



World Leader in Rating Technology

2016 ORC Club Certificate

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

Certificate
 Number **000419**
 Issued On **8/6/2016**
 ORC Ref **GRE01006187**
 VPP Ver. **2016 1.01**
 Valid until **28/2/2017**

Crew Weight
 Declared **430kg**
 Default* **493kg**
 Non Manual Pwr **No**

Special Scoring

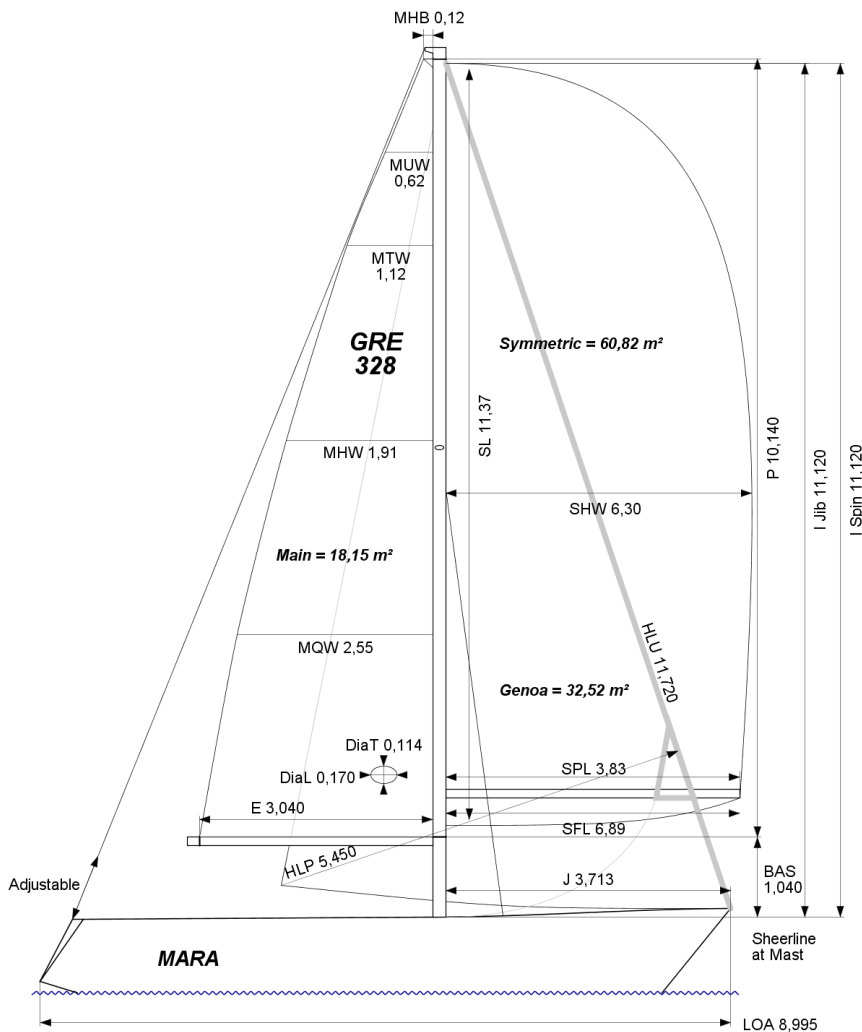
	ToD	ToT
Non Spin GPH	784,1	0,7652
Non Spin OSN	757,4	0,7922
N/S Perf. Line	-1,3	0,488

Sails Limitations
 Headsails **1** Spinnakers **3**
Dacron Sails
Spinnaker configuration
 Symmetric: **Yes** **60,82**
 Asymmetric: **No**
 Flying H/S: **No**
 Spin. Pole: **Yes**

Class Division Length
 CDL = **6,642**

Stability
 LPS (Estimated): **114,9°**
 Stability Index: **115,9**
 OSR Category: **N/A**

Owner



BOAT Name MARA Sail Nr GRE-328		GPH 756,9	HULL Data File GR328.dxt LOA 8,995m Offset File H168.BOF MB 3,220m Displacement 4,538kg Draft 1,833m		
CLASS Class NEREIS 30 Designer VAN DE STADT Builder AKROPORRO Series 03/1981 Age Date 01/1989 Age Allowance 0,488%		IMS Division Cruiser/Racer Dynamic All. 0,631% Fwd Accom. Yes Construction Solid Fiber Rigging No Aramid Core No Crew Arm Ex Carbon Rudder No Light Stanchions No			
COMMENTS		IMSL 7,732m VCGM 0,221m Sink 13,74kg/mm RL 5,551m VCGM 0,052m WS 19,19m² LSM0 7,911m Displacement/Length ratio 9,1658			
PROPELLER Installation Shaft exposed PRD 0,340 Type Solid 3 blades PIPA 0,0144		CENTERBOARD N/A			
SCORING OPTIONS					
	OFFSHORE COASTAL / LONG DISTANCE			INSHORE WINDWARD / LEEWARD	
Time On Distance	732,9			818,3	
Time On Time	0,8186			0,8249	
Performance Line	PLT	PLD	PLT	PLD	
	0,525	13,7	0,607	126,0	
Triple Number	Low	Medium	High	Low	Medium
	0,7586	1,0136	1,1691	0,5852	0,8120
				High	0,9789

