

<b>BOAT</b> Name <b>COSA NOSTRA</b> Sail Nr <b>ROU-484</b>	<b>GPH</b> <b>610.6</b>	<b>HULL</b> Length Overall <b>9.550m</b> Maximum Beam <b>2.964m</b> Displacement <b>2,873kg</b> Draft <b>2.088m</b> IMS Reg. Division <b>Performance</b> Dynamic Allowance <b>0.117%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Solid</b> Carbon Rudder <b>No</b> Crew Arm Extension IMSL <b>9.361m</b> VCGD <b>-0.067m</b> Sink <b>14.86kg/mm</b> RL <b>8.896m</b> VCGM <b>-0.034m</b> WS <b>19.15m<sup>2</sup></b> LSM0 <b>9.441m</b> Displacement/Length ratio <b>3.4141</b>
<b>GENERAL</b> Class <b>GRAND SURPRISE</b> Designer <b>JOUBERT-NIVELT</b> Builder <b>ARCHAMBAULT</b> Series <b>10/1999</b> Age <b>03/2005</b> Age Allowance <b>0.487%</b> Offset File <b>H00301.off - 27/06/2000 10:18:42</b> Measurement by - <b>29/03/2011</b>		



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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>593.3</b>			<b>663.3</b>		
Time on Time	<b>1.0113</b>			<b>1.0176</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>695.5</b>	<b>542.8</b>	<b>479.4</b>	<b>897.5</b>	<b>664.4</b>	<b>580.0</b>
Time on Time	<b>0.9705</b>	<b>1.2436</b>	<b>1.4081</b>	<b>0.7521</b>	<b>1.0159</b>	<b>1.1637</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1027.1</b>	<b>845.0</b>	<b>744.0</b>	<b>708.0</b>	<b>693.9</b>	<b>686.8</b>	<b>671.9</b>
52°	<b>674.0</b>	<b>567.6</b>	<b>524.4</b>	<b>508.7</b>	<b>502.2</b>	<b>498.7</b>	<b>488.0</b>
60°	<b>637.7</b>	<b>546.4</b>	<b>512.3</b>	<b>495.2</b>	<b>487.0</b>	<b>482.2</b>	<b>470.6</b>
75°	<b>612.6</b>	<b>532.0</b>	<b>502.3</b>	<b>479.8</b>	<b>461.6</b>	<b>452.1</b>	<b>443.7</b>
90°	<b>609.6</b>	<b>521.7</b>	<b>494.0</b>	<b>475.4</b>	<b>450.3</b>	<b>428.9</b>	<b>406.1</b>
110°	<b>604.2</b>	<b>515.1</b>	<b>478.6</b>	<b>446.3</b>	<b>426.5</b>	<b>411.3</b>	<b>383.7</b>
120°	<b>623.3</b>	<b>523.0</b>	<b>484.3</b>	<b>446.9</b>	<b>412.4</b>	<b>389.4</b>	<b>360.2</b>
135°	<b>697.1</b>	<b>563.5</b>	<b>507.1</b>	<b>472.7</b>	<b>435.6</b>	<b>398.5</b>	<b>329.0</b>
150°	<b>828.6</b>	<b>659.0</b>	<b>559.3</b>	<b>507.3</b>	<b>475.7</b>	<b>442.0</b>	<b>374.2</b>
Run VMG	<b>956.8</b>	<b>760.9</b>	<b>645.4</b>	<b>573.6</b>	<b>524.8</b>	<b>491.8</b>	<b>430.8</b>

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<b>Selected Courses</b>							
Windward / Leeward	<b>991.9</b>	<b>803.0</b>	<b>694.7</b>	<b>640.8</b>	<b>609.3</b>	<b>589.3</b>	<b>551.4</b>
Circular Random	<b>837.6</b>	<b>678.0</b>	<b>592.9</b>	<b>543.1</b>	<b>511.5</b>	<b>489.0</b>	<b>455.6</b>
Coastal / Long Distance	<b>988.4</b>	<b>754.9</b>	<b>630.5</b>	<b>563.4</b>	<b>524.1</b>	<b>491.5</b>	<b>436.6</b>
Non Spinnaker	<b>912.4</b>	<b>730.4</b>	<b>631.7</b>	<b>573.6</b>	<b>537.0</b>	<b>511.8</b>	<b>476.3</b>

