

<b>BOAT</b> Name <b>Ramona</b> Sail Nr <b>CRO 16155</b>	<b>GPH</b> <b>603.9</b>	<b>HULL</b> Length Overall <b>10.600m</b> Maximum Beam <b>3.250m</b> Displacement <b>4,608kg</b> Draft <b>2.180m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0.000%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Cored</b> Carbon Rudder <b>No</b> Crew Arm Extension
<b>GENERAL</b> Class <b>X 35 mod.</b> Designer <b>Jeppesen</b> Builder <b>X-Yachts</b> Series <b>09/2005</b> Age Age Allowance <b>0.455%</b> Offset File <b>X35 NR.off - 07/05/2019 12:40:04</b> Measurement by - <b>04/10/2016</b>		IMSL <b>9.496m</b> VCGD <b>0.007m</b> Sink <b>17.74kg/mm</b> RL <b>9.135m</b> VCGM <b>-0.010m</b> WS <b>23.14m<sup>2</sup></b> LSM0 <b>9.336m</b> Displacement/Length ratio <b>5.6628</b>



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2019**  
ORC International  
Certificate

**Rating Office**

Offshore  
Racing  
Congress



SCORING OPTIONS						
Time on Distance	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	<b>588.5</b>			<b>655.3</b>		
Time on Time	<b>1.0196</b>			<b>1.0300</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>681.7</b>	<b>538.1</b>	<b>483.5</b>	<b>876.5</b>	<b>656.6</b>	<b>578.8</b>
Time on Time	<b>0.9901</b>	<b>1.2545</b>	<b>1.3962</b>	<b>0.7701</b>	<b>1.0281</b>	<b>1.1663</b>

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>982.9</b>	<b>816.3</b>	<b>727.3</b>	<b>698.7</b>	<b>687.9</b>	<b>680.9</b>	<b>673.8</b>
52°	<b>648.8</b>	<b>551.5</b>	<b>511.8</b>	<b>498.9</b>	<b>494.0</b>	<b>491.7</b>	<b>484.5</b>
60°	<b>615.5</b>	<b>532.7</b>	<b>500.5</b>	<b>486.5</b>	<b>480.8</b>	<b>477.7</b>	<b>469.4</b>
75°	<b>590.3</b>	<b>520.3</b>	<b>492.1</b>	<b>473.4</b>	<b>460.4</b>	<b>453.8</b>	<b>448.4</b>
90°	<b>597.3</b>	<b>519.9</b>	<b>486.2</b>	<b>468.4</b>	<b>451.0</b>	<b>434.7</b>	<b>417.8</b>
110°	<b>607.3</b>	<b>514.4</b>	<b>479.0</b>	<b>452.5</b>	<b>430.7</b>	<b>414.0</b>	<b>391.0</b>
120°	<b>625.4</b>	<b>523.3</b>	<b>484.3</b>	<b>455.2</b>	<b>427.5</b>	<b>404.7</b>	<b>368.7</b>
135°	<b>692.7</b>	<b>564.5</b>	<b>505.2</b>	<b>475.3</b>	<b>447.4</b>	<b>420.3</b>	<b>364.3</b>
150°	<b>821.3</b>	<b>656.8</b>	<b>557.4</b>	<b>505.0</b>	<b>476.9</b>	<b>451.0</b>	<b>401.1</b>
Run VMG	<b>948.4</b>	<b>758.4</b>	<b>642.7</b>	<b>570.9</b>	<b>520.0</b>	<b>488.1</b>	<b>438.7</b>

**Certificate**  
Number **029/19**  
ORC Ref **CRO00090632**  
Issued On **27/05/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**  
Default **624kg**  
Maximum **720kg**  
Minimum\* **540kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr

