



2020
ORC Club
Certificate

Rating Office
Hellenic Sailing Federation
Offshore Committee
Επιτροπή
Ανοικτής Θαλάσσης
Ελληνικής
Ιστιοπλοϊκής Ομοσπονδίας



Certificate
 Number **01288**
 Issued On **27/05/2020**
 ORC Ref **03420000J0A**
 VPP Ver. **2020 1.02**
 Valid until **28/02/2021**

Crew Weight

Default	1,049kg
Maximum	1,047kg
Minimum*	785kg

**when applied by the NoR and SI*
 Non Manual Pwr **No**

Special Scoring

ToD	ToT
Non Spin GPH	652.4 0.9197
Non Spin OSN	630.6 0.9514

Sails Limitations

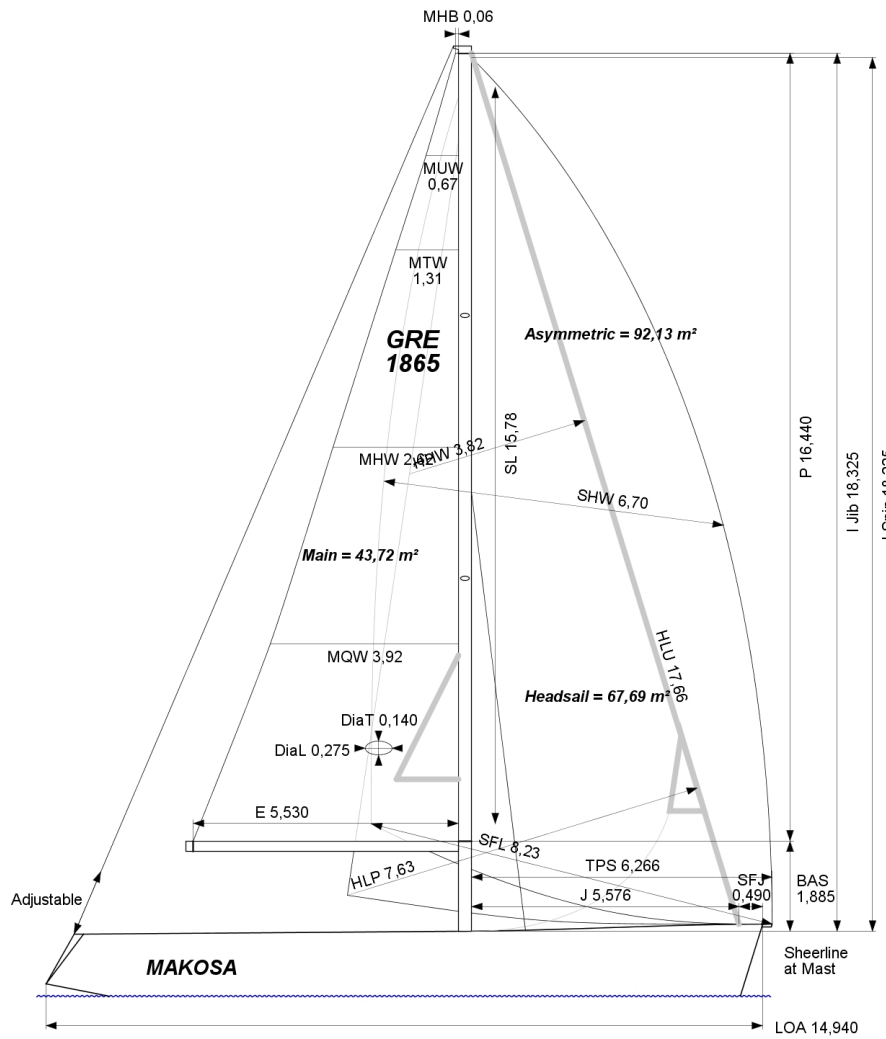
Headsails **1** Spinnakers **4**
Woven Polyester
Asymmetric on centerline

Spinnaker configuration
 Symmetric: **No**
 Asymmetric: **Yes 121.15**
 Flying H/S: **No**
 Spin. Pole: **No**

Class Division Length
CDL = 10.998

Stability (Estimated)
 Limit Positive Stab.: **109.5°**
 Stability Index: **116.6**

Owner



BOAT Name MAKOSA Sail Nr GRE-1865		GPH 619.8	HULL Data File GR1865 LOA 14.940m Offset File DUFO50CL.OFF MB 4.552m Displacement 14,000kg Draft 2.134m					
CLASS Class DUFOUR 50 CLASSIC Designer Poncin/Berret Builder DUFOUR Series 01/1998 Age Date 01/1998 Age Allowance 0.487%			IMS Division Cruiser/Racer Dynamic All. 0.414% Plan Review Construction Solid Fiber Rigging No Aramid Core No Crew Arm Ex Carbon Rudder No Light Stanchions No			IMS L 13.409m VCGD 0.201m Sink 34.59kg/mm RL 8.586m VCGM 0.186m WS 44.67m² LSM0 13.439m Displacement/Length ratio 5.7680		
COMMENTS Builder's displacement.			Water Ballast 0 Trim Tab No BLR Index 0.0000			CENTERBOARD N/A		
PROPELLER Installation Strut PRD 0.400 Type Solid 3 blades PBW 0.106 PIPA 0.0194								
SCORING OPTIONS								
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD				
Time on Distance	599.4			682.6				
Time on Time	1.0011			0.9889				
Triple Number	Low	Medium	High	Low	Medium	High		
Time on Distance	745.9	540.6	462.8	979.7	689.6	572.3		
Time on Time	0.9050	1.2487	1.4586	0.6890	0.9788	1.1795		

