

BOAT Name COSA NOSTRA Sail Nr ROU-484	GPH 609.7	HULL Length Overall 9.550m Maximum Beam 2.964m Displacement 2,873kg Draft 2.088m Plan Review IMS Reg. Division Performance Dynamic Allowance 0.000% Hull Construction Solid Carbon Rudder No Crew Arm Extension IMSL 9.361m VCGD -0.067m Sink 14.86kg/mm RL 8.858m VCGM -0.034m WS 19.15m² LSM0 9.441m Displacement/Length ratio 3.4141
GENERAL Class GRAND SURPRISE Designer JOUBERT-NIVELT Builder ARCHAMBAULT Series 10/1999 Age 03/2005 Age Allowance 0.487% Offset File H00301.off - 27/06/2000 10:18:42 Measurement by - 29/03/2011		



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	592.5			663.1		
Time on Time	1.0126			1.0180		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	694.7	542.0	478.4	896.7	663.9	580.4
Time on Time	0.9717	1.2454	1.4109	0.7528	1.0167	1.1629

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1029.3	846.8	745.4	709.5	696.3	689.8	676.5
52°	675.3	568.0	524.0	508.4	502.2	498.9	488.7
60°	639.4	546.6	512.1	495.0	486.8	482.2	470.5
75°	614.8	532.5	502.5	479.6	461.2	451.6	443.3
90°	609.1	521.4	495.0	475.3	449.7	428.0	405.2
110°	601.3	513.4	477.0	445.7	426.7	409.8	379.8
120°	619.4	520.6	481.6	443.9	410.2	387.9	354.6
135°	693.2	559.3	504.3	468.7	430.6	392.8	324.5
150°	824.3	657.0	556.5	504.5	472.1	437.5	368.8
Run VMG	951.8	758.7	642.6	570.5	522.6	489.6	427.3

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VPP Ver. **2020 1.02**
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Crew Weight
Default 634kg
Maximum **648kg**
Minimum* **486kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **652.4 0.9197**
Non Spin OSN **632.7 0.9484**

Selected Courses							
Windward / Leeward	990.5	802.7	694.0	640.0	609.4	589.7	551.9
Circular Random	836.5	677.1	592.0	542.3	510.6	488.0	454.4
Coastal / Long Distance	986.7	754.5	629.8	562.5	523.4	490.7	434.6
Non Spinnaker	913.7	731.1	632.1	573.8	537.0	511.9	476.5

Sails Limitations
Headsails **5** Spinnakers **4**

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	42.4°	41.3°	39.4°	37.5°	37.1°	36.8°	36.8°
Beat VMG	3.50	4.25	4.83	5.07	5.17	5.22	5.32
52°	5.33	6.34	6.87	7.08	7.17	7.22	7.37
60°	5.63	6.59	7.03	7.27	7.40	7.47	7.65
75°	5.86	6.76	7.16	7.51	7.81	7.97	8.12
90°	5.91	6.90	7.27	7.57	8.01	8.41	8.89
110°	5.99	7.01	7.55	8.08	8.44	8.78	9.48
120°	5.81	6.92	7.47	8.11	8.78	9.28	10.15
135°	5.19	6.44	7.14	7.68	8.36	9.17	11.09
150°	4.37	5.48	6.47	7.14	7.63	8.23	9.76
Run VMG	3.78	4.75	5.60	6.31	6.89	7.35	8.42
Gybe Angles	141.0°	147.0°	150.0°	158.0°	180.0°	180.0°	180.0°

Class Division Length
CDL = **9.106**

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

Owner

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

RIG	
Forestay Tension Aft	Spreaders 2
Inner Stay None Fitted	Runners/Checkstays 0
Carbon Mast No	Jib Furler No
Fiber Rigging No	Main Furler No
Non-Circular Rigging No	
Articulated Bowsprit No	
P 12.130	E 4.392 MDT1 0.106 MW 0.160
IG 12.294	J 3.424 MDL1 0.160 GO 0.163
ISP 13.531	SFJ 0.132 MDT2 0.072 BD 0.149
BAS 1.311	SPL 3.439 MDL2 0.131 MWT
FSD 0.026	TPS 4.891 TL 0.350 MCG

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 12/03/2011	SG 1.0280	
FFM 0.962	FF 0.962	SFFP 0.230
FAM 0.689	FA 0.692	SAFP 9.178
W1 40.0	PD1 241.0	WD 11.092
W2 40.0	PD2 241.0	GSA 50.2
W3 40.0	PD3 241.0	RSA 5941.7
W4 40.0	PD4 241.0	PLM 2069.0
LCF from stem on CL / on sheer		5.351 / 5.543
Maximum beam station from stem		5.905
RM Measured		66.1kg-m
RM Default		68.5kg-m
Limit of positive stability / Stab.Index		106.4° / 104.0
Freeboard at mast at 3.556		0.775



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MIZZEN RIG AND SAILS	
N/A	

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

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COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.16	0.96	1.71	2.89	3.69	32.08	32.83	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	74.08		SL · (SFL + 4·SHW) / 6	
	12.97	12.97	12.97	6.89	6.71				
Asymmetric	SLU	SLE	SL	SHW	SFL	86.32		AS · (SFL + 4·SHW) / 6	
	14.49	12.92	13.71	7.45	7.99				

HEADSAILS												
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	Flying	Meas.Date	Material	Comment
0.10	0.61	1.10	1.95	2.74	3.48	12.42	23.36	Y	No	29/06/2016	Kevlar	
0.09	0.50	0.93	1.79	2.67	3.52	11.90	21.35		No	25/03/2011	Dacron	HEAVY JIB