**Special Scoring**  
ToD ToT  
Non Spin GPH **635.0 0.9449**  
Non Spin OSN **617.7 0.9714**

Selected Courses							
Windward / Leeward	<b>965.7</b>	<b>787.3</b>	<b>685.0</b>	<b>634.8</b>	<b>604.0</b>	<b>584.5</b>	<b>556.3</b>
Circular Random	<b>821.7</b>	<b>667.8</b>	<b>586.6</b>	<b>540.1</b>	<b>511.5</b>	<b>492.1</b>	<b>465.1</b>
Coastal / Long Distance	<b>963.9</b>	<b>741.5</b>	<b>622.0</b>	<b>559.1</b>	<b>523.8</b>	<b>494.3</b>	<b>444.4</b>
Non Spinnaker	<b>877.4</b>	<b>707.1</b>	<b>615.9</b>	<b>563.0</b>	<b>530.4</b>	<b>508.7</b>	<b>479.5</b>

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

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>42.2°</b>	<b>40.8°</b>	<b>39.0°</b>	<b>37.7°</b>	<b>37.8°</b>	<b>37.5°</b>	<b>38.0°</b>
Beat VMG	<b>3.66</b>	<b>4.41</b>	<b>4.95</b>	<b>5.15</b>	<b>5.23</b>	<b>5.29</b>	<b>5.34</b>
52°	<b>5.55</b>	<b>6.53</b>	<b>7.03</b>	<b>7.22</b>	<b>7.29</b>	<b>7.32</b>	<b>7.43</b>
60°	<b>5.85</b>	<b>6.76</b>	<b>7.19</b>	<b>7.40</b>	<b>7.49</b>	<b>7.54</b>	<b>7.67</b>
75°	<b>6.10</b>	<b>6.92</b>	<b>7.32</b>	<b>7.61</b>	<b>7.82</b>	<b>7.93</b>	<b>8.03</b>
90°	<b>6.03</b>	<b>6.92</b>	<b>7.40</b>	<b>7.69</b>	<b>7.98</b>	<b>8.28</b>	<b>8.62</b>
110°	<b>5.93</b>	<b>7.00</b>	<b>7.52</b>	<b>7.96</b>	<b>8.36</b>	<b>8.69</b>	<b>9.21</b>
120°	<b>5.76</b>	<b>6.88</b>	<b>7.43</b>	<b>7.91</b>	<b>8.42</b>	<b>8.90</b>	<b>9.76</b>
135°	<b>5.20</b>	<b>6.38</b>	<b>7.13</b>	<b>7.57</b>	<b>8.05</b>	<b>8.57</b>	<b>9.88</b>
150°	<b>4.38</b>	<b>5.48</b>	<b>6.46</b>	<b>7.13</b>	<b>7.55</b>	<b>7.98</b>	<b>8.98</b>
Run VMG	<b>3.80</b>	<b>4.75</b>	<b>5.60</b>	<b>6.31</b>	<b>6.92</b>	<b>7.38</b>	<b>8.21</b>
Gybe Angles	<b>142.1°</b>	<b>148.5°</b>	<b>151.2°</b>	<b>158.9°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>

**Class Division Length**  
CDL = **9.316**

**Storm Sails Areas**  
Heavy Weather Jib **28.66**  
Storm Jib (JL=9.48) **10.62**  
Storm Trysail **11.94**

**Owner**

<b>BOAT</b>	
Name <b>Ramona</b>	Sail Nr <b>CRO 16155</b>
File <b>CRO16155</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>					
Inclining Test <b>Current Inclining</b>					
Flotation date <b>16/05/2019</b>			SG <b>1.0253</b>		
FFM	<b>1.310</b>	FF	<b>1.310</b>	SFFP	<b>0.075</b>
FAM	<b>0.979</b>	FA	<b>0.980</b>	SAFP	<b>10.275</b>
W1	<b>70.0</b>	PD1	<b>542.8</b>	WD	<b>11.500</b>
W2	<b>70.0</b>	PD2	<b>547.7</b>	GSA	<b>1.0</b>
W3	<b>70.0</b>	PD3	<b>545.8</b>	RSA	<b>1.0</b>
W4	<b>70.0</b>	PD4	<b>541.5</b>	PLM	<b>9000.0</b>
LCF from stem on CL / on sheer				<b>5.965 / 6.163</b>	
Maximum beam station from stem				<b>7.300</b>	
RM Measured				<b>116.4kg-m</b>	
RM Default				<b>122.3kg-m</b>	
Limit of positive stability / Stab.Index				<b>119.0° / 120.1</b>	
Freeboard at mast at 4.185				<b>1.099</b>	



