b>Special Scoring</b>		
	ToD	ToT
Double H.GPH	<b>619,9</b>	<b>0,9679</b>
Double H.OSN	<b>606,5</b>	<b>0,9893</b>
Non Spin GPH	<b>636,2</b>	<b>0,9431</b>
Non Spin OSN	<b>620,6</b>	<b>0,9668</b>
N/S Perf. Line	<b>84,5</b>	<b>0,799</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>43,9°</b>	<b>43,7°</b>	<b>42,8°</b>	<b>41,4°</b>	<b>40,1°</b>	<b>39,5°</b>	<b>39,7°</b>
Beat VMG	<b>3,53</b>	<b>4,21</b>	<b>4,71</b>	<b>5,00</b>	<b>5,17</b>	<b>5,29</b>	<b>5,33</b>
52°	<b>5,44</b>	<b>6,48</b>	<b>7,07</b>	<b>7,31</b>	<b>7,44</b>	<b>7,53</b>	<b>7,62</b>
60°	<b>5,81</b>	<b>6,84</b>	<b>7,33</b>	<b>7,56</b>	<b>7,71</b>	<b>7,80</b>	<b>7,91</b>
75°	<b>6,17</b>	<b>7,11</b>	<b>7,55</b>	<b>7,85</b>	<b>8,11</b>	<b>8,27</b>	<b>8,43</b>
90°	<b>6,14</b>	<b>7,10</b>	<b>7,55</b>	<b>7,90</b>	<b>8,22</b>	<b>8,50</b>	<b>8,89</b>
110°	<b>5,68</b>	<b>6,89</b>	<b>7,51</b>	<b>7,97</b>	<b>8,40</b>	<b>8,67</b>	<b>9,04</b>
120°	<b>5,49</b>	<b>6,70</b>	<b>7,39</b>	<b>7,84</b>	<b>8,29</b>	<b>8,73</b>	<b>9,32</b>
135°	<b>4,91</b>	<b>6,02</b>	<b>6,94</b>	<b>7,48</b>	<b>7,90</b>	<b>8,33</b>	<b>9,23</b>
150°	<b>4,09</b>	<b>5,16</b>	<b>6,13</b>	<b>6,97</b>	<b>7,48</b>	<b>7,88</b>	<b>8,72</b>
Run VMG	<b>3,54</b>	<b>4,47</b>	<b>5,32</b>	<b>6,14</b>	<b>6,88</b>	<b>7,41</b>	<b>8,22</b>
Gybe Angles	<b>144,6°</b>	<b>150,7°</b>	<b>153,0°</b>	<b>161,0°</b>	<b>175,2°</b>	<b>179,0°</b>	<b>179,5°</b>

<b>Sails Limitations</b>		
Genoa	Jibs	Spinnakers
<b>3</b>	<b>2</b>	<b>3</b>
Spinnaker configuration <b>Symmetric</b>		

<b>Storm Sails Areas</b>	
Heavy Weather Jib	<b>27,86</b>
Storm Jib (JL=9,34)	<b>10,32</b>
Storm Try sail	<b>13,62</b>

<b>Owner</b>

<b>BOAT</b>	
Name <b>CHARRO V</b>	Sail Nr <b>ESP-2717</b>
File <b>(0)</b>	Data in <b>meters/kilograms</b>

<b>RIG</b>				
Forestay Tension <b>Aft</b>	Spreaders <b>3</b>			
Inner Stay <b>None Fitted</b>	Runners <b>1</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>13,770</b>	E <b>5,650</b>	MDT1 <b>0,110</b>	MW <b>0,191</b>	
IG <b>14,280</b>	J <b>4,210</b>	MDL1 <b>0,191</b>	GO <b>0,216</b>	
ISP <b>14,420</b>	SFJ <b>0,000</b>	MDT2 <b>0,105</b>	BD <b>0,180</b>	
BAS <b>1,840</b>	SPL <b>4,260</b>	MDL2 <b>0,140</b>	MWT <b>168,00</b>	
FSP <b>0,074</b>	TPS	TL <b>0,760</b>	MCG <b>6,245</b>	

