

BOAT Name LAKEMANDA Sail Nr PER-2000	GPH 609.6	HULL Length Overall 13.720m Maximum Beam 4.242m Displacement 10,904kg Draft 2.196m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.369% Fwd Accommodation Yes Hull Construction Solid Carbon Rudder No Crew Arm Extension
GENERAL Class F45F5 Designer Farr Builder Beneteau Series 01/1989 Age 01/1992 Age Allowance 0.487% Offset File lakeman.off - 25/10/2001 09:53:00 Measurement by G LIZA - 27/12/2014		IMSL 11.768m VCGD -0.145m Sink 27.99kg/mm RL 9.269m VCGM 0.109m WS 37.15m² LSM0 11.652m Displacement/Length ratio 6.8926



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Rating Office
Asociacion de Veleros
Oceanicos del Peru
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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	590.7			662.0		
Time on Time	1.0157			1.0197		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	717.1	535.6	467.8	933.7	670.0	562.7
Time on Time	0.9413	1.2602	1.4430	0.7229	1.0075	1.1996

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1053.1	865.8	759.1	693.6	663.7	650.1	642.8
52°	679.6	570.7	505.6	473.8	459.9	454.1	450.1
60°	638.0	540.3	485.2	460.4	447.9	441.2	436.4
75°	608.0	516.9	471.0	449.9	436.8	426.8	415.0
90°	615.6	519.7	469.9	445.5	432.4	421.0	400.0
110°	641.8	525.1	465.1	439.2	421.1	404.5	382.9
120°	663.5	541.3	473.3	443.4	424.6	407.0	375.0
135°	740.4	597.2	511.4	463.3	439.2	421.1	386.0
150°	881.7	691.3	582.3	510.4	465.3	441.8	407.6
Run VMG	1018.1	798.2	672.1	586.6	526.5	481.0	433.5

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ORC Ref **PER00000116**
Issued On **5/10/2019**
VPP Ver. **2019 1.01**
Valid until **31/03/2020**

Crew Weight
Default **856kg**
Maximum **800kg**
Minimum* **600kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **636.2 0.9431**
Non Spin OSN **615.9 0.9741**

Selected Courses							
Windward / Leeward	1035.6	832.0	715.6	640.1	595.1	565.6	538.2
Circular Random	855.0	684.1	590.5	535.0	500.5	478.2	452.1
Coastal / Long Distance	1033.8	780.2	639.8	552.7	508.2	477.2	431.2
Non Spinnaker	903.1	718.1	615.7	554.4	515.8	490.8	460.8

Sails Limitations	
Headsails	Spinnakers
6	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	43.7°	42.5°	41.7°	41.2°	40.2°	39.5°	39.9°
Beat VMG	3.42	4.16	4.74	5.19	5.42	5.54	5.60
52°	5.30	6.31	7.12	7.60	7.83	7.93	8.00
60°	5.64	6.66	7.42	7.82	8.04	8.16	8.25
75°	5.92	6.96	7.64	8.00	8.24	8.43	8.68
90°	5.85	6.93	7.66	8.08	8.33	8.55	9.00
110°	5.61	6.86	7.74	8.20	8.55	8.90	9.40
120°	5.43	6.65	7.61	8.12	8.48	8.85	9.60
135°	4.86	6.03	7.04	7.77	8.20	8.55	9.33
150°	4.08	5.21	6.18	7.05	7.74	8.15	8.83
Run VMG	3.54	4.51	5.36	6.14	6.84	7.48	8.30
Gybe Angles	144.6°	149.2°	151.5°	153.2°	160.0°	180.0°	180.0°

Class Division Length
CDL = **10.519**

Storm Sails Areas
Heavy Weather Jib **36.07**
Storm Jib (JL=10.63) **13.36**
Storm Trysail **14.15**

