



ORC

Offshore Racing Congress
World leader in rating technology

2020
ORC Club
Certificate

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



Certificate

Number **00834**
Issued On **06/06/2020**
ORC Ref **03420000K27**
VPP Ver. **2020 1.02**
Valid until **28/02/2021**

Crew Weight

Default 509kg
Maximum **400kg**
Minimum* **300kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	770.7	0.7785
Non Spin OSN	742.9	0.8077

Sails Limitations

Headsails **1** Spinnakers **4**

Asymmetric on centerline

Spinnaker configuration
Symmetric: **No**
Asymmetric: **Yes 76.95**
Flying H/S: **No**
Spin. Pole: **No**

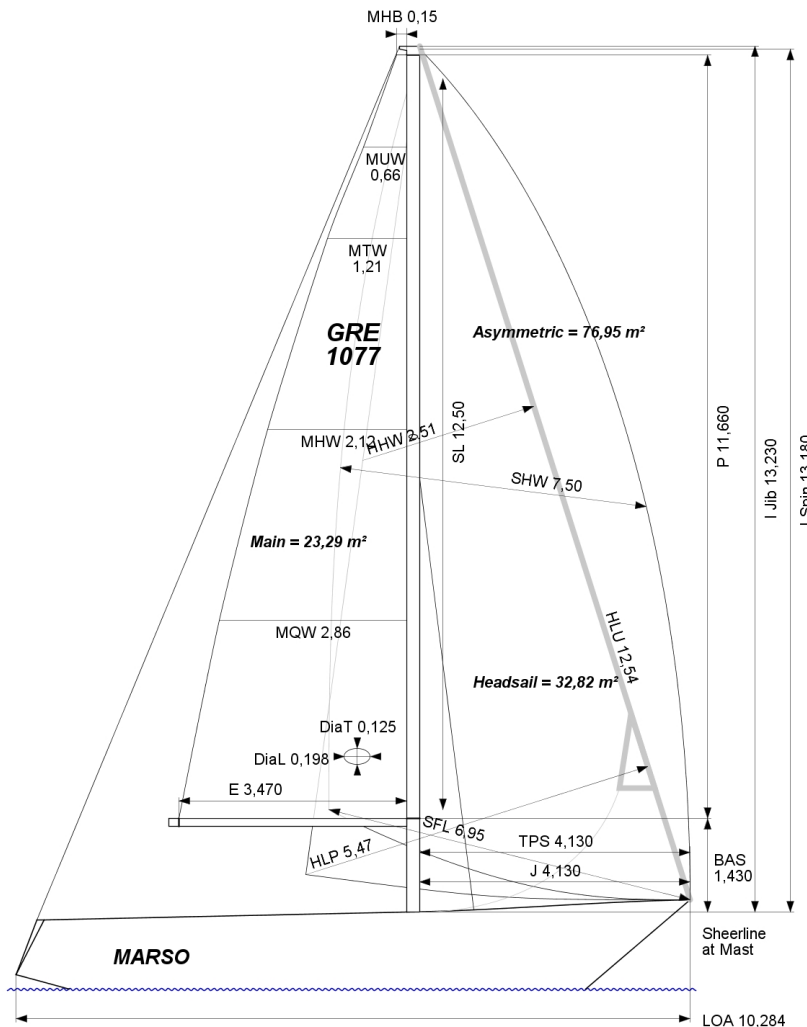
Class Division Length

CDL = 6.992

Stability (Estimated)

Limit Positive Stab.: **122.2°**
Stability Index: **125.8**

Owner



BOAT		GPH	HULL			
Name MARSO Sail Nr GRE-1077		733.7	Data File GR1077	LOA 10.284m		
			Offset File E115.BOF	MB 3.266m		
			Displacement 5,727kg	Draft 1.871m		
CLASS			IMS Division Cruiser/Racer	Dynamic All. 0.670%		
Class DUFOUR 34			Plan Review	Construction Solid		
Designer MICHEL DUFOUR S.A.			Fiber Rigging No	Aramid Core No		
Builder MICHEL DUFOUR			Crew Arm Ex	Carbon Rudder No		
Series 01/1974				Light Stanchions No		
Age Date 01/1977			IMSL 8.051m	VCGD -0.059m	Sink 15.98kg/mm	
Age Allowance 0.487%			RL 5.931m	VCGM 0.012m	WS 23.56m²	
COMMENTS			LSM0 8.088m	Displacement/Length ratio 10.8244		
ex "VELOS"			Water Ballast 0	Trim Tab No		
			BLR Index 0.0000			
PROPELLER			CENTERBOARD			
Installation Shaft non exposed	PRD 0.400	N/A				
Type Solid 3 blades	PIPA 0.0096					
SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	713.3			804.3		
Time on Time	0.8412			0.8393		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	850.8	647.4	574.4	1102.2	814.2	697.2
Time on Time	0.7934	1.0426	1.1752	0.6124	0.8290	0.9682

