



ORC
Offshore Racing Congress
World leader in rating technology

**2019
ORC Club
Certificate**

Rating Office

**EYU
Purje 8
11911, Tallinn
Estonia**

Certificate

Number **EST678**
Issued On **4/30/2019**
ORC Ref **EST0000508**
VPP Ver. **2019 1.01**
Valid until **12/31/2019**

Crew Weight

Default 627kg
Maximum **690kg**
Minimum* **518kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	642.2	0.9343
Double H.OSN	625.7	0.9589
Non Spin GPH	664.7	0.9027
Non Spin OSN	643.7	0.9322

Sails Limitations

Headsails **5** Spinnakers **3**

Spinnaker configuration

Symmetric: **Yes 86.28**
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = 9.070

Stability (Measured)

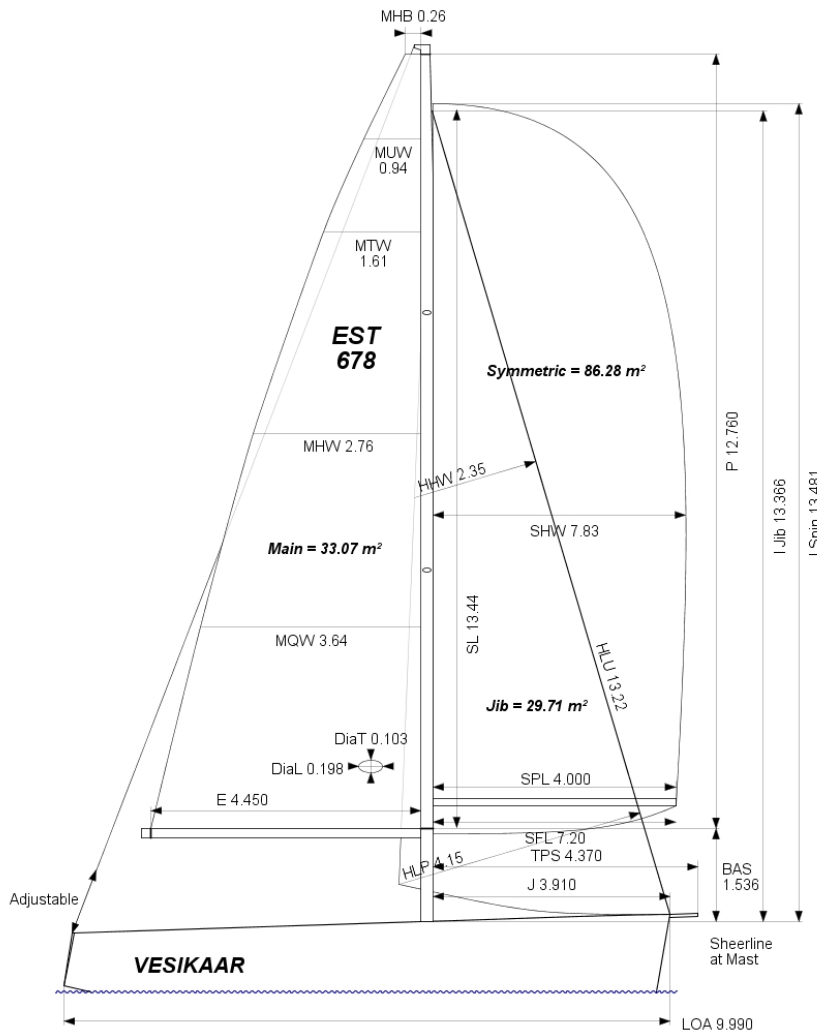
Limit Positive Stab.: **114.0°**
Stability Index: **114.2**

Owner

**OÜ Hardwork
Kandle 21, Tallinn
Estonia
KJK**

I certify that I understand my responsibilities under ORC Rules and Regulations

Signature



BOAT		GPH		HULL		
Name	VESIKAAR			Data File	EST0678	
Sail Nr	EST 678			Offset File	T34-VER.OFF	
		629.5		Displacement	4,445kg	
				LOA	9.990m	
				MB	3.296m	
				Draft	2.249m	
CLASS				IMS Division	Cruiser/Racer	
Class	T-34			Dynamic All.	0.189%	
Designer	Lostuzzi design			Fwd Accom.	Yes	
Builder	T-Yachts			Construction	Cored	
Series	04/2009			Fiber Rigging	No	
Age Date	06/2009			Aramid Core	No	
Age Allowance	0.325%			Carbon Rudder	Yes	
				Light Stanchions		
COMMENTS				IMSL	9.535m	
				VCGD	0.166m	
				Sink	17.87kg/mm	
				RL	8.603m	
				VCGM	0.109m	
				WS	23.10m²	
				LSM0	9.371m	
				Displacement/Length ratio	5.4015	
				Water Ballast	0	
				Trim Tab	No	
				BLR Index	0.0000	
PROPELLER				CENTERBOARD		
Installation	Strut	PRD	0.382			
Type	Folding 3 blades	PBW	0.098			
		PIPA	0.0036			
				N/A		
SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	610.8			680.1		
Time on Time	0.9823			0.9925		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	721.9	557.3	497.5	931.8	682.2	593.8
Time on Time	0.9350	1.2113	1.3568	0.7244	0.9894	1.1368

BOAT	
Name VESIKAAR	Sail Nr EST 678
File EST0678	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 03/07/2015		SG 1.0020	
FFM 1.259	FF 1.267	SFFP 0.550	
FAM 0.960	FA 0.965	SAFP 9.820	
W1 62.0	PD1 545.1	WD 11.260	
W2 62.0	PD2 544.2	GSA 1.0	
W3 62.0	PD3 548.5	RSA 1.0	
W4 62.0	PD4 549.4	PLM 9000.0	
LCF from stem on CL / on sheer		5.610 / 5.840	
Maximum beam station from stem		6.400	
RM Measured		100.5kg·m	
RM Default		110.4kg·m	
Limit of positive stability / Stab.Index		114.0° / 114.2	
Freeboard at mast at 3.910		1.153	



