



World Leader in Rating Technology

2017 ORC Club Certificate

Rating Office

**PATRICIO D. GUTIERREZ
C. GRIERSON Y
COSTANERASUR
Y.C.A**



Certificate

Number **387001**
Issued On **10/03/2017**
ORC Ref **ARG00004512**
VPP Ver. **2017 1.00**
Valid until **31/12/2017**

Crew Weight

Declared **620kg**
Default* **551kg**
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	663,1	0,9049
Double H.OSN	646,5	0,9281
Non Spin GPH	683,6	0,8777
Non Spin OSN	664,6	0,9028

Sails Limitations

Headsails **5** Spinnakers **3**

Spinnaker configuration

Symmetric: **Yes** **77,08**
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = **8,121**

Stability (Estimated)

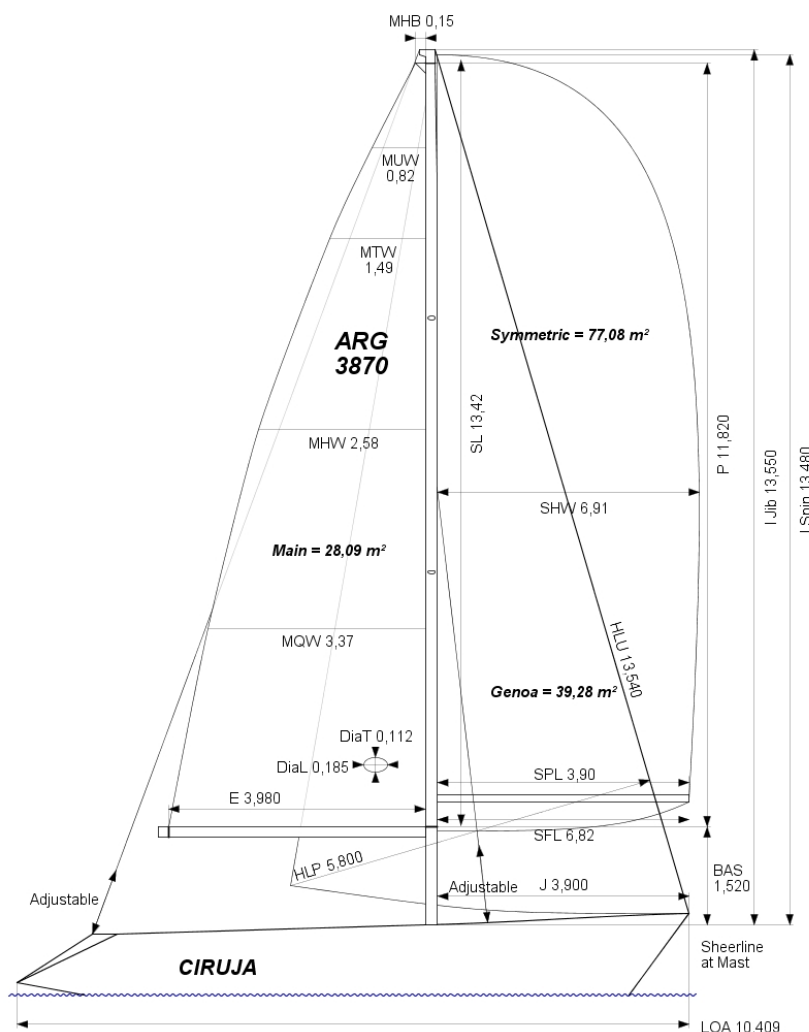
Limit Positive Stab.: **115,8°**
Stability Index: **113,0**

Owner

**JUAN RUGGERO
BUENOS AIRES**

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

Signature



BOAT		GPH	HULL	
Name	CIRUJA	659,6	Data File	ARG3870
Sail Nr	ARG-3870		LOA	10,409m
CLASS			Offset File	ARG3870-2.off
Class	PANDORA34		Displacement	4.457kg
Designer	NESTOR VOLKER		MB	3,520m
Builder	AST. MARCO		Draft	1,787m
Series	03/1992		IMS Division	Cruiser/Racer
Age Date	03/1992		Dynamic All.	0,038%
Age Allowance	0,487%		Fwd Accom.	Yes
COMMENTS			Construction	Solid
PROPELLER			Fiber Rigging	No
Installation	Strut	PRD 0,428	Aramid Core	No
Type	Folding 2 blades	PBW 0,113	Carbon Rudder	No
		PIPA 0,0034	Light Stanchions	
SCORING OPTIONS			IMSL	8,691m
			VCGD	0,034m
			Sink	15,85kg/mm
			RL	7,549m
			VCGM	0,006m
			WS	22,06m²
			LSM0	8,552m
			Displacement/Length ratio	7,1259
			Water Ballast	0
			Trim Tab	No
			CENTERBOARD	
			N/A	

	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	641,8			715,6		
Time On Time	0,9348			0,9433		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	756,0	584,8	518,4	979,3	721,6	620,1
Time on Time	0,8928	1,1542	1,3022	0,6893	0,9354	1,0886