BOAT	
Name MARA	Sail Nr GRE-328
File GR328.dxt	Data in meters/kilograms

RIG	
Forestay Tension Aft	Spreaders 1
Inner Stay Fixed	Runners 0
Carbon Mast No	Jumper Struts None
Taper Hollows No	Jib Furler Yes
Fiber Rigging No	Main Furler No
Lenticular Rigging No	Without Backstay No
Articulated Bowsprit No	
P 10,140	E 3,040 MDT1 0,114 MW
IG 11,120	J 3,713 MDL1 0,170 GO
ISP 11,120	SFJ 0,000 MDT2 0,114 BD
BAS 1,040	SPL 3,830 MDL2 0,170 MWT
FSP -3,000	TPS TL 0,000 MCG

INCLINING TEST AND FREEBOARDS		
Inclining Test Club Estimated VCG		
Flotation date 12/04/2001		SG
FFM 1,095	FF 1,104	SFFP 0,450
FAM 0,963	FA 0,969	SAFP 8,435
LCF from stem on CL / on sheer		5,043 / 5,289
Maximum beam station from stem		5,147
RM Measured		73,3kg·m
RM Default		71,2kg·m
Limit of positive stability / Stab.Index		114,9° / 115,9
Freeboard at mast at 3,713		0,990



ORC
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2016
Measurements
Datasheet

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Shaft exposed	PRD 0,340		
Type Solid 3 blades	PBW		
Twin Screw No	PIPA 0,0144		
PSA	PHL	ST3	ESL
PSD	ST1	ST4	
PHD	ST2	ST5	

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COMMENTS	

MOVEABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0,120	0,62	1,12	1,91	2,55	18,15	18,40	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	11,37	11,37	11,37	6,30	6,89	60,82		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
					5,45	0,00	32,53					* Copied from legacy *



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ORC Club Certificate Appendix

BOAT	
Name MARA	Certificate Number 000419
Sail Nr GRE-328	Issued On 8/6/2016

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1352,8	1116,0	989,0	896,2	836,5	808,0	789,2
52°	867,1	728,9	643,1	593,7	570,4	559,3	551,8
60°	810,0	684,5	607,6	572,9	554,1	542,4	533,5
75°	763,5	644,6	583,4	557,2	539,7	525,4	504,6
90°	766,3	648,4	584,2	552,0	536,3	525,4	497,8
110°	787,8	648,2	577,1	546,8	523,8	501,9	479,9
120°	809,6	665,0	584,9	551,8	529,2	507,1	468,8
135°	898,3	726,6	619,3	569,9	544,0	522,4	481,6
150°	1039,6	819,9	694,1	609,0	568,1	544,4	504,5
Run VMG	1200,5	944,9	798,5	695,4	621,5	576,8	531,4

Selected Courses							
Windward / Leeward	1276,6	1030,5	893,8	795,8	729,0	692,4	660,3
Circular Random	1061,4	850,0	733,6	663,8	619,9	591,2	557,1
Ocean for PCS	1301,6	998,2	824,6	716,8	646,4	598,0	533,6
Non Spinnaker	1109,1	884,1	759,4	684,1	636,3	604,8	567,5

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	45,0°	43,2°	43,0°	43,6°	42,0°	40,6°	40,0°
Beat VMG	2,66	3,23	3,64	4,02	4,30	4,46	4,56
52°	4,15	4,94	5,60	6,06	6,31	6,44	6,52
60°	4,44	5,26	5,93	6,28	6,50	6,64	6,75
75°	4,72	5,58	6,17	6,46	6,67	6,85	7,13
90°	4,70	5,55	6,16	6,52	6,71	6,85	7,23
110°	4,57	5,55	6,24	6,58	6,87	7,17	7,50
120°	4,45	5,41	6,16	6,52	6,80	7,10	7,68
135°	4,01	4,95	5,81	6,32	6,62	6,89	7,47
150°	3,46	4,39	5,19	5,91	6,34	6,61	7,14
Run VMG	3,00	3,81	4,51	5,18	5,79	6,24	6,77
Gybe Angles	148,2°	152,2°	154,2°	157,2°	180,0°	180,0°	180,0°