**Crew Weight**

Default 634kg  
Maximum **648kg**  
Minimum\* **486kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>627.7</b>	<b>0.9559</b>
Double H.OSN	<b>612.2</b>	<b>0.9801</b>
Non Spin GPH	<b>652.0</b>	<b>0.9202</b>
Non Spin OSN	<b>632.4</b>	<b>0.9487</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>40.7°</b>	<b>39.0°</b>	<b>37.3°</b>	<b>36.7°</b>	<b>36.3°</b>	<b>36.3°</b>
Beat VMG	<b>3.51</b>	<b>4.26</b>	<b>4.84</b>	<b>5.08</b>	<b>5.19</b>	<b>5.24</b>	<b>5.36</b>
52°	<b>5.34</b>	<b>6.34</b>	<b>6.87</b>	<b>7.08</b>	<b>7.17</b>	<b>7.22</b>	<b>7.38</b>
60°	<b>5.65</b>	<b>6.59</b>	<b>7.03</b>	<b>7.27</b>	<b>7.39</b>	<b>7.47</b>	<b>7.65</b>
75°	<b>5.88</b>	<b>6.77</b>	<b>7.17</b>	<b>7.50</b>	<b>7.80</b>	<b>7.96</b>	<b>8.11</b>
90°	<b>5.91</b>	<b>6.90</b>	<b>7.29</b>	<b>7.57</b>	<b>8.00</b>	<b>8.39</b>	<b>8.86</b>
110°	<b>5.96</b>	<b>6.99</b>	<b>7.52</b>	<b>8.07</b>	<b>8.44</b>	<b>8.75</b>	<b>9.38</b>
120°	<b>5.78</b>	<b>6.88</b>	<b>7.43</b>	<b>8.06</b>	<b>8.73</b>	<b>9.25</b>	<b>9.99</b>
135°	<b>5.16</b>	<b>6.39</b>	<b>7.10</b>	<b>7.62</b>	<b>8.27</b>	<b>9.03</b>	<b>10.94</b>
150°	<b>4.34</b>	<b>5.46</b>	<b>6.44</b>	<b>7.10</b>	<b>7.57</b>	<b>8.15</b>	<b>9.62</b>
Run VMG	<b>3.76</b>	<b>4.73</b>	<b>5.58</b>	<b>6.28</b>	<b>6.86</b>	<b>7.32</b>	<b>8.36</b>
Gybe Angles	<b>143.6°</b>	<b>147.1°</b>	<b>150.5°</b>	<b>158.1°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>

**Sails Limitations**

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

**Class Division Length**

CDL = **9.129**

**Storm Sails Areas**

Heavy Weather Jib **20.44**  
Storm Jib (JL=8.00) **7.58**  
Storm Trysail **9.33**

**Owner**

<b>BOAT</b>	
Name <b>COSA NOSTRA</b>	Sail Nr <b>ROU-484</b>
File <b>ROU484</b>	Data in <b>meters/kilograms</b>

<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>12.130</b>	E <b>4.392</b> MDT1 <b>0.106</b> MW <b>0.160</b>
IG <b>12.294</b>	J <b>3.424</b> MDL1 <b>0.160</b> GO <b>0.163</b>
ISP <b>13.531</b>	SFJ <b>0.132</b> MDT2 <b>0.072</b> BD <b>0.149</b>
BAS <b>1.311</b>	SPL <b>3.439</b> MDL2 <b>0.131</b> MWT
FSP <b>0.052</b>	TPS <b>4.891</b> TL <b>0.350</b> MCG

<b>INCLINING TEST AND FREEBOARDS</b>		
Inclining Test <b>Current Inclining</b>		
Flotation date <b>12/03/2011</b>	SG <b>1.0280</b>	
FFM <b>0.962</b>	FF <b>0.962</b>	SFFP <b>0.230</b>
FAM <b>0.689</b>	FA <b>0.692</b>	SAFP <b>9.178</b>
W1 <b>40.0</b>	PD1 <b>241.0</b>	WD <b>11.092</b>
W2 <b>40.0</b>	PD2 <b>241.0</b>	GSA <b>50.2</b>
W3 <b>40.0</b>	PD3 <b>241.0</b>	RSA <b>5941.7</b>
W4 <b>40.0</b>	PD4 <b>241.0</b>	PLM <b>2069.0</b>
LCF from stem on CL / on sheer	<b>5.351 / 5.543</b>	
Maximum beam station from stem	<b>5.905</b>	
RM Measured	<b>66.1kg-m</b>	
RM Default	<b>68.7kg-m</b>	
Limit of positive stability / Stab.Index	<b>106.4° / 104.0</b>	
Freeboard at mast at 3.556	<b>0.775</b>	