BOAT	
Name MARSO	Sail Nr GRE-1077
File GR1077	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Club Estimated VCG			
Flotation date 16/05/2004		SG	
FFM 1.330	FF 1.340	SFFP 0.859	
FAM 1.050	FA 1.055	SAFP 9.862	
LCF from stem on CL / on sheer		5.944 / 6.149	
Maximum beam station from stem		6.253	
RM Measured		104.3kg-m	
RM Default		101.3kg-m	
Limit of positive stability / Stab.Index		122.2° / 125.8	
Freeboard at mast at 4.130		1.177	

RIG			
Forestay Tension Fixed	Spreaders 1		
Inner Stay Fixed	Runners/Checkstays 0		
Carbon Mast No	Jib Furler Yes		
Fiber Rigging No	Main Furler No		
Non-Circular Rigging No			
Articulated Bowsprit No			
P 11.660	E 3.470	MDT1 0.125	MW
IG 13.230	J 4.130	MDL1 0.198	GO
ISP 13.180	SFJ 0.000	MDT2	BD
BAS 1.430	SPL	MDL2	MWT
FSD -3.000	TPS 4.130	TL -3.000	MCG




2020
Measurements
Datasheet

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Shaft non exposed	PRD 0.400		
Type Solid 3 blades	PBW		
Twin Screw No	PIPA 0.0096		
PSA	PHD	ESL	
PSD	PHL		

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COMMENTS	
ex "VELOS"	

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	0.15	0.66	1.21	2.12	2.86	23.30		03/08/2011		Unknown						
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	OvrI/p	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.03	0.61	1.21	2.51	3.95	5.47	12.54	132%	32.82		No		03/08/2011		Unknow	
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	13.01	11.98	12.50	7.50	6.95	76.95	asym		19/04/2012	KAKITSIS	Nylon					

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ORC Club Certificate Appendix

BOAT			
Name	MARSO	Certificate Number	00834
Sail Nr	GRE-1077	Issued On	06/06/2020

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1294.3	1070.9	949.6	867.0	821.4	805.8	807.7
52°	835.0	706.7	627.0	582.1	561.9	553.9	551.5
60°	785.8	668.9	597.4	563.3	546.4	537.4	533.3
75°	752.1	639.6	577.3	549.6	532.9	520.7	507.1
90°	747.1	618.6	556.5	531.9	522.6	514.5	490.4
110°	733.8	606.8	550.2	523.5	502.2	484.3	466.9
120°	760.5	624.8	557.9	528.4	505.6	484.2	452.2
135°	840.9	684.9	589.6	546.2	521.5	499.9	462.1
150°	983.1	786.5	671.8	602.6	565.1	541.0	506.3
Run VMG	1135.2	908.1	775.8	695.8	648.9	590.2	534.3
Selected Courses							
Windward / Leeward	1214.7	989.5	862.7	781.4	735.2	698.0	671.0
Circular Random	1017.7	819.0	711.4	648.5	610.1	586.0	559.3
Coastal / Long Distance	1206.8	926.6	770.1	671.8	620.7	582.8	529.3
Non Spinnaker	1089.5	868.3	746.1	673.0	627.6	598.9	568.2

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	44.6°	42.8°	42.0°	42.4°	41.6°	41.3°	41.4°
Beat VMG	2.78	3.36	3.79	4.15	4.38	4.47	4.46
52°	4.31	5.09	5.74	6.18	6.41	6.50	6.53
60°	4.58	5.38	6.03	6.39	6.59	6.70	6.75
75°	4.79	5.63	6.24	6.55	6.76	6.91	7.10
90°	4.82	5.82	6.47	6.77	6.89	7.00	7.34
110°	4.91	5.93	6.54	6.88	7.17	7.43	7.71
120°	4.73	5.76	6.45	6.81	7.12	7.43	7.96
135°	4.28	5.26	6.11	6.59	6.90	7.20	7.79
150°	3.66	4.58	5.36	5.97	6.37	6.65	7.11
Run VMG	3.17	3.96	4.64	5.17	5.55	6.10	6.74
Gybe Angles	146.0°	146.5°	145.5°	147.0°	174.0°	176.0°	178.0°