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

<b>COMMENTS</b>				

<b>INCLINING TEST AND FREEBOARDS</b>				
Inclining Test <b>Current Inclining</b>				
Flotation date <b>20/07/2013</b>			SG <b>1,0260</b>	
FFM <b>1,132</b>	FF <b>1,132</b>	SFFP <b>0,570</b>		
FAM <b>0,946</b>	FA <b>0,946</b>	SAFP <b>10,535</b>		
W1 <b>80,000</b>	PD1 <b>530,8</b>	WD <b>9,850</b>		
W2 <b>80,000</b>	PD2 <b>524,4</b>	GSA <b>1,0</b>		
W3 <b>80,000</b>	PD3 <b>524,0</b>	RSA <b>1,0</b>		
W4 <b>80,000</b>	PD4 <b>525,6</b>	PLM <b>9000,0</b>		
LCF from stem on CL / on sheer			<b>6,057 / 6,292</b>	
Maximum beam station from stem			<b>6,755</b>	
RM Measured / Default			<b>117,9 / 128,2</b>	
Limit of positive stability / Stab.Index			<b>111,9° / 110,4</b>	
Freeboard at mast at 4,210			<b>1,014</b>	

<b>PROPELLER</b>				
Installation <b>Shaft exposed</b>	PRD <b>0,450</b>			
Type <b>Folding</b>	PBW <b>0,120</b>			
Twin Screw <b>No</b>	PIPA <b>0,0054</b>			
PSA <b>16,000</b>	PHL <b>0,145</b>	ST3 <b>0,130</b>	ESL <b>0,815</b>	
PSD <b>0,030</b>	ST1 <b>0,042</b>	ST4 <b>0,061</b>		
PHD <b>0,078</b>	ST2 <b>0,130</b>	ST5 <b>0,180</b>		

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

<b>CENTERBOARD</b>				
N/A				



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<b>SAILS (Maximum Areas)</b>									
Mainsail	HB	MGT	MGU	MGM	MGL	Area	Area (r)	Formula	
	0,115	1,11	2,02	3,57	4,77	45,66	46,83	P/8 · (E + 2·MGL + 2·MGM + 1.5·MGU + MGT + 0.5·HB)	
Symmetric	SL	SMG	SF						
	14,12	7,70	7,41				89,92		SL · (SF + 4·SMG) / 6
<b>Asymmetric</b> Not Available									

<b>HEADSAILS</b>												
Area = 0.1125·JL·(1.445·LPG+2·JGL+2·JGM+1.5·JGU+JGT+0.5·JH)												
JH	JGT	JGU	JGM	JGL	LPG	JL	Area	Btn	Fly	Meas.Date	Material	Comment
0,09	0,77	1,48	2,95	4,46	6,03	14,38	42,98			20/07/2013		
0,07	0,67	1,31	2,63	4,06	5,76	13,67	37,48			20/07/2013	Unknown	