BOAT	
Name MAKOSA	Sail Nr GRE-1865
File GR1865	Data in meters/kilograms

RIG	
Forestay Tension Aft	Spreaders 2
Inner Stay Fixed	Runners/Checkstays 0
Carbon Mast No	Jib Furler Yes
Fiber Rigging No	Main Furler Yes
Non-Circular Rigging No	
Articulated Bowsprit No	
P 16.440	E 5.530 MDT1 0.140 MW
IG 18.325	J 5.576 MDL1 0.275 GO
ISP 18.225	SFJ 0.490 MDT2 BD 0.220
BAS 1.885	SPL MDL2 MWT
FSD 0.050	TPS 6.266 TL -3.000 MCG

INCLINING TEST AND FREEBOARDS		
Inclining Test Club Estimated VCG		
Flotation date 21/05/2018	SG 1.0252	
FFM 1.494	FF 1.494	SFFP 0.536
FAM 1.297	FA 1.297	SAFP 14.158
LCF from stem on CL / on sheer		8.067 / 8.354
Maximum beam station from stem		9.150
RM Measured		370.6kg-m
RM Default		365.4kg-m
Limit of positive stability / Stab.Index		109.5° / 116.6
Freeboard at mast at 6.066		1.350



ORC
Offshore Racing Congress
World leader in rating technology

2020
Measurements
Datasheet

MIZZEN RIG AND SAILS	
N/A	

PROPELLER		
Installation Strut	PRD 0.400	
Type Solid 3 blades	PBW 0.106	
Twin Screw No	PIPA 0.0194	
ST1	ST3	
ST2	ST4	
	ST5	
	EDL	

Certificate

Number **01288**
ORC Ref **03420000J0A**
Issued On **27/05/2020**
VPP Ver. **2020 1.02**
Valid until **28/02/2021**



COMMENTS	
Builder's displacement.	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS INVENTORY																
MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	0.06	0.67	1.31	2.62	3.92	43.73		21/05/2018		Dacron						
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.04	1.06	1.95	3.82	5.70	7.63	17.66	137%	67.69		No		07/08/2018	QUANTUM	Dacron	
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
1	16.62	14.94	15.78	6.70	8.23	92.13	asy82		07/08/2018	KAKITSIS	Nylon					

2020

ORC Club Certificate Appendix

BOAT	
Name	MAKOSA
Sail Nr	GRE-1865
Certificate Number	01288
Issued On	27/05/2020

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1147.7	922.5	800.7	720.6	671.3	650.0	638.5
52°	724.1	593.1	520.7	474.0	449.8	438.7	432.6
60°	667.1	555.2	490.4	453.4	434.6	424.6	417.7
75°	627.4	526.6	467.9	438.7	422.8	412.1	398.2
90°	635.1	529.4	465.4	431.4	413.7	401.6	385.6
110°	655.0	529.7	459.1	426.0	407.4	391.4	362.3
120°	677.4	547.1	470.2	431.5	411.0	394.4	361.3
135°	759.5	601.9	512.3	455.2	425.8	407.7	375.1
150°	901.3	699.4	588.0	515.8	468.7	442.1	411.2
Run VMG	1040.8	807.6	679.0	595.5	541.2	510.5	444.9
Selected Courses							
Windward / Leeward	1094.2	865.0	739.9	658.1	606.3	580.3	541.7
Circular Random	885.2	701.5	599.5	538.1	499.6	474.6	444.4
Coastal / Long Distance	1088.9	808.6	656.7	558.7	505.5	471.4	421.3
Non Spinnaker	946.1	744.0	630.4	560.8	516.4	487.3	453.2

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	46.3°	44.3°	43.5°	43.1°	42.6°	42.0°	41.6°
Beat VMG	3.14	3.90	4.50	5.00	5.36	5.54	5.64
52°	4.97	6.07	6.91	7.60	8.00	8.21	8.32
60°	5.40	6.48	7.34	7.94	8.28	8.48	8.62
75°	5.74	6.84	7.69	8.21	8.51	8.74	9.04
90°	5.67	6.80	7.74	8.35	8.70	8.96	9.34
110°	5.50	6.80	7.84	8.45	8.84	9.20	9.94
120°	5.31	6.58	7.66	8.34	8.76	9.13	9.96
135°	4.74	5.98	7.03	7.91	8.45	8.83	9.60
150°	3.99	5.15	6.12	6.98	7.68	8.14	8.76
Run VMG	3.46	4.46	5.30	6.04	6.65	7.05	8.09
Gybe Angles	144.5°	147.0°	147.0°	146.5°	147.5°	149.3°	174.0°