BOAT Name CIRUJA Sail Nr ARG-3870 File ARG3870 Data in meters/kilograms		INCLINING TEST AND FREEBOARDS Inclining Test Club Estimated VCG Flotation date 27/07/2016 SG 1,0000 FFM 1,220 FF 1,228 SFFP 0,869 FAM 0,938 FA 0,947 SAFF 8,855 LCF from stem on CL / on sheer 5,675 / 5,919 Maximum beam station from stem 6,182 RM Measured 95,3kg-m RM Default 92,6kg-m Limit of positive stability / Stab.Index 115,8° / 113,0 Freeboard at mast at 3,900 1,080		 World Leader in Rating Technology 2017 Measurements Datasheet												
RIG Forestay Tension Aft Spreaders 2 Inner Stay Adjustable Runners 0 Carbon Mast No Jumper Struts None Taper Hollows No Jib Furler No Fiber Rigging No Main Furler No Lenticular Rigging No Without Backstay No Articulated Bowsprit No P 11,820 E 3,980 MDT1 0,112 MW 0,145 IG 13,550 J 3,900 MDL1 0,185 GO 0,180 ISP 13,480 SFJ 0,000 MDT2 0,110 BD 0,164 BAS 1,520 SPL 3,900 MDL2 0,145 MWT FSP 0,070 TPS TL 1,870 MCG		PROPELLER Installation Strut PRD 0,428 Type Folding 2 blades PBW 0,113 Twin Screw No PIPA 0,0034 ST1 0,045 ST3 0,169 ST5 0,340 ST2 0,180 ST4 0,110 EDL 1,960														
MIZZEN RIG AND SAILS N/A		MOVEABLE BALLAST N/A														
COMMENTS 		CENTERBOARD N/A														
SAILS INVENTORY																
MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
M3	0,150	0,82	1,49	2,58	3,37	28,09	PG	27/07/2016	NORTH	Kevlar						
HEADSAILS (2)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
G1LM	0,07	0,74	1,45	2,90	4,33	5,80	13,54	149%	39,29			PG	27/07/2016	NORTH	Kevlar	
G1MH	0,07	0,70	1,35	2,78	4,25	5,79	13,53	148%	38,34			PG	27/07/2016	NORTH	Kevlar	
SYMMETRIC SPINNAKERS (3)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
S2	13,42	13,42	13,42	6,91	6,82	77,08	PG	10/01/2014	QUANTUM	Nylon	* Copied from legacy *					
S2	13,34	13,34	13,34	6,91	6,82	76,62	PG	27/07/2016	ELVSTROM	Nylon						
S3	13,08	13,08	13,08	6,69	6,83	73,23		10/01/2014	QUANTUM	Nylon						
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
MEASUREMENT INVENTORY																
Measurer P. GUTIERREZ PG Date 27/07/2016 Comment																
Id	Item	Weight	Distance	VCG	Description											
Id	Item	Maker	Model													
C5	Engine	VOLVO	28 HP													
Id	Item	Weight	Description													
MEASUREMENT INVENTORY																
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description								
C4	Tank	GAS OIL	METAL	60,0	8,09	0,00	12,0									
B5	Tank	AGUA	METAL	124,0	5,59	0,00	5,0									
Id	Item	Weight	Distance	VCG	Description											
B5	Battery	30,0	7,50	0,00	2 BATERIAS 12 V. 70 AMP											



World Leader in Rating Technology

2017

ORC Club Certificate Appendix

BOAT

Name **CIRUJA**
Sail Nr **ARG-3870**

Certificate Number **387001**
Issued On **10/03/2017**

TIME ALLOWANCES

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1106,2	924,4	823,5	768,6	740,8	725,6	715,0
52°	718,8	605,0	551,0	528,7	518,5	512,5	507,4
60°	676,2	573,6	533,9	514,7	502,9	496,0	489,7
75°	641,1	553,0	520,9	501,4	485,1	471,9	459,7
90°	641,1	551,4	518,1	498,1	480,3	463,3	438,6
110°	686,7	565,6	519,0	492,2	466,9	447,8	429,5
120°	707,1	579,4	525,0	497,5	472,3	448,5	412,6
135°	777,8	631,7	549,7	514,3	489,7	465,6	422,3
150°	911,6	721,9	611,5	545,0	513,6	490,7	446,8
Run VMG	1052,6	833,6	704,6	618,6	558,7	522,5	477,5

Selected Courses

Windward / Leeward	1079,4	879,0	764,1	693,6	649,8	624,0	596,3
Circular Random	908,4	733,9	640,2	585,4	551,4	528,9	500,6
Ocean for PCS	1114,4	861,6	718,9	631,4	574,2	534,0	477,8
Non Spinnaker	950,6	764,0	662,8	603,2	565,9	541,3	509,8

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	43,9°	43,6°	43,1°	41,5°	40,2°	39,3°	38,8°
Beat VMG	3,25	3,89	4,37	4,68	4,86	4,96	5,03
52°	5,01	5,95	6,53	6,81	6,94	7,02	7,09
60°	5,32	6,28	6,74	6,99	7,16	7,26	7,35
75°	5,62	6,51	6,91	7,18	7,42	7,63	7,83
90°	5,62	6,53	6,95	7,23	7,50	7,77	8,21
110°	5,24	6,36	6,94	7,31	7,71	8,04	8,38
120°	5,09	6,21	6,86	7,24	7,62	8,03	8,72
135°	4,63	5,70	6,55	7,00	7,35	7,73	8,53
150°	3,95	4,99	5,89	6,61	7,01	7,34	8,06
Run VMG	3,42	4,32	5,11	5,82	6,44	6,89	7,54
Gybe Angles	146,8°	150,6°	152,0°	158,2°	180,0°	180,0°	180,0°