

BOAT
Name CENTINELA Sail Nr PER 41

GPH
609,7

HULL					
Length Overall	12,330 m				
Maximum Beam	3,938 m				
Displacement	7,538 kg				
Draft	2,222 m				
IMS Reg. Division	Cruiser/Racer				
Dynamic Allowance	0,149%				
Fwd Accommodation	Yes				
Hull Construction	Solid				
Carbon Rudder	No				
Trim Tab	No				
IMS L	10,254	VCGD	-0,067	VCGM	-0,061
Sink	21,39 kg/mm	Wetted Area	30,61 m²		



2009
ORC International
Certificate

GENERAL
Class Frers 40
Designer Frers
Builder Arribas
Series 01/1990
Age 01/1990
Age Allowance 1,235%
Offset File sansat.off - 18/08/1991 12:54:58
Measurement by Ricardo Chalco - 08/08/1991

SCORING OPTIONS	OFFSHORE			INSHORE		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	609,7			677,9		
Time On Time	0,9841			0,9957		
Performance Line	PLT	PLD		PLT	PLD	
	0,871	108,0		1,044	303,7	
Triple Number	Low	Medium	High	Low	Medium	High
	0,9667	1,2477	1,4111	0,7369	1,0005	1,1717

Rating Office
Federacion Peruana Vela
Bolognesi 761, Callao
5, Peru
Aguiles Rubina, Rat. Ofi.
rubina@terra.com.pe

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1016,6	838,8	753,7	709,7	682,5	665,0	648,5
52°	654,3	551,7	508,8	488,9	477,2	469,7	462,2
60°	610,5	527,8	489,4	471,2	461,1	454,3	446,7
75°	579,3	510,8	475,7	454,2	440,5	432,5	422,6
90°	584,4	503,1	466,2	448,1	437,5	421,8	405,8
110°	596,2	513,4	472,4	445,4	423,6	409,4	395,2
120°	635,0	533,3	484,8	454,7	429,9	409,0	382,8
135°	731,0	586,8	518,0	478,6	452,0	428,8	390,3
150°	874,9	691,2	580,9	520,3	482,5	456,5	414,1
Run VMG	1010,3	798,1	670,5	590,9	536,3	497,8	448,7

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Crew Weight	
Declared	744 kg
Default*	744 kg

Special Scoring	
ToD	ToT
Double Handed 612,6	0,9794
Non Spinnaker 649,1	0,9243

Selected Courses							
Windward / Leeward	1033,0	831,9	722,9	658,4	616,5	587,9	554,2
Circular Random	839,2	678,2	591,8	541,1	509,4	488,1	461,0
Ocean for PCS	896,6	709,3	605,0	541,0	498,6	468,3	425,7
Non Spinnaker	911,1	728,8	629,0	569,5	531,7	506,5	474,9

Sails Limitations		
Genoa	Jibs	Spinnakers
4	3	4
Spinnaker configuration Symmetric		

Storm Sails Areas	
Heavy Weather Jib	38,03
Storm Jib (JL=10,91)	14,09
Storm Trysail	11,45

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	44,7°	44,1°	41,0°	39,3°	38,5°	37,8°	37,2°
Beat VMG	3,54	4,29	4,78	5,07	5,27	5,41	5,55
52°	5,50	6,52	7,08	7,36	7,54	7,66	7,79
60°	5,90	6,82	7,36	7,64	7,81	7,93	8,06
75°	6,21	7,05	7,57	7,93	8,17	8,32	8,52
90°	6,16	7,16	7,72	8,03	8,23	8,53	8,87
110°	6,04	7,01	7,62	8,08	8,50	8,79	9,11
120°	5,67	6,75	7,43	7,92	8,37	8,80	9,40
135°	4,92	6,13	6,95	7,52	7,96	8,40	9,22
150°	4,11	5,21	6,20	6,92	7,46	7,89	8,69
Run VMG	3,56	4,51	5,37	6,09	6,71	7,23	8,02
Gybe Angles	142,5°	146,3°	150,9°	161,0°	166,1°	170,8°	173,3°

Owner
Miguel Caillaux
Los Durazos 138,
Monterrico
Surco
mcaillaux@gmail.com

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

Signature

BOAT	
Name CENTINELA File CENTINELAdxt	Sail Nr PER 41 Data in meters/kilograms

RIG	
Forestay Tension Aft Inner Forestay Adjustable Carbon Mast No Taper Hollows No	Spreaders 3 Runners 2 Jumpers None w/o Backstay No
P 14,600 E 4,480 MDT1 0,122 TL 2,590 IG 16,689 J 4,920 MDL1 0,224 MWT ISP 16,604 SFJ 0,000 MDT2 0,121 MCG SPS 5,954 SPL 4,845 MDL2 0,175 CPW 2,300 BAS 1,734 TPS 0,000 MW 0,172 BD 0,160 BAL 0,450 FSP 0,066 GO 0,200 BWT	

HEAVY ITEMS		
Bow Thruster No Windlass No Heavy Deck No Headliners No	Generator No Jib Furler No Main Furler No Water Heater No	Air Condition No Desalinator No
Anchor Weight 30,0 Anchor LCG 1,13	Heavy Items Adjustment 0,0016 Total Gyradius Adjustment 0,0225	

MIZZEN RIG AND SAILS	
N/A	

COMMENTS	
Ex San Saturio	

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 06/05/2003		SG 1,0255
FFM 1,218 FAM 1,007	FF 1,218 FA 1,007	SFFP 0,600 SAFP 10,810
W1 23,750 W2 47,500 W3 71,250 W4 95,000	PD1 59,5 PD2 119,0 PD3 178,5 PD4 244,0	WD 12,450 GSA 38,0 RSA 7800,0 PLM 2130,0
Maximum beam station from stem RM Measured / Default		6,980 184,3 / 171,5
Limit of positive stability Stability Index		115,8° 117,4
Freeboard at mast at 4,920		1,036

PROPELLER		
Installation Out of Aperture Type Feathering 2 blades Twin Screw No	PRD 0,460 PBW 0,155 PIPA 0,0058	
PSA 19,000 PHL 0,145 ST3 0,170 ESL 1,080 PSD 0,032 ST1 0,012 ST4 0,057 PHD 0,071 ST2 0,131 ST5 0,245		

WATER BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)										
Mainsail	HB	MGT	MGU	MGM	MGL	MSW		Area	Formula	
	0,180	0,98	1,70	2,90	3,83	21,00		39,35	P/8 · (E + 2·MGL+ 2·MGM + 1.5·MGU + MGT + 0.5·HB)	
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG	63,58	0.1125·JL·(1.445·LPG+2·JGL+2·JGM+1.5·JGU+JGT+0.5·JH)	
	0,00	0,91	1,82	3,64	5,45	17,49	7,27			
Symmetric	SL	SMG	SF					122,63	SL · (SF + 4·SMG) / 6	
	16,23	9,12	8,86							



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