Owner
GUILLERMO VEGA / FERNANDO
DE LA FLOR

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

BOAT	
Name LAKEMANDA	Sail Nr PER-2000
File PER2000	Data in meters/kilograms

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 15.740	E 5.135 MDT1 0.130 MW 0.240
IG 16.202	J 4.590 MDL1 0.244 GO 0.280
ISP 16.187	SFJ 0.450 MDT2 0.130 BD 0.230
BAS 1.817	SPL 4.570 MDL2 0.180 MWT
FSP 0.085	TPS 1.600 TL 1.600 MCG

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 13/06/2017		SG 1.0253	
FFM 1.395	FF 1.394	SFFP 0.650	
FAM 1.117	FA 1.118	SAFP 12.088	
W1 130.0	PD1 472.5	WD 11.910	
W2 130.0	PD2 469.5	GSA 1.0	
W3 130.0	PD3 463.2	RSA 1.0	
W4 130.0	PD4 466.6	PLM 9000.0	
LCF from stem on CL / on sheer		7.321 / 7.604	
Maximum beam station from stem		7.422	
RM Measured		260.6kg-m	
RM Default		265.4kg-m	
Limit of positive stability / Stab.Index		110.7° / 115.8	
Freeboard at mast at 5.040		1.243	



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MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Shaft exposed	PRD 0.510		
Type Feathering 2 blades	PBW 0.154		
Twin Screw No	PIPA 0.0053		
PSA 19.000	PHL 0.130	ST3 0.130	ESL 1.190
PSD 0.030	ST1 0.044	ST4 0.062	
PHD 0.058	ST2 0.124	ST5 0.230	

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COMMENTS	
NUEVO ARMADOR MEDICION FLOTACION Y ESTABILIDAD	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.200	1.07	1.94	3.32	4.29	48.08	48.92	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	15.85	15.85	15.85	8.07	8.00	106.41		SL · (SFL + 4·SHW) / 6	
Asymmetric									
Not Available									

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	Fly	Meas.Date	Material	Comment
0.09	0.79	1.55	3.13	4.71	6.39	15.98	50.47			07/09/2019	Kevlar	USADA
0.09	0.77	1.51	3.05	4.68	6.41	15.97	49.95			07/09/2019	Kevlar	NUEVA

MEASUREMENT INVENTORY				
Measurer Patricio Gutierrez				
Date 13/06/2017				
Comment				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
3A	Engine	YANMAR	40HP	
Id	Item	Weight Description		

