



ORC

Offshore Racing Congress
World leader in rating technology

**2019
ORC Club
Certificate**

Rating Office

**EYU
Purje 8
11911, Tallinn
Estonia**

Certificate

Number **Est734**
Issued On **6/12/2019**
ORC Ref **EST00000656**
VPP Ver. **2019 1.01**
Valid until **12/31/2019**

Crew Weight

Default 320kg
Maximum **400kg**
Minimum* **300kg**
**when applied by the NoR and SI*
Non Manual Pwr

Special Scoring

	ToD	ToT
Double H.GPH	755.1	0.7946
Double H.OSN	734.9	0.8165
Non Spin GPH	775.9	0.7733
Non Spin OSN	748.7	0.8014

Sails Limitations

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

Spinnaker configuration

Symmetric: **Yes 31.59**
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = 6.134

Stability (Estimated)

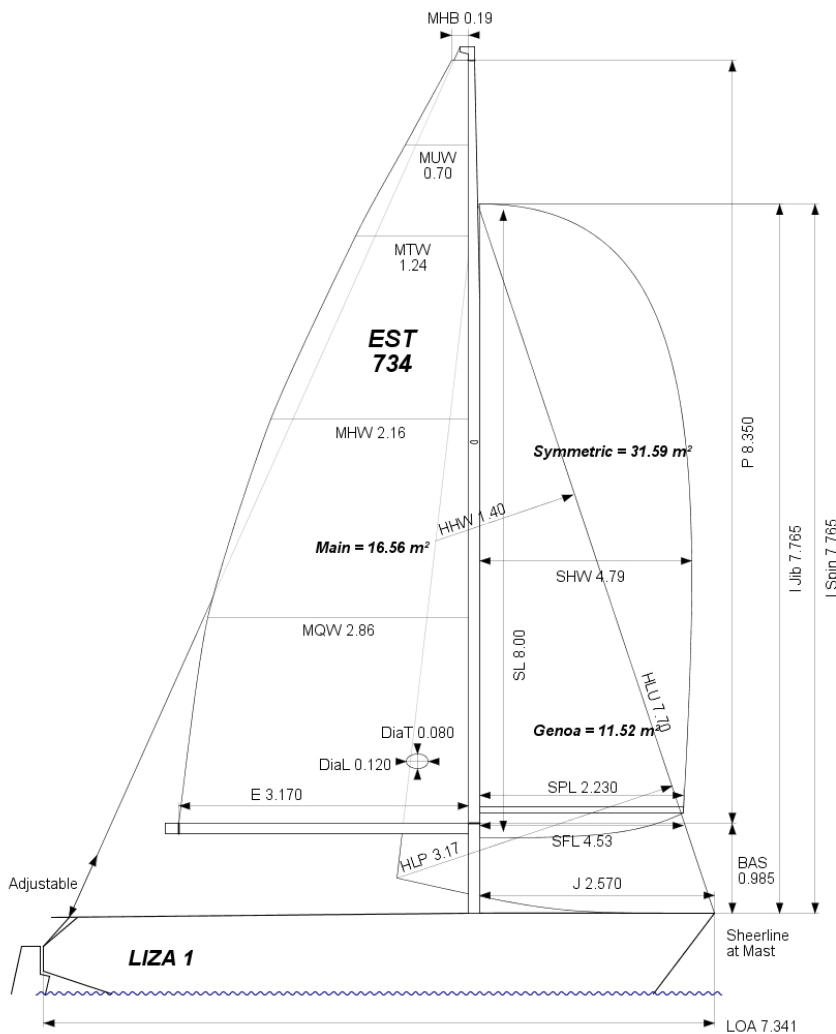
Limit Positive Stab.: **113.8°**
Stability Index: **105.8**

Owner

**Urmo Niinberg
Ohtu tee 4
Keila, Estonia
SMS**

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

Signature



BOAT		GPH		HULL		
Name	LIZA 1			Data File	Est0734	
Sail Nr	EST 734			Offset File	xtrapaulet.off	
		744.4		Displacement	1,406kg	
				LOA	7.341m	
				MB	3.124m	
				Draft	1.453m	
CLASS				IMS Division	Dynamic All. 0.242%	
Class	Extra Paulette			Fwd Accom.	Yes	
Designer	Joubert/Nivelt			Construction	Solid	
Builder				Fiber Rigging	No	
Series	05/1978			Aramid Core	No	
Age Date	05/1978			Carbon Rudder	No	
Age Allowance	0.487%			Light Stanchions	No	
COMMENTS				IMSL	6.287m	
				VCGD	0.015m	
				Sink	8.14kg/mm	
				RL	5.980m	
				VCGM	0.034m	
				WS	10.87m²	
				LSM0	5.845m	
				Displacement/Length ratio	7.0410	
PROPELLER				Water Ballast	0	
Type	No Propeller			Trim Tab	No	
				BLR Index	0.0000	
SCORING OPTIONS				CENTERBOARD		
				N/A		
		COASTAL / LONG DISTANCE			WINDWARD / LEEWARD	
Time on Distance		721.9			800.3	
Time on Time		0.8311			0.8434	
Triple Number		Low	Medium	High	Low	Medium
Time on Distance		855.3	660.2	579.8	1104.2	805.7
Time on Time		0.7892	1.0224	1.1642	0.6113	0.8378
					0.9736	

