



World Leader in Rating Technology

2017 ORC Club Certificate

Rating Office

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



Certificate

Number **419301**
Issued On **12/01/2017**
ORC Ref **ARG00004034**
VPP Ver. **2017 1.00**
Valid until **31/12/2017**

Crew Weight

Declared	568kg
Default*	568kg
Non Manual Pwr	No

Special Scoring

	ToD	ToT
Non Spin GPH	696,3	0,8617
Non Spin OSN	676,5	0,8869

Sails Limitations

Headsails **5** Spinnakers **3**
Dacron Sails

Spinnaker configuration
Symmetric: **Yes** **77,98**
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = 7,984

Stability (Estimated)

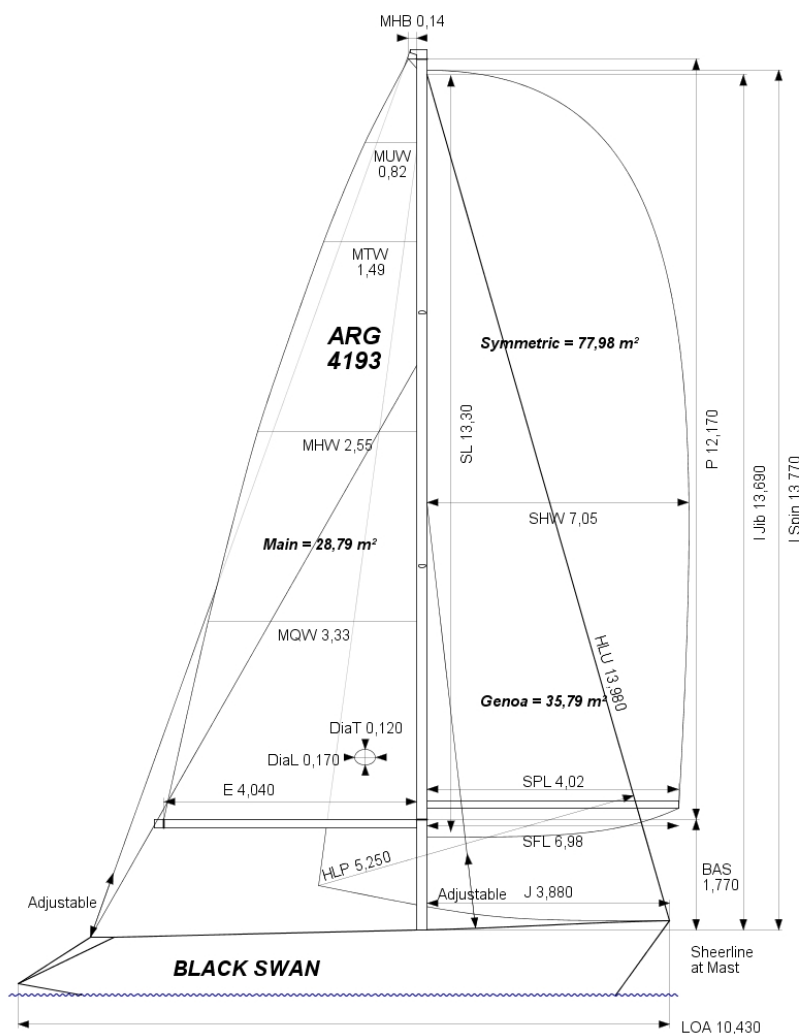
Limit Positive Stab.: **112,2°**
Stability Index: **111,0**

Owner

**IGNACIO ADURIZ
VICTORIA OCAMPO 785
SAN ISIDRO**

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

Signature



BOAT		GPH	HULL	
Name	BLACK SWAN	668,7	Data File	ARG4193
Sail Nr	ARG-4193		Offset File	FOLLIAOFF
CLASS			Displacement	4.943kg
Class	PANDORA34		LOA	10,430m
Designer	NESTOR VOLKER		MB	3,538m
Builder	AST. MARCO		Draft	1,622m
Series	03/1992		IMS Division	Cruiser/Racer
Age Date	03/1992		Fwd Accom.	Yes
Age Allowance	0,487%		Fiber Rigging	No
COMMENTS			Crew Arm Ex	No
PROPELLER			Light Stanchions	No
Installation	Strut	PRD 0,380	IMSL	8,818m
Type	Folding 2 blades	PBW 0,110	VCGD	0,004m
		PIPA 0,0031	Sink	16,46kg/mm
SCORING OPTIONS			RL	7,149m
			VCGM	0,057m
			WS	22,69m²
			LSM0	8,736m
			Displacement/Length ratio	7,4140
			Water Ballast	0
			Trim Tab	No
			CENTERBOARD	
			N/A	

	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	650,8			727,5		
Time On Time	0,9219			0,9278		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	766,2	592,6	527,7	992,5	733,7	633,3
Time on Time	0,8810	1,1391	1,2792	0,6801	0,9200	1,0658



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ORC Club Certificate Appendix

BOAT

Name **BLACK SWAN**
Sail Nr **ARG-4193**

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TIME ALLOWANCES

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1139,0	953,1	850,9	789,8	762,9	749,4	744,9
52°	738,6	623,3	561,6	535,9	525,3	520,0	516,3
60°	693,8	586,8	541,1	520,5	509,1	503,3	498,9
75°	656,7	561,5	526,0	506,7	491,8	479,6	467,9
90°	656,5	560,1	523,2	501,9	487,0	471,1	446,4
110°	684,9	565,3	519,1	493,5	469,9	452,4	435,6
120°	704,5	578,9	525,0	498,4	475,1	452,4	419,2
135°	773,4	632,0	550,2	515,0	491,6	468,9	427,1
150°	906,5	720,2	612,0	545,5	514,3	492,4	450,6
Run VMG	1046,7	831,5	704,9	619,2	558,8	522,8	479,7

Selected Courses

Windward / Leeward	1092,9	892,3	777,9	704,5	660,8	636,1	612,3
Circular Random	920,3	743,7	648,9	593,7	559,9	538,1	511,8
Ocean for PCS	1128,2	873,2	729,0	640,6	583,0	542,8	486,9
Non Spinnaker	969,7	778,6	674,9	613,9	576,3	551,8	522,1

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	44,0°	42,9°	43,5°	42,3°	41,1°	40,9°	40,9°
Beat VMG	3,16	3,78	4,23	4,56	4,72	4,80	4,83
52°	4,87	5,78	6,41	6,72	6,85	6,92	6,97
60°	5,19	6,13	6,65	6,92	7,07	7,15	7,22
75°	5,48	6,41	6,84	7,10	7,32	7,51	7,69
90°	5,48	6,43	6,88	7,17	7,39	7,64	8,06
110°	5,26	6,37	6,93	7,29	7,66	7,96	8,26
120°	5,11	6,22	6,86	7,22	7,58	7,96	8,59
135°	4,66	5,70	6,54	6,99	7,32	7,68	8,43
150°	3,97	5,00	5,88	6,60	7,00	7,31	7,99
Run VMG	3,44	4,33	5,11	5,81	6,44	6,89	7,51
Gybe Angles	146,8°	150,9°	152,4°	158,2°	180,0°	180,0°	180,0°