



World Leader in Rating Technology

2018 ORC Club Certificate

Rating Office

EYU
Regati 1
11911, Tallinn
Estonia

Certificate

Number **EST400**
Issued On **5/28/2018**
ORC Ref **EST00000153**
VPP Ver. **2018 1.00**
Valid until **12/31/2018**

Crew Weight

Default 872kg
Maximum **800kg**
Minimum* **600kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	575.6	1.0424
Double H.OSN	560.6	1.0702
Non Spin GPH	604.6	0.9924
Non Spin OSN	586.9	1.0223

Sails Limitations

Headsails **6** Spinnakers **4**

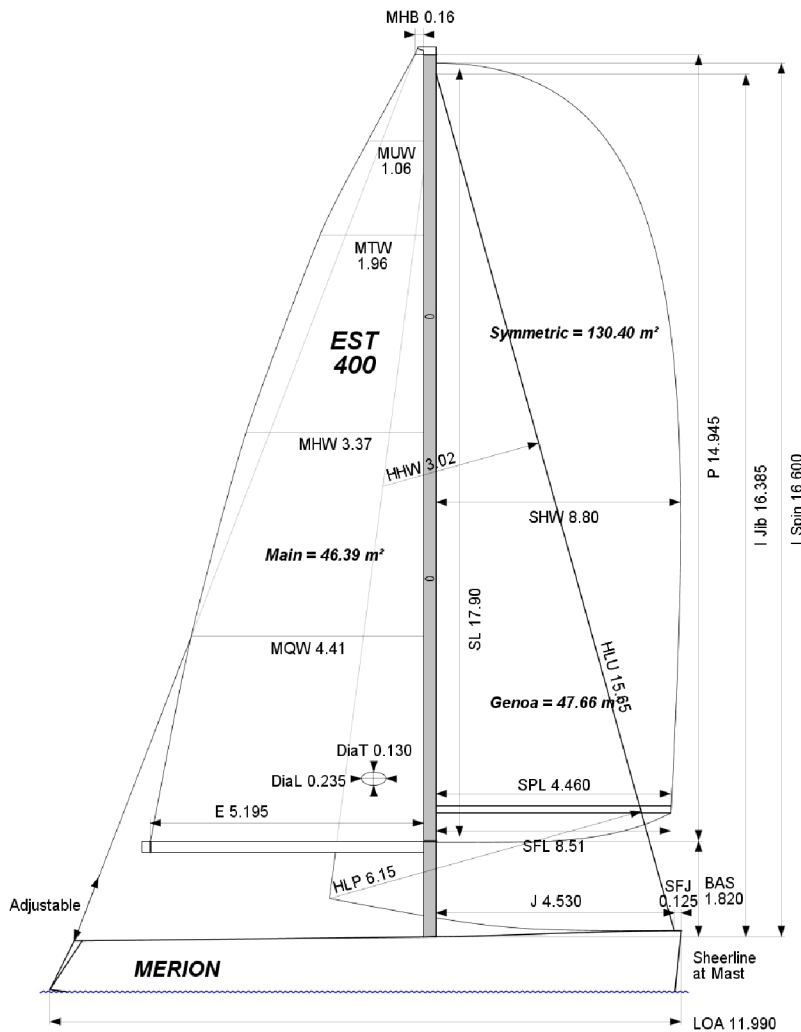
Spinnaker configuration
Symmetric: **Yes** 130.40
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = 11.148

Stability (Measured)

Limit Positive Stab.: **118.5°**
Stability Index: **121.1**



BOAT		GPH		HULL			
Name	MERION			Data File	Est0400	LOA	11.990m
Sail Nr	EST 400			Offset File	F223.OFF	MB	3.762m
			571.5	Displacement	6,875kg	Draft	2.414m
CLASS				IMS Division		Dynamic All.	
Class	A 40			Cruiser/Racer		0.095%	
Designer	B.NIVELT			Fwd Accom.	Yes	Construction	Solid
Builder	ARCHAMBAULT			Fiber Rigging	No	Aramid Core	No
Series	12/2003			Crew Arm Ex		Carbon Rudder	No
Age Date	08/2005					Light Stanchions	
Age Allowance	0.487%			IMSL	11.715m	VCGD	-0.089m
				RL	10.578m	VCGM	-0.122m
				WS	31.07m²		
				LSM0	11.800m	Displacement/Length ratio	4.1843
COMMENTS				Water Ballast		Trim Tab	
TPS6,43				0		No	
				BLR Index	0.0000		
PROPELLER				CENTERBOARD			
Installation	Strut	PRD	0.410				
Type	Folding 2 blades	PBW	0.111				
		PIPA	0.0040				
				N/A			
SCORING OPTIONS							
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD			
Time on Distance	554.5			618.0			
Time on Time	1.0820			1.0923			
Triple Number	Low	Medium	High	Low	Medium	High	
Time on Distance	656.6	505.9	449.3	846.1	620.7	538.2	
Time on Time	1.0280	1.3342	1.5025	0.7978	1.0875	1.2542	

