

BOAT
Name HURACAN Sail Nr PER 5050

GPH
550.5

HULL					
Length Overall	15.090 m				
Maximum Beam	4.496 m				
Displacement	12,008 kg				
Draft	2.676 m				
IMS Reg. Division	Cruiser/Racer				
Dynamic Allowance	0.364%				
Fwd Accommodation	Yes				
Hull Construction	Light				
Carbon Rudder	No				
Trim Tab	No				
IMS L	14.046	VCGD	0.170	VCGM	0.170
Sink	35.34 kg/mm	Wetted Area	48.41 m²		



2010
ORC International
Certificate

GENERAL
Class Macchi 50
Designer Macchi
Builder
Series 01/1991
Age 01/1991
Age Allowance 0.975%
Offset File huracan.off - 29/10/2001 04:08:12
Measurement by Carrion/Chalco - 28/10/2001

SCORING OPTIONS						
	OFFSHORE			INSHORE		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	550.5			619.9		
Time On Time	1.0900			1.0889		
Performance Line	PLT	PLD		PLT	PLD	
	0.929	87.3		1.090	268.2	
Triple Number	Low	Medium	High	Low	Medium	High
	1.0624	1.3862	1.5766	0.8048	1.0964	1.2919

Rating Office

Roberto Peschiera
peschiera56@gmail.com
Asociación de Veleros
Oceánicos del Peru

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	953.7	778.8	697.8	651.1	621.8	607.2	602.2
52°	606.6	509.5	462.8	441.6	429.3	421.5	416.4
60°	564.2	481.4	440.5	422.9	412.4	405.5	399.4
75°	534.4	460.6	424.3	402.5	391.4	384.5	376.5
90°	529.3	446.7	415.0	402.3	385.5	371.8	359.8
110°	531.4	451.1	412.9	388.4	375.2	366.2	354.1
120°	559.2	469.7	424.3	395.6	373.7	357.0	338.8
135°	653.8	525.3	457.5	419.3	392.7	371.0	332.8
150°	786.4	618.9	525.9	464.7	426.8	400.2	359.2
Run VMG	908.0	714.6	607.2	535.6	483.5	445.6	394.7

Certificate
Number PERI22
ORC Ref PER00000329
Issued On 03/07/2010
VPP Ver. 2010 1.11
Valid until 31/03/2011

Selected Courses							
Windward / Leeward	948.2	760.5	661.4	600.5	559.5	532.6	503.4
Circular Random	763.3	614.4	534.0	486.6	456.9	437.4	413.7
Ocean for PCS	816.6	643.0	545.8	485.7	445.6	416.9	377.1
Non Spinnaker	835.8	666.0	572.1	515.4	479.2	455.0	425.7

Crew Weight
Declared 1,058 kg
Default* 1,058 kg
Non Manual Power No

Special Scoring		
	ToD	ToT
Double Handed	553.9	1.0833
Non Spinnaker	590.7	1.0157
N/S Perf. Line	43.7	0.793

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	44.8°	43.3°	41.3°	40.2°	39.3°	39.1°	39.4°
Beat VMG	3.77	4.62	5.16	5.53	5.79	5.93	5.98
52°	5.93	7.07	7.78	8.15	8.39	8.54	8.65
60°	6.38	7.48	8.17	8.51	8.73	8.88	9.01
75°	6.74	7.82	8.49	8.94	9.20	9.36	9.56
90°	6.80	8.06	8.67	8.95	9.34	9.68	10.01
110°	6.77	7.98	8.72	9.27	9.60	9.83	10.17
120°	6.44	7.66	8.48	9.10	9.63	10.08	10.63
135°	5.51	6.85	7.87	8.59	9.17	9.70	10.82
150°	4.58	5.82	6.85	7.75	8.44	9.00	10.02
Run VMG	3.96	5.04	5.93	6.72	7.45	8.08	9.12
Gybe Angles	142.1°	144.2°	148.9°	152.8°	161.2°	167.1°	171.8°