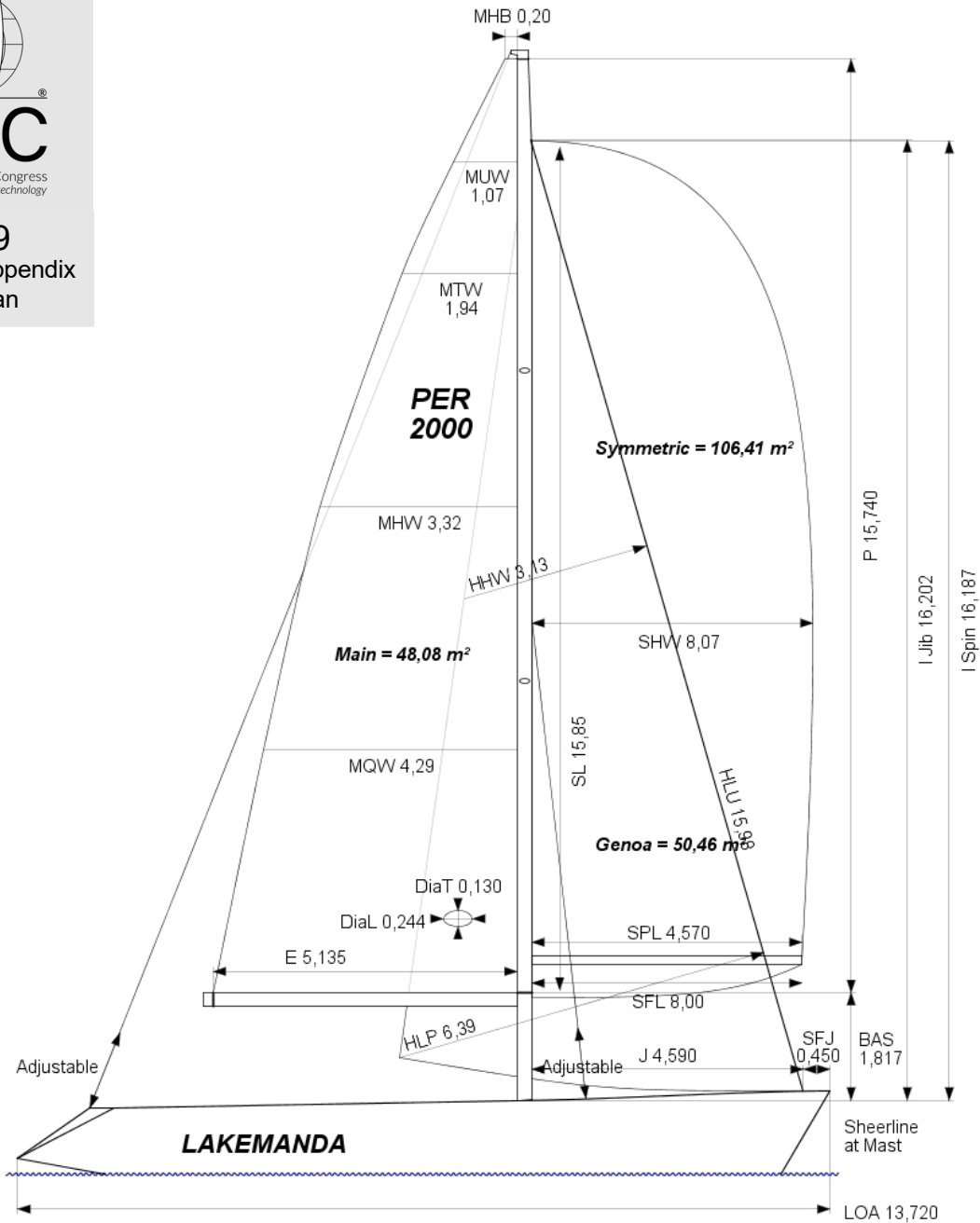
MEASUREMENT INVENTORY									
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description	
C3	Tank	PETROLEO	ACERO INOX	160.0	9.96	0.15	12-0	A POPA MOTOR	
B6	Tank	AGUA	PRFV	160.0	6.09	-0.10	0-0	A BABOR	
E6	Tank	AGUA	PRFV	160.0	6.09	-0.10	0-0	A ESTRIBOR	
C8	Tank	AGUA	PVC	160.0	4.18	-0.10	0-0	A PROA EN CRUJIA	
Id	Item	Weight	Distance	VCG Description					
B3	Battery	48.0	9.39	0.15	02	BATERIA DE 24 PLACAS BABOR			
C3	Battery	24.0	9.39	0.15	01	BATERIA DE 24 PLACAS CRUJIA			
B2	Misc	2.0	12.39	1.20	BALON DE PROPANO				
C6	Misc	3.0	5.89	0.10	MOTOR CONGELADOR				
5D	Misc	2.0	4.98	1.10	TELEVISOR lcd				
Water Ballast Tanks									
Id	Volume	Distance	VCG	TCG Description					



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
M-1	0.20	1.07	1.94	3.32	4.29	48.08	G LIZA	07/09/2019	NORTH	Unknown	USADA					
HEADSAILS (2)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
LM-1	0.09	0.79	1.55	3.13	4.71	6.39	15.98	139%	50.47			G LIZA	07/09/2019	NORTH	Kevlar	USADA
MH	0.09	0.77	1.51	3.05	4.68	6.41	15.97	140%	49.95			G LIZA	07/09/2019	NORTH	Kevlar	NUEVA
SYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
S2	15.85	15.85	15.85	8.07	8.00	106.41	G LIZA	20/06/2016	NORTH	Nylon	USADO					
S1	15.74	15.74	15.74	7.26	7.95	97.04	G LIZA	20/06/2016	QUANTUM	Nylon	USADO					
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				