



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 **00731**
Issued On **23/06/2020**
ORC Ref **03420000L8C**
VPP Ver. **2020 1.02**
Valid until **28/02/2021**

Crew Weight

Default	423kg
Maximum	400kg
Minimum*	300kg

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

Special Scoring

ToD	ToT
Non Spin GPH 825.4	0.7269
Non Spin OSN 796.5	0.7533

Sails Limitations

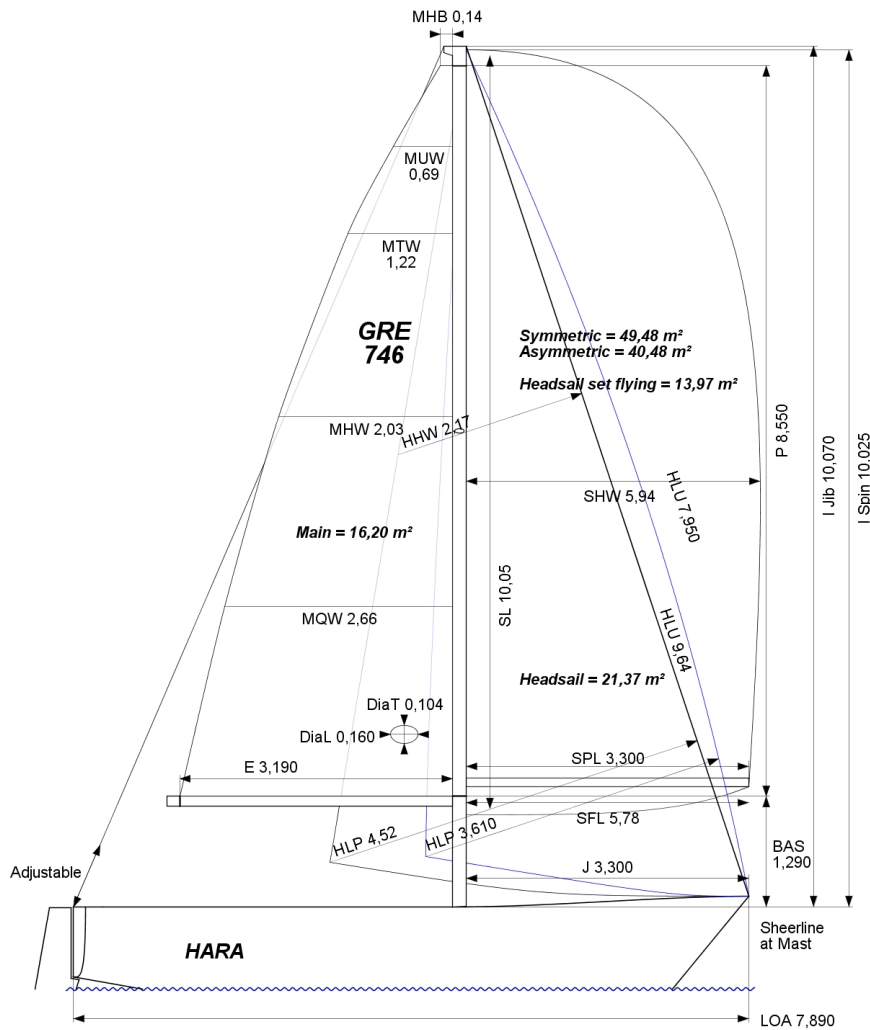
Headsails **5** Spinnakers **4**
Woven Polyester

Spinnaker configuration
Symmetric: **Yes** **49.48**
Asymmetric: **Yes** **40.48**
Flying H/S: **Yes** **16.54**
Spin. Pole: **Yes**

Class Division Length
CDL = 5.906

Stability (Measured)
Limit Positive Stab.: **114.4°**
Stability Index: **114.4**

Owner



BOAT Name HARA Sail Nr GRE-746		GPH 789.1	HULL Data File GR746 LOA 7.890m Offset File GR0043.OFF MB 2.984m Displacement 3,539kg Draft 1.617m IMS Division Cruiser/Racer Dynamic All. 0.690% Plan Review Construction Solid Fiber Rigging No Aramid Core No Crew Arm Ex Carbon Rudder No Light Stanchions No IMSL 6.864m VCGD 0.285m Sink 11.40kg/mm RL 4.952m VCGM 0.090m WS 16.14m² LSM0 7.105m Displacement/Length ratio 9.8671 Water Ballast 0 Trim Tab No BLR Index 0.0000																			
CLASS Class DROMOR 26 Designer R.CARTER Builder DROMOR Series 01/1993 Age Date 01/1983 Age Allowance 0.487%			<table border="1"> <tr><td colspan="7">CENTERBOARD</td></tr> <tr><td colspan="7" style="text-align: center;">N/A</td></tr> </table>						CENTERBOARD							N/A						
CENTERBOARD																						
N/A																						
COMMENTS			PROPELLER Installation Shaft exposed PRD 0.360 Type Feathering 2 blades PBW 0.131 PIPA 0.0050																			
SCORING OPTIONS							OWNER															
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD																		
Time on Distance	765.4			852.1																		
Time on Time	0.7839			0.7921																		
Triple Number	Low	Medium	High	Low	Medium	High																
Time on Distance	910.9	698.1	616.4	1170.0	862.2	734.1																
Time on Time	0.7410	0.9669	1.0951	0.5769	0.7829	0.9195																