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2019
Measurements
Datasheet

RIG			
Forestay Tension Aft	Spreaders 2		
Inner Stay None Fitted	Runners 0		
Carbon Mast No	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 12.760	E 4.450	MDT1 0.103	MW 0.185
IG 13.366	J 3.910	MDL1 0.198	GO 0.207
ISP 13.481	SFJ 0.000	MDT2 0.103	BD 0.150
BAS 1.536	SPL 4.000	MDL2 0.155	MWT 132.50
FSP 0.080	TPS 4.370	TL 2.060	MCG 4.900

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.382		
Type Folding 3 blades	PBW 0.098		
Twin Screw No	PIPA 0.0036		
ST1 0.065	ST3 0.180	ST5 0.224	
ST2 0.180	ST4 0.110	EDL 1.580	

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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					
4	0.26	0.94	1.61	2.76	3.64	33.08	EST 1	29/06/2016	North	Carbon	2016					
HEADSAILS (6)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
9	0.10	0.71	1.32	2.35	3.27	4.15	13.22	106%	29.71	Y		EST 1	24/05/2018		Unknown	
7	0.11	0.69	1.31	2.36	3.27	4.13	13.20	106%	29.61	Y		EST 1	13/04/2017		Carbon	
4	0.10	0.69	1.28	2.32	3.32	4.25	12.97	109%	29.30	Y		EST 1	18/04/2015		Unknown	
8	0.10	0.67	1.25	2.28	3.22	4.11	13.16	105%	28.92	Y		EST 1	15/06/2016		Unknown	
5	0.09	0.66	1.25	2.24	3.22	4.20	12.98	107%	28.58	Y		EST 1	18/04/2015		Unknown	
6	0.09	0.51	0.95	1.90	2.98	4.11	12.97	105%	25.80	Y		EST 1	18/04/2015		Unknown	
SYMMETRIC SPINNAKERS (5)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
5	13.44	13.44	13.44	7.83	7.20	86.29			North	Unknown	S2 2016					
6	13.50	13.50	13.50	7.78	7.22	86.27			North	Unknown	S1,5 2016					
7	13.60	13.60	13.60	7.20	7.60	82.51	Hemamali	16/06/2016	North	Unknown	S3 2016					
3	13.44	13.44	13.44	7.27	7.27	81.43	EST 2	24/07/2011		Unknown						
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				

MEASUREMENT INVENTORY				
Measurer Veiko Rosme EST 2				
Date 03/07/2015				
Comment				
Id	Item	Weight	Distance	VCG Description
1	Engine			Volvo-Penta D1-20
Id	Item	Weight	Description	

MEASUREMENT INVENTORY							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condn Description
1	Tank	Diesel	PVC	61.0	4.90		40-0 ports.
3	Tank	Water	PVC	61.0	4.30		0-0 stb.
Id	Item	Weight	Distance	VCG Description			
1	Battery	4.85		100 Ah, stb.			
2	Battery	4.85		100 Ah, stb.			
1	Misc	9.60		Autopilot Nexus ML40			

2019

ORC Club Certificate Appendix

BOAT

Name **VESIKAAR** Certificate Number **EST678**
Sail Nr **EST 678** Issued On **4/30/2019**

TIME ALLOWANCES

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1058.7	877.3	771.1	719.9	704.8	699.7	689.1
52°	694.0	587.5	532.6	510.7	503.5	500.5	495.4
60°	657.1	561.5	518.8	499.1	490.3	486.6	482.6
75°	631.4	543.2	508.3	488.5	473.8	464.3	458.0
90°	640.8	540.9	500.3	485.9	468.9	451.3	428.4
110°	637.4	531.3	491.8	465.7	444.2	430.9	410.8
120°	655.7	541.7	496.7	469.0	441.3	416.4	387.7
135°	724.4	588.4	518.5	486.9	460.3	433.1	379.3
150°	865.3	686.2	578.3	517.3	488.1	463.6	414.1
Run VMG	999.1	792.3	667.7	587.7	534.5	499.6	452.0

Selected Courses

Windward / Leeward	1028.9	834.8	719.4	653.8	619.7	599.7	570.6
Circular Random	866.6	699.8	610.6	559.1	527.6	506.8	479.3
Coastal / Long Distance	1025.9	784.4	650.4	575.5	537.9	507.8	458.8
Non Spinnaker	930.1	744.5	643.8	584.9	548.8	525.2	495.3

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	42.6°	40.9°	39.9°	38.2°	37.7°	37.6°	37.5°
Beat VMG	3.40	4.10	4.67	5.00	5.11	5.14	5.22
52°	5.19	6.13	6.76	7.05	7.15	7.19	7.27
60°	5.48	6.41	6.94	7.21	7.34	7.40	7.46
75°	5.70	6.63	7.08	7.37	7.60	7.75	7.86
90°	5.62	6.66	7.20	7.41	7.68	7.98	8.40
110°	5.65	6.78	7.32	7.73	8.10	8.35	8.76
120°	5.49	6.65	7.25	7.68	8.16	8.64	9.29
135°	4.97	6.12	6.94	7.39	7.82	8.31	9.49
150°	4.16	5.25	6.23	6.96	7.38	7.76	8.69
Run VMG	3.60	4.54	5.39	6.13	6.73	7.21	7.97
Gybe Angles	144.9°	149.1°	150.0°	157.5°	175.8°	180.0°	180.0°