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2019**  
**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>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>13.950</b>	E	<b>4.890</b>	MDT1	<b>0.125</b>
IG	<b>14.500</b>	J	<b>4.185</b>	MDL1	<b>0.184</b>
ISP	<b>14.520</b>	SFJ		MDT2	<b>0.122</b>
BAS	<b>1.745</b>	SPL	<b>4.170</b>	MDL2	<b>0.140</b>
FSP	<b>0.068</b>	TPS	<b>4.200</b>	MWT	<b>168.00</b>
		TL	<b>1.210</b>	MCG	<b>4.700</b>

<b>Certificate</b>	
Number	<b>029/19</b>
ORC Ref	<b>CRO00090632</b>
Issued On	<b>27/05/2019</b>
VPP Ver.	<b>2019 1.01</b>
Valid until	<b>31/12/2019</b>

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

<b>PROPELLER</b>			
Installation	<b>Strut</b>	PRD	<b>0.415</b>
Type	<b>Folding 2 blades</b>	PBW	
Twin Screw		PIPA	<b>0.0033</b>
ST1	<b>0.042</b>	ST3	<b>0.180</b>
ST2	<b>0.180</b>	ST4	<b>0.112</b>
		ST5	<b>0.255</b>
		EDL	<b>2.390</b>

<b>COMMENTS</b>	

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

<b>CENTERBOARD</b>	
<b>N/A</b>	



<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.370	1.20	1.97	3.20	4.10	41.55	42.50	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL			SL · (SFL + 4·SHW) / 6	
	14.38	14.38	14.38	7.78	7.54	92.66			
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL	Area (r)		AS · (SFL + 4·SHW) / 6	
	14.35	13.72	14.04	4.63	6.17	57.75 72.09			