MEASUREMENT INVENTORY				
Measurer GRE-56				
Date 12/03/2011				
Comment				
Internal Ballast total = 0.0				
Id	Item	Weight	Distance	VCG Description
2	Anchor	4.0	7.75	Folding, Rope-
4	Anchor	6.0	7.75	Danforth, Rope-
4	Tools	6.5	6.05	
Id	Item	Maker	Model	
1	Engine	NANNI DIESEL	N2.14 ,	
Id	Item	Weight	Description	
4	Deck Gear	7.5		

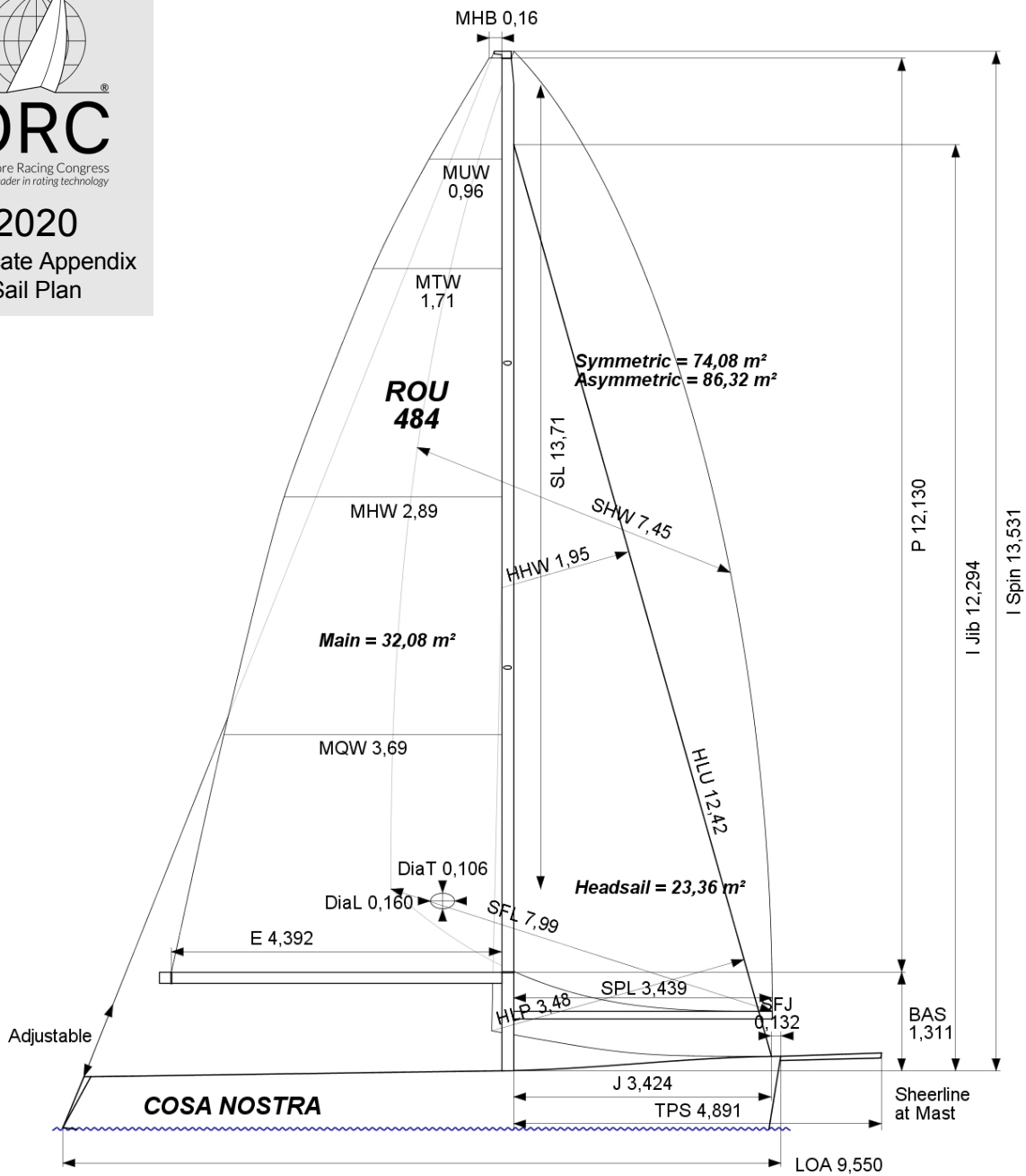
MEASUREMENT INVENTORY							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
1	Tank	FUEL	PVC HARD	25.0	7.75		5-0
Id	Item	Weight	Distance	VCG Description			
2	Battery		7.40	62Ah			
1	Battery		7.40	62Ah			
3	Misc	3.3	2.40	Chemical WC			
2	Misc	2.0	2.90	Fire extinguisher			
1	Misc	5.0	3.40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



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
MN	0.16	0.96	1.71	2.89	3.69	32.08		05/07/2019	one	Carbon	

HEADSAILS (2)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	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	No		29/06/2016	SAIL LOFT	Kevlar	
3	0.09	0.50	0.93	1.79	2.67	3.52	11.90	103%	21.35		No		25/03/2011	DEME	Dacron	HEAVY JIB

SYMMETRIC SPINNAKERS (2)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
s	12.97	12.97	12.97	6.89	6.71	74.09		06/07/2019	one	Nylon	
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
as	14.49	12.92	13.71	7.45	7.99	86.32	asym		06/07/2019	one	Nylon	