Sails Limitations		
Genoas	Jibs	Spinnakers
4	3	4
Spinnaker configuration Symmetric		

Storm Sails Areas	
Heavy Weather Jib	63.03
Storm Jib (JL=14.04)	23.34
Storm Triesail	20.75

Owner

Jorge Lira
AV. Gral. Pezet 877
San Isidro, Lima 27
Peru

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

Signature

BOAT	
Name HURACAN	Sail Nr PER 5050
File PER5050.dxt	Data in meters/kilograms

RIG	
Forestay Tension Aft	Spreaders 3
Inner Forestay Adjustable	Runners 2
Carbon Mast No	Jumpers None
Taper Hollows No	Jib Furler No
Fiber Rigging No	w/o Backstay No

P 20.100	E 5.900	MDT1 0.142	TL 3.200
IG 21.490	J 5.900	MDL1 0.238	MWT
ISP 21.740	SFJ	MDT2 0.125	MCG
SPS 4.760	SPL 5.820	MDL2 0.185	CPW 2.776
BAS 1.452	TPS	MW 0.178	BD 0.260
BAL 0.152	FSP 0.088	GO 0.210	BWT

MIZZEN RIG AND SAILS	
N/A	

COMMENTS

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 04/08/2008		SG 1.0255
FFM 1.443	FF 1.443	SFFP 0.450
FAM 1.160	FA 1.160	SAFP 13.625
W1 36.250	PD1 58.8	WD 15.400
W2 72.500	PD2 117.5	GSA 38.0
W3 108.75	PD3 176.2	RSA 7800.0
W4 145.00	PD4 235.0	PLM 2130.0
Maximum beam station from stern		8.708
RM Measured / Default		352.5 / 369.2
Limit of positive stability		108.0°
Stability Index		113.6
Freeboard at mast at 5.900		1.332

PROPELLER			
Installation Shaft	PRD 0.566		
Type Folding	PBW 0.144		
Twin Screw No	PIPA 0.0054		
PSA 16.400	PHL 0.187	ST3 0.105	ESL 1.105
PSD 0.038	ST1 0.023	ST4 0.074	
PHD 0.063	ST2 0.074	ST5 0.200	

WATER BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)										
Mainsail	HB	MGT	MGU	MGM	MGL	MSW	Area	Area (r)	Formula	
	0.180	1.12	1.94	3.27	4.28	0.00	63.11	63.46	P/8 · (E + 2·MGL + 2·MGM + 1.5·MGU + MGT + 0.5·HB)	
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG			
	0.00	1.00	2.00	4.00	6.00	22.40	8.00	89.59		
									0.1125·JL·(1.445·LPG+2·JGL+2·JGM+1.5·JGU+JGT+0.5·JH)	
Symmetric	SL	SMG	SF							
	21.00	10.42	21.00				219.38		SL · (SF + 4·SMG) / 6	




ORC
World Leader in Rating Technology

2010
IMS Measurement
Certificate

Certificate

Number **PERI22**
ORC Ref **PER00000329**
Issued On **03/07/2010**
VPP Ver. **2010 1.11**
Valid until **31/03/2011**