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

<b>PROPELLER</b>		
Installation <b>Shaft exposed</b>	PRD <b>0.384</b>	
Type <b>Folding 2 blades</b>	PBW <b>0.098</b>	
Twin Screw <b>No</b>	PIPA <b>0.0041</b>	
PSA <b>16.107</b>	PHL <b>0.115</b> ST3 <b>0.087</b> ESL <b>0.911</b>	
PSD <b>0.025</b>	ST1 <b>0.017</b> ST4 <b>0.047</b>	
PHD <b>0.067</b>	ST2 <b>0.075</b> ST5 <b>0.155</b>	

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<b>COMMENTS</b>	

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

<b>CENTERBOARD</b>	
N/A	



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<b>SAILS (Maximum Areas)</b>									
<b>Mainsail</b>	<b>MHB</b>	<b>MUW</b>	<b>MTW</b>	<b>MHW</b>	<b>MQW</b>	<b>Area</b>	<b>Area (r)</b>	<b>Formula</b>	
	0.130	0.98	1.75	2.94	3.79	32.63	33.46	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
<b>Symmetric</b>	<b>SLU</b>	<b>SLE</b>	<b>SL</b>	<b>SHW</b>	<b>SFL</b>	68.70		SL · (SFL + 4·SHW) / 6	
	12.11	12.11	12.11	6.82	6.76				
<b>Asymmetric</b>	<b>SLU</b>	<b>SLE</b>	<b>SL</b>	<b>SHW</b>	<b>SFL</b>	81.98		AS · (SFL + 4·SHW) / 6	
	14.56	12.43	13.49	7.18	7.73				

<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	0.61	1.10	1.95	2.74	3.48	12.42	23.36	Y		29/06/2016	Kevlar	
0.10	0.61	1.10	1.95	2.74	3.48	12.42	23.36	Y		29/06/2016	Kevlar	
0.08	0.57	1.06	1.88	2.65	3.39	12.31	22.38			03/04/2011	Kevlar	Jib Light
0.08	0.57	1.06	1.88	2.65	3.39	12.31	22.38			03/04/2011	Kevlar	Jib Light
0.06	0.55	1.01	1.88	2.64	3.33	12.24	21.96			25/11/2010	Kevlar	Jibtop
0.06	0.55	1.01	1.88	2.64	3.33	12.24	21.96			25/11/2010	Kevlar	Jibtop
0.09	0.50	0.93	1.79	2.67	3.52	11.90	21.35			25/03/2011	Dacron	Heavy Jib

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>GRE-56</b>				
Date <b>12/03/2011</b>				
Comment				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
2	Anchor	4.0	7.75	Folding, Rope-
4	Anchor	6.0	7.75	Danforth, Rope-
4	Feels	6.5	5.05	
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
1	Engine	NANNI DIESEL	N2.14 ,	
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Description</b>	
4	Deck-Gear	7.5		