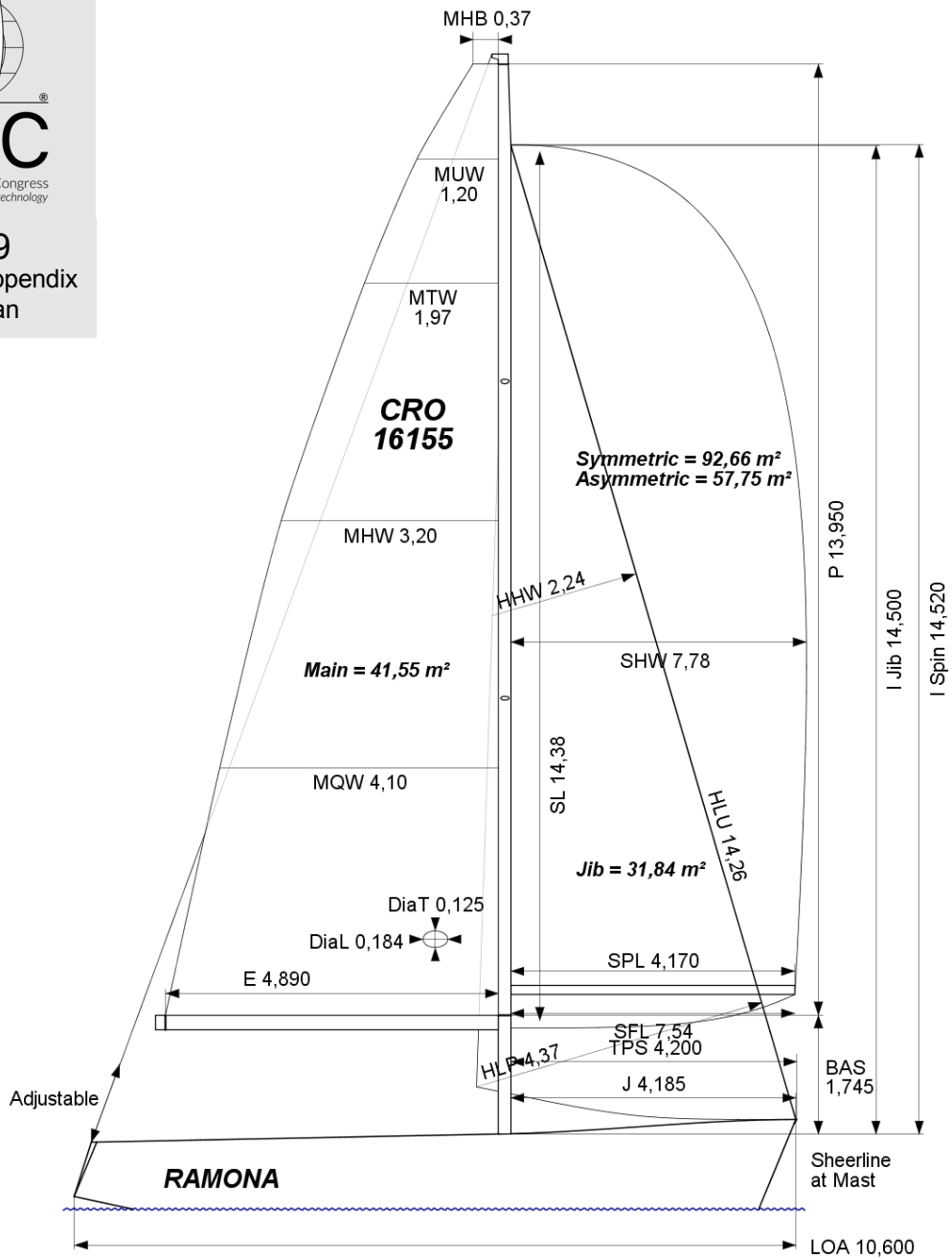
<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
<b>HHB</b>	<b>HUW</b>	<b>HTW</b>	<b>HHW</b>	<b>HQW</b>	<b>HLP</b>	<b>HLU</b>	<b>Area</b>	<b>Btn</b>	<b>Fly</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.10	0.62	1.19	2.24	3.30	4.37	14.26	31.84	Y		04/10/2016	Carbon	JL
0.10	0.60	1.17	2.23	3.28	4.35	14.26	31.62	Y		04/10/2016	Carbon	J M
0.10		0.95	1.83	2.80	3.82	14.45	27.34	Y		04/06/2013	Carbon	J H

<b>MEASUREMENT INVENTORY</b>				
Measurer	<b>CROAK6</b>			
Date	<b>16/05/2019</b>			
Comment				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
1	Engine	Yanmar	3YM20	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

<b>MEASUREMENT INVENTORY</b>						
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG Condtn Description</b>
1	Tank Fuel		Fixed	60.0	6.20	15.0
2	Tank Water			130.0	5.60	0.0
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>		
1	Ballast	15.0	5.35	1 pcs on port		
2	Ballast	16.0	5.60	1 pcs on port		
3	Ballast	17.1	5.35	1 pcs on stb		
4	Ballast	14.0	5.60	1 pcs on stb		
1	Battery		5.00	M26-80Ah		
3	Battery		5.20	60Ah		



2019  
Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

MAINSAIL (2)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
3	0.37	1.20	1.97	3.20	4.10	41.56		01/07/2017	North Sails	Carbon						
2	0.33	1.07	1.91	3.18	4.10	41.07		23/03/2017	North sails	Unknown						
HEADSAILS (3)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.10	0.62	1.19	2.24	3.30	4.37	14.26	104%	31.84	Y			04/10/2016	North sails	Carbon	JL
3	0.10	0.60	1.17	2.23	3.28	4.35	14.26	104%	31.62	Y			04/10/2016	North sails	Carbon	J M
5	0.10		0.95	1.83	2.80	3.82	14.45	91%	27.34	Y			04/06/2013	North Sails	Carbon	J H
SYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	14.38	14.38	14.38	7.78	7.54	92.66		12/09/2014		Nylon						
1	14.36	14.36	14.36	7.75	7.52	92.20		25/07/2013		Nylon						
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
1	14.35	13.72	14.04	4.63	6.17	57.76	asym		16/05/2019	Dustom sails	Polyester					