BOAT	
Name MERION	Sail Nr EST 400
File Est0400	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 31/08/2005		SG 1.0020	
FFM 1.170	FF 1.179	SFFP 0.142	
FAM 0.980	FA 0.988	SAFP 11.381	
W1 95.1	PD1 204.0	WD 11.900	
W2 95.1	PD2 205.0	GSA 12.6	
W3 95.1	PD3 204.0	RSA 4298.7	
W4 95.1	PD4 205.0	PLM 2005.0	
LCF from stem on CL / on sheer		6.682 / 6.928	
Maximum beam station from stem		8.236	
RM Measured		193.6kg·m	
RM Default		173.9kg·m	
Limit of positive stability / Stab.Index		118.5° / 121.1	
Freeboard at mast at 4.655		1.056	



2018
Measurements
Datasheet

RIG			
Forestay Tension Aft	Spreaders 2		
Inner Stay None Fitted	Runners 0		
Carbon Mast Yes	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 14.945	E 5.195	MDT1 0.130	MW 0.235
IG 16.385	J 4.530	MDL1 0.235	GO 0.270
ISP 16.600	SFJ 0.125	MDT2 0.130	BD 0.210
BAS 1.820	SPL 4.460	MDL2 0.235	MWT 195.50
FSP 0.064	TPS	TL 0.000	MCG 5.430

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MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.410		
Type Folding 2 blades	PBW 0.111		
Twin Screw No	PIPA 0.0040		
ST1 0.064	ST3 0.180	ST5 0.290	
ST2 0.178	ST4 0.110	EDL 2.210	

COMMENTS	
TPS6,43	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS INVENTORY																
MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
3	0.160	1.06	1.96	3.37	4.41	46.39	D206	27/05/2010	NS	Unknown						
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
4	0.08	0.75	1.49	3.02	4.56	6.15	15.65	136%	47.66			EST 1	13/07/2012		Unknown	
SYMMETRIC SPINNAKERS (3)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
4	17.90	17.90	17.90	8.80	8.51	130.40		23/06/2013		Unknown	S2					
3	17.87	17.87	17.87	8.80	8.52	130.21		03/05/2013		Unknown	S1					
2	15.85	15.85	15.85	8.17	7.82	106.99	EST 1	18/05/2010		Unknown						
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				

MEASUREMENT INVENTORY				
Measurer A. Tetsmann				
Date 31/08/2005				
Comment				
Id	Item	Weight	Distance	VCG Description
4	Anchor	45.0	8.40	Anchor
2	Anchor	40.0	8.40	Anchor
4	Tools	40.0	6.90	Toolbox
Id	Item	Maker	Model	
1	Engine	Volvo-Penta	MD2030	
Id	Item	Weight	Distance	Description

MEASUREMENT INVENTORY								
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condn	Description
1	Tank	Water	solid	140.0	6.10		0-0	Water tank portside
2	Tank	Water	solid	140.0	6.10		0-0	Water tank starboard
3	Tank	Fuel	solid	80.0	6.90		0-0	Fuel tank center
Id	Item	Weight	Distance	VCG Description				
1	Battery		7.00	Battery 92Ah				
2	Battery		7.00	Battery 92Ah				



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ORC Club Certificate Appendix

BOAT			
Name	MERION	Certificate Number	EST400
Sail Nr	EST 400	Issued On	5/28/2018

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	948.5	780.0	687.6	649.2	632.7	624.5	615.4
52°	625.6	523.6	478.5	462.0	455.4	451.8	449.5
60°	594.2	503.0	466.9	451.4	443.7	439.2	435.5
75°	572.1	490.2	458.7	441.2	427.6	418.1	409.3
90°	579.1	492.9	458.3	438.7	421.1	404.5	381.2
110°	594.8	488.9	449.0	425.9	409.1	395.5	371.5
120°	608.9	498.3	453.2	426.9	400.9	379.6	353.4
135°	671.6	541.9	473.9	443.7	418.3	390.9	337.5
150°	796.4	637.7	535.3	475.1	446.0	422.8	373.2
Run VMG	919.6	736.4	618.1	542.7	497.2	461.4	415.7
Selected Courses							
Windward / Leeward	934.0	758.2	652.9	596.0	564.9	543.0	515.5
Circular Random	788.3	635.9	554.4	507.1	477.7	458.0	431.3
Coastal / Long Distance	932.6	713.1	590.6	523.1	487.6	458.9	413.9
Non Spinnaker	847.5	677.9	585.7	531.3	497.3	474.6	444.7

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	42.3°	40.8°	39.7°	38.2°	37.3°	36.8°	36.5°
Beat VMG	3.80	4.62	5.24	5.55	5.69	5.76	5.85
52°	5.75	6.88	7.52	7.79	7.90	7.97	8.01
60°	6.06	7.16	7.71	7.97	8.11	8.20	8.27
75°	6.29	7.34	7.85	8.16	8.42	8.61	8.80
90°	6.22	7.30	7.85	8.21	8.55	8.90	9.44
110°	6.05	7.36	8.02	8.45	8.80	9.10	9.69
120°	5.91	7.23	7.94	8.43	8.98	9.48	10.19
135°	5.36	6.64	7.60	8.11	8.61	9.21	10.67
150°	4.52	5.65	6.72	7.58	8.07	8.51	9.65
Run VMG	3.91	4.89	5.82	6.63	7.24	7.80	8.66
Gybe Angles	140.9°	147.7°	147.7°	154.9°	164.9°	180.0°	180.0°