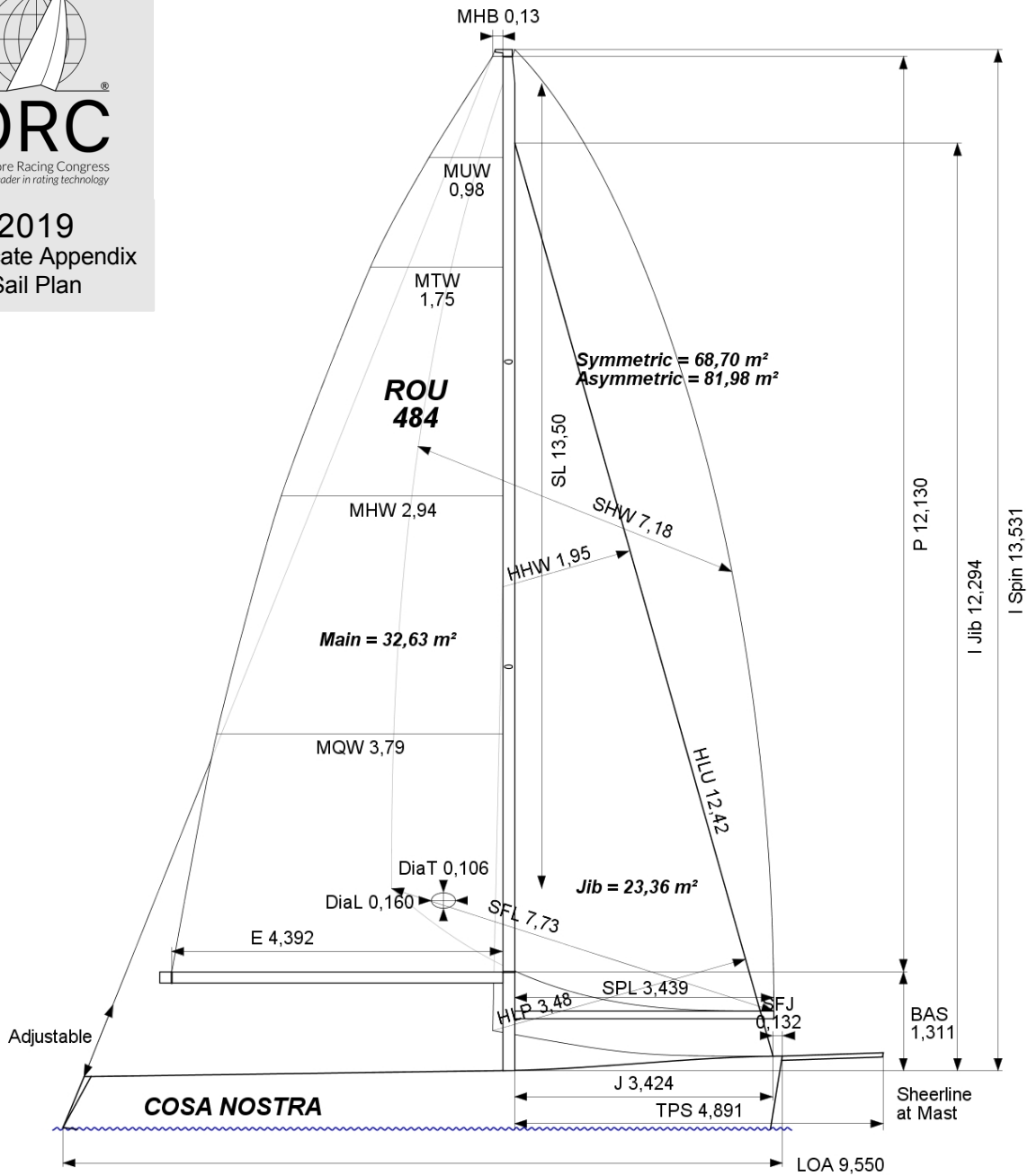
<b>MEASUREMENT INVENTORY</b>							
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG</b>	<b>Condtn Description</b>
1	Tank	FUEL	PVC HARD	25.0	7.75		5-0
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>			
2	Battery		7.40	62Ah			
1	Battery		7.40	62Ah			
3	Misc	3.3	2.40	Chemical WC			
2	Misc	2.0	2.90	Fire extinguisher			
1	Misc	5.0	3.40	Fire extinguisher			



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**SAILS INVENTORY**

**MAINSAIL (1)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
3	0.13	0.98	1.75	2.94	3.79	32.64		31/07/2014	SAIL LOFT	Carbon	

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
2	0.10	0.61	1.10	1.95	2.74	3.48	12.42	102%	23.36	Y			29/06/2016	SAIL LOFT	Kevlar	
2	0.10	0.61	1.10	1.95	2.74	3.48	12.42	102%	23.36	Y			29/06/2016	SAIL LOFT	Kevlar	
7	0.08	0.57	1.06	1.88	2.65	3.39	12.31	99%	22.38				03/04/2011	SAIL LOFT	Kevlar	Jib Light
7	0.08	0.57	1.06	1.88	2.65	3.39	12.31	99%	22.38				03/04/2011	SAIL LOFT	Kevlar	Jib Light
6	0.06	0.55	1.01	1.88	2.64	3.33	12.24	97%	21.96				25/11/2010	SAIL LOFT	Kevlar	Jibtop
6	0.06	0.55	1.01	1.88	2.64	3.33	12.24	97%	21.96				25/11/2010	SAIL LOFT	Kevlar	Jibtop
3	0.09	0.50	0.93	1.79	2.67	3.52	11.90	103%	21.35				25/03/2011	DEME	Dacron	Heavy Jib

**SYMMETRIC SPINNAKERS (1)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
2	12.11	12.11	12.11	6.82	6.76	68.71		25/03/2011	INCIDENCE	Nylon	0.75

**ASYMMETRIC SPINNAKERS (1)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
2	14.56	12.43	13.50	7.18	7.73	81.99	asym		05/08/2015		Nylon	