BOAT	
Name HARA File GR746	Sail Nr GRE-746 Data in meters/kilograms
RIG	
Forestay Tension Aft	Spreaders 1
Inner Stay None Fitted	Runners/Checkstays 0
Carbon Mast No	Jib Furler No
Fiber Rigging No	Main Furler No
Non-Circular Rigging No	
Articulated Bowsprit No	
P 8.550	E 3.190 MDT1 0.104 MW 0.160
IG 10.070	J 3.300 MDL1 0.160 GO 0.175
ISP 10.025	SFJ 0.000 MDT2 0.104 BD 0.115
BAS 1.290	SPL 3.300 MDL2 0.160 MWT
FSD 0.028	TPS TL 0.000 MCG

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 01/04/2006		SG 1.0290	
FFM 1.087	FF 1.081	SFFP 0.450	
FAM 0.953	FA 0.960	SAFP 7.550	
W1 36.0	PD1 265.0	WD 9.510	
W2 36.0	PD2 265.0	GSA 28.3	
W3 36.0	PD3 265.0	RSA 5674.0	
W4 36.0	PD4 265.0	PLM 2115.0	
LCF from stem on CL / on sheer		4.618 / 4.846	
Maximum beam station from stem		5.202	
RM Measured		47.6kg-m	
RM Default		46.6kg-m	
Limit of positive stability / Stab.Index		114.4° / 114.4	
Freeboard at mast at 3.300		0.965	



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2020
Measurements
Datasheet

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Shaft exposed	PRD 0.360		
Type Feathering 2 blades	PBW 0.131		
Twin Screw No	PIPA 0.0050		
PSA 28.800	PHL 0.107	ST3 0.071	ESL 0.800
PSD 0.025	ST1 0.010	ST4 0.054	
PHD 0.046	ST2 0.074	ST5 0.067	

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COMMENTS	

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	0.14	0.69	1.22	2.03	2.66	16.21		20/04/2012	QUANTUM	Dacron						
HEADSAILS (2)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.07	0.56	1.08	2.17	3.31	4.52	9.64	137%	21.37		No		20/04/2012	QUANTUM	Dacron	
3	0.04	0.42	0.85	1.71	2.63	3.61	7.95	109%	13.97		Yes		23/04/2019		Unknow	
SYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	10.05	10.05	10.05	5.94	5.78	49.48		15/03/2013		Unknown						
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
1	10.31	9.01	9.66	4.92	5.46	40.48	asym		03/04/2019		Unknown					

MEASUREMENT INVENTORY				
Measurer GRE-33 Date 01/04/2006 Comment COPIED FROM IMS PAGE 2 Internal Ballast total = 0.0				
Id	Item	Weight	Distance	VCG Description
4	Anchor	7.5	6.80	(P)-BRUCE
4	Chain	10.8	6.80	Chain 8m, 8mm-
4	Tools	10.0	5.80	
Id	Item	Maker	Model	
1	Engine	FARRYMAN	10 HP	
Id	Item	Weight	Description	
4	Deck-Gear	5.0		

MEASUREMENT INVENTORY							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
1	Tank	FUEL	INOX	50.0	6.30		0-0 (S)
2	Tank	WATER	PVC hard	70.0	1.40		0-0 (C)
Id	Item	Weight	Distance	VCG Description			
1	Battery	40.2	5.70	(S) 2 x 75 Ah			

2020

ORC Club Certificate Appendix

BOAT	
Name HARA	Certificate Number 00731
Sail Nr GRE-746	Issued On 23/06/2020

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1381.6	1158.3	1036.5	948.9	894.5	873.0	866.3
52°	897.0	763.8	683.9	640.0	617.7	606.1	596.5
60°	848.1	722.6	652.7	620.2	602.0	590.2	577.8
75°	815.2	694.3	631.5	604.6	587.4	573.4	552.8
90°	812.4	674.4	611.5	584.6	566.3	555.9	537.6
110°	793.7	658.5	602.7	574.9	551.3	530.4	503.9
120°	816.1	673.3	608.7	579.0	554.3	530.8	495.9
135°	895.8	733.0	634.8	595.4	570.1	546.1	504.2
150°	1031.0	825.5	702.9	626.9	593.6	570.3	526.7
Run VMG	1190.5	950.1	807.4	705.0	636.2	600.1	555.1
Selected Courses							
Windward / Leeward	1286.1	1054.2	922.0	827.0	765.4	736.5	710.7
Circular Random	1091.1	880.1	765.7	698.1	656.3	629.5	598.2
Coastal / Long Distance	1276.5	988.2	827.1	722.8	665.3	627.7	570.8
Non Spinnaker	1154.6	925.7	800.1	725.1	678.2	648.1	613.2

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	44.3°	42.0°	42.2°	42.0°	41.3°	40.9°	41.3°
Beat VMG	2.61	3.11	3.47	3.79	4.02	4.12	4.16
52°	4.01	4.71	5.26	5.63	5.83	5.94	6.04
60°	4.25	4.98	5.52	5.80	5.98	6.10	6.23
75°	4.42	5.19	5.70	5.95	6.13	6.28	6.51
90°	4.43	5.34	5.89	6.16	6.36	6.48	6.70
110°	4.54	5.47	5.97	6.26	6.53	6.79	7.14
120°	4.41	5.35	5.91	6.22	6.49	6.78	7.26
135°	4.02	4.91	5.67	6.05	6.31	6.59	7.14
150°	3.49	4.36	5.12	5.74	6.06	6.31	6.84
Run VMG	3.02	3.79	4.46	5.11	5.66	6.00	6.49
Gybe Angles	149.0°	153.5°	154.0°	167.0°	180.0°	180.0°	180.0°