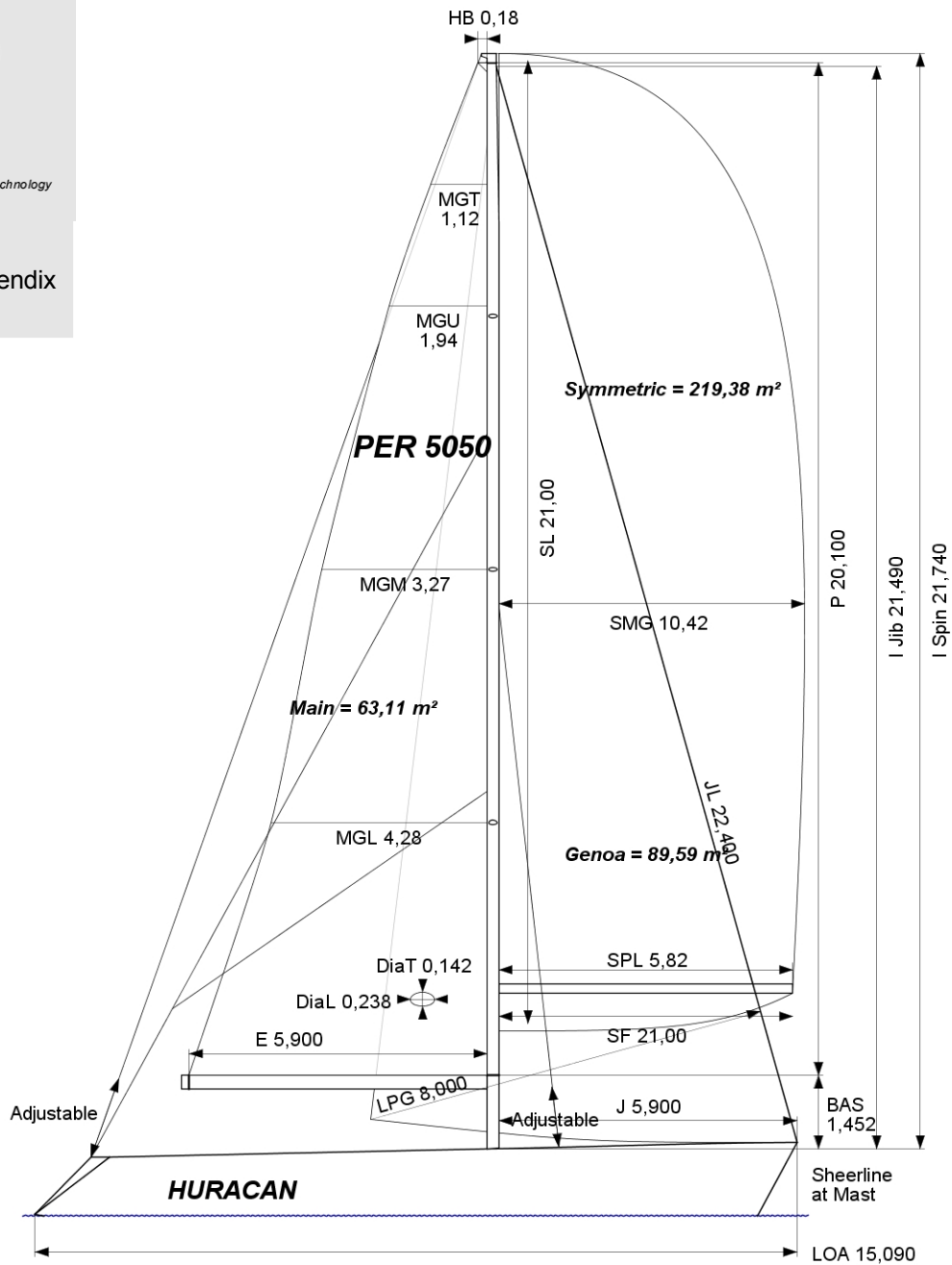


AVOP



World Leader in Rating Technology

2010
Certificate Appendix
Sail Plan



SAILS INVENTORY

MANSAL

Id	HB	MGT	MGU	MGM	MGL	MSW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	0.180	1.12	1.94	3.27	4.28	0.00	63.11					* Copied from legacy

JIBS / GENOAS

Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Overlp	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC						8.00	0.00	136%	89.59					* Copied from

SYMMETRIC SPINNAKERS

Id	SL	SMG	SF	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	21.00	10.42	21.00	219.38					* Copied from legacy *

ASYMMETRIC SPINNAKERS

Id	SLU	SLE	ASL	AMG	ASF	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
----	-----	-----	-----	-----	-----	------	------	----------	-----------	-------------	----------	---------