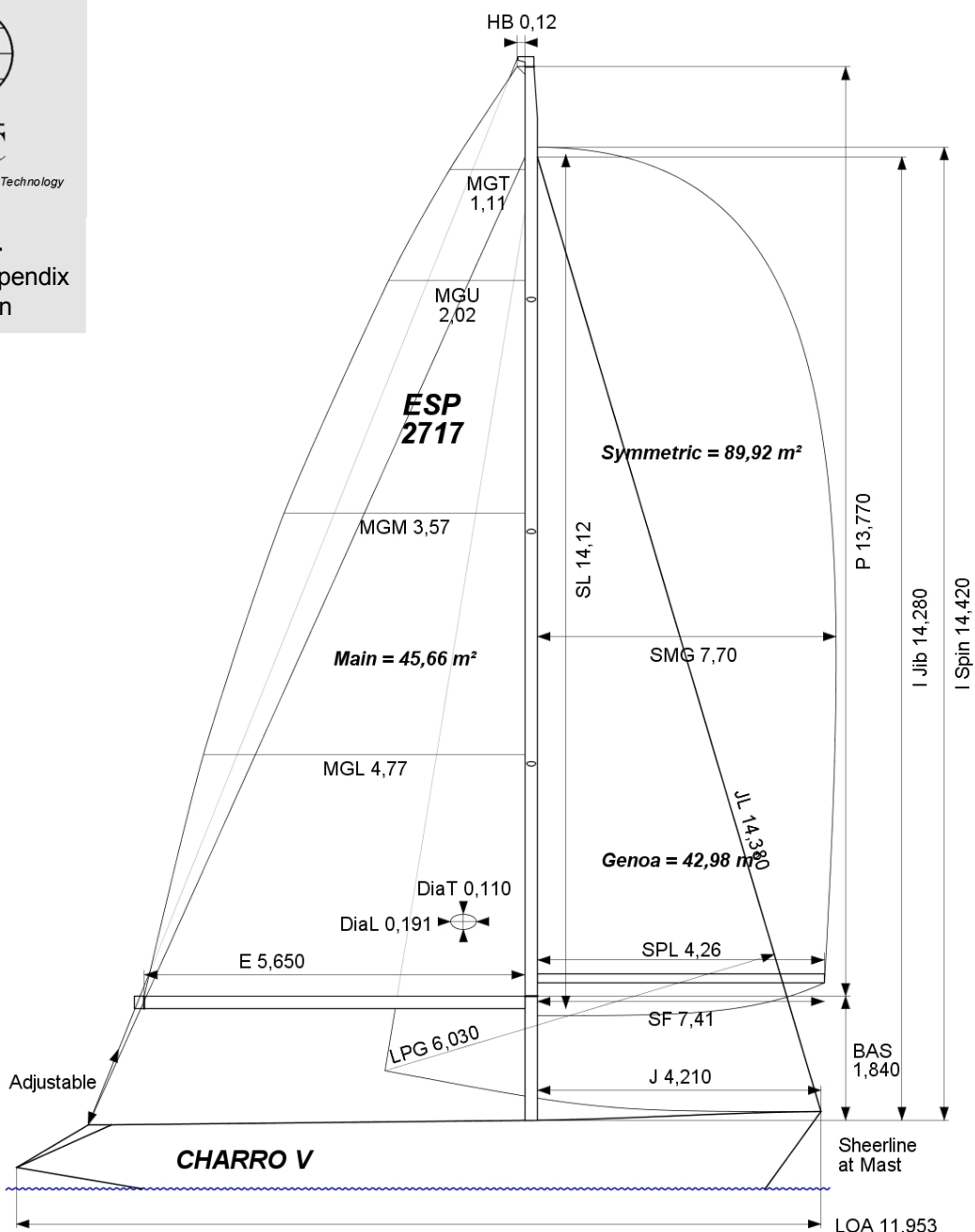
<b>MEASUREMENT INVENTORY</b>				
Measurer <b>C.S.ARJONA</b>				
Date <b>20/07/2013</b>				
Comment				
Id	Item	Weight	Distance	VCG Description
Id	Item	Weight Description		

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



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Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL**

Id	HB	MGT	MGU	MGM	MGL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	0,115	1,11	2,02	3,57	4,77	45,66	266	30/07/2013			

**HEADSAILS**

Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0,09	0,77	1,48	2,95	4,46	6,03	14,38	143%	42,98			C.S.ARJ	20/07/2013			
2	0,07	0,67	1,31	2,63	4,06	5,76	13,67	137%	37,48			C.S.ARJ	20/07/2013			Unknow

**SYMMETRIC SPINNAKERS**

Id	SL	SMG	SF	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	14,12	7,70	7,41	89,92	C.S.ARJONA	20/07/2013			
2	13,18	7,62	7,09	82,53	C.S.ARJONA	20/07/2013		Unknown	
3	12,40	6,13	7,13	65,41	C.S.ARJONA	20/07/2013		Unknown	

**ASYMMETRIC SPINNAKERS**

Id	SLU	SLE	ASL	AMG	ASF	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
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