BOAT	
Name LIZA 1	Sail Nr EST 734
File Est0734	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Club Estimated VCG			
Flotation date 08/06/2019		SG	
FFM	FF 0.880	SFFP	0.200
FAM	FA 0.837	SAFP	7.257
LCF from stem on CL / on sheer		3.954 / 4.246	
Maximum beam station from stem		4.432	
RM Measured		25.3kg·m	
RM Default		24.5kg·m	
Limit of positive stability / Stab.Index		113.8° / 105.8	
Freeboard at mast at 2.570		0.875	



ORC
Offshore Racing Congress
World leader in rating technology

2019
Measurements
Datasheet

RIG			
Forestay Tension Aft	Spreaders 1		Runners 0
Inner Stay None Fitted	Jumper Struts None		Jib Furler No
Carbon Mast No	Main Furler No		Without Backstay No
Taper Hollows No	Main Furler No		Without Backstay No
Fiber Rigging No	Main Furler No		Without Backstay No
Lenticular Rigging No	Main Furler No		Without Backstay No
Articulated Bowsprit No	Main Furler No		Without Backstay No
P 8.350	E 3.170	MDT1 0.080	MW
IG 7.765	J 2.570	MDL1 0.120	GO
ISP 7.765	SFJ	MDT2 0.040	BD
BAS 0.985	SPL 2.230	MDL2 0.060	MWT 26.00
FSP	TPS	TL 2.620	MCG 3.421

MIZZEN RIG AND SAILS	
N/A	

PROPELLER	
Type No Propeller	

Certificate	
Number Est734	
ORC Ref EST00000656	
Issued On 6/12/2019	
VPP Ver. 2019 1.01	
Valid until 12/31/2019	

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	0.19	0.70	1.24	2.16	2.86	16.56	EST 5	08/06/2019		Unknown						
HEADSAILS (2)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
2	0.07	0.37	0.68	1.40	2.25	3.17	7.70	123%	11.53			EST5	08/06/2019		Unknown	
3	0.06	0.34	0.61	1.17	1.76	2.36	7.47	92%	8.87			EST5	08/06/2019		Unknown	
SYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	8.00	8.00	8.00	4.79	4.53	31.59	EST5	08/06/2019		Unknown						
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				

2009

ORC Club Certificate Appendix

BOAT			
Name	LIZA 1	Certificate Number	Est734
Sail Nr	EST 734	Issued On	6/12/2019

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1266.2	1057.4	935.8	863.5	821.5	808.1	812.6
52°	829.2	698.4	637.8	611.6	594.4	582.9	577.9
60°	784.7	667.9	621.2	597.0	578.8	563.7	553.4
75°	753.5	650.0	609.8	583.3	561.1	541.3	516.7
90°	743.2	631.4	587.9	557.1	533.2	519.6	493.1
110°	741.9	630.4	586.8	551.4	518.7	489.9	448.5
120°	768.6	643.5	595.3	560.6	527.2	495.8	432.7
135°	860.3	703.6	619.9	583.3	550.8	519.7	459.3
150°	1011.4	802.6	679.2	614.0	580.8	550.4	493.9
Run VMG	1167.8	925.6	779.2	678.3	620.2	586.6	529.3
Selected Courses							
Windward / Leeward	1217.0	991.5	857.5	770.9	720.9	697.3	670.9
Circular Random	1026.6	829.4	722.6	659.4	619.4	592.4	557.3
Coastal / Long Distance	1212.1	930.5	775.5	682.3	630.2	592.7	528.7
Non Spinnaker	1080.1	867.8	752.3	684.0	641.1	612.7	577.1

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	42.5°	42.3°	41.9°	39.2°	37.3°	36.9°	37.8°
Beat VMG	2.84	3.40	3.85	4.17	4.38	4.46	4.43
52°	4.34	5.15	5.64	5.89	6.06	6.18	6.23
60°	4.59	5.39	5.80	6.03	6.22	6.39	6.51
75°	4.78	5.54	5.90	6.17	6.42	6.65	6.97
90°	4.84	5.70	6.12	6.46	6.75	6.93	7.30
110°	4.85	5.71	6.13	6.53	6.94	7.35	8.03
120°	4.68	5.59	6.05	6.42	6.83	7.26	8.32
135°	4.18	5.12	5.81	6.17	6.54	6.93	7.84
150°	3.56	4.49	5.30	5.86	6.20	6.54	7.29
Run VMG	3.08	3.89	4.62	5.31	5.80	6.14	6.80
Gybe Angles	148.6°	152.8°	153.6°	172.1°	180.0°	180.0°	180.0°