



ORC

Offshore Racing Congress
World leader in rating technology

2020 ORC Club Certificate

Rating Office

EYU
Purje 8
11911, Tallinn
Estonia

Certificate

Number **Est004**
Issued On **5/29/2020**
ORC Ref **03580000J3T**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

Crew Weight

Default	463kg
Maximum	450kg
Minimum*	338kg

*when applied by the NoR and SI

Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	787.4	0.7620
Non Spin OSN	759.8	0.7897

Sails Limitations

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

Spinnaker configuration

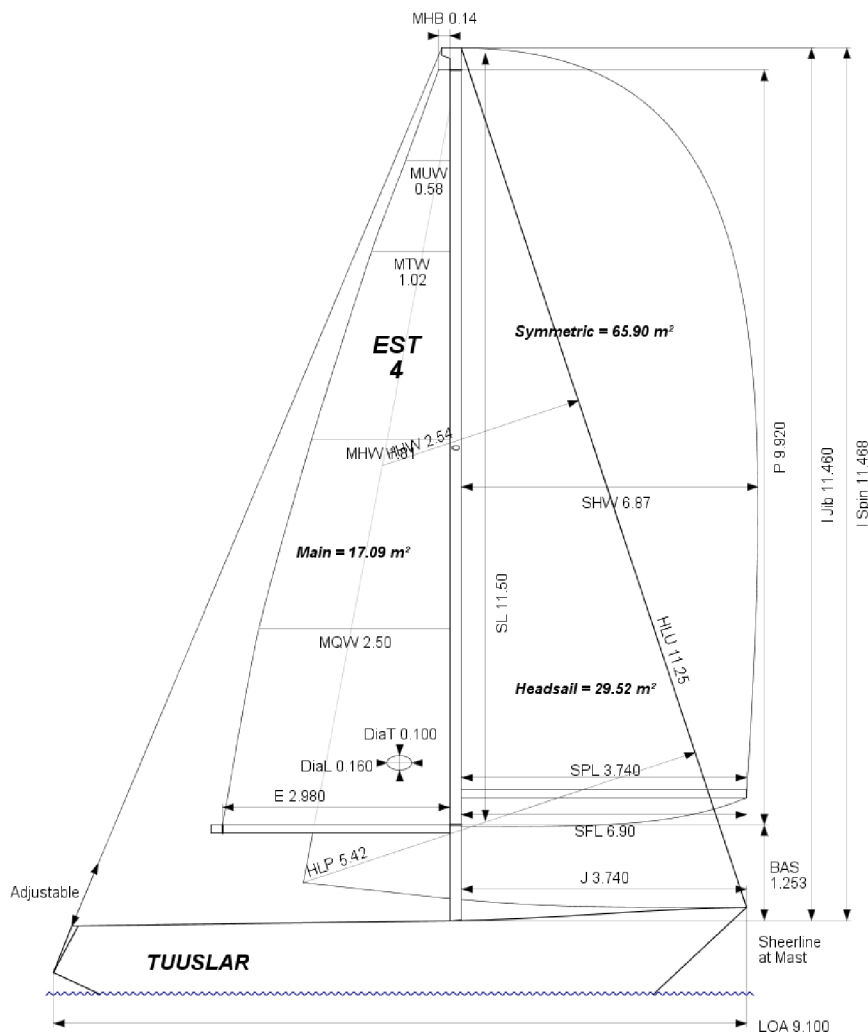
Symmetric: **Yes** **65.89**
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = 6.566

Stability (Estimated)

Limit Positive Stab.: **114.2°**
Stability Index: **114.4**



BOAT			GPH		HULL						
Name Tuuslar Sail Nr EST 4			749.1		Data File	Est0004	LOA	9.100m			
					Offset File	GR0044.BOF	MB	3.058m			
					Displacement	3,848kg	Draft	1.590m			
CLASS					IMS Division	Cruiser/Racer	Dynamic All.	0.496%			
					Plan Review		Construction	Solid			
					Fiber Rigging	No	Aramid Core	No			
					Crew Arm Ex		Carbon Rudder	No			
							Light Stanchions	No			
					IMSL	7.418m	VCGD	-0.119m	Sink	12.45kg/mm	
					RL	5.713m	VCGM	0.056m	WS	17.85m	
					LSM0	7.567m	Displacement/Length ratio				
COMMENTS					Water Ballast					Trim Tab	No
					BLR Index					0.0000	
PROPELLER					CENTERBOARD						
Installation					Shaft exposed	PRD	0.381				
Type					Solid 2 blades	PBW	0.125				
						PIPA	0.0158				
SCORING OPTIONS											
			COASTAL / LONG DISTANCE				WINDWARD / LEEWARD				
Time on Distance			725.4				808.9				
Time on Time			0.8271				0.8344				
Triple Number			Low	Medium	High	Low	Medium	High			
Time on Distance			869.2	660.3	587.2	1118.8	815.7	701.5			
Time on Time			0.7766	1.0223	1.1496	0.6033	0.8275	0.9622			

BOAT										INCLINING TEST AND FREEBOARDS									
Name Tuuslar					Sail Nr EST 4					Inclining Test Club Estimated VCG									
File Est0004					Data in meters/kilograms					Flotation date 18/11/2019 SG									
FFM					FF 1.128					SFFP 0.500									
FAM					FA 0.891					SAFP 8.786									
RIG										LCF from stem on CL / on sheer 5.119 / 5.322									
Forestay Tension Aft					Spreaders 1					Maximum beam station from stem 5.648									
Inner Stay None Fitted					Runners/Checkstays 0					RM Measured 55.9kg·m									
Carbon Mast No					Jib Furler No					RM Default 54.2kg·m									
Fiber Rigging No					Main Furler No					Limit of positive stability / Stab.Index 114.2° / 114.4									
Non-Circular Rigging No										Freeboard at mast at 3.740 0.966									
Articulated Bowsprit No																			
P 9.920					E 2.980					MDT1 0.100					MW 0.160				
IG 11.460					J 3.740					MDL1 0.160					GO 0.255				
ISP 11.468					SFJ					MDT2 0.100					BD				
BAS 1.253					SPL 3.740					MDL2 0.160					MWT				
FSD -3.000					TPS					TL					MCG				
MIZZEN RIG AND SAILS										PROPELLER									
N/A										Installation Shaft exposed PRD 0.381									
										Type Solid 2 blades PBW 0.125									
										Twin Screw No PIPA 0.0158									
										PSA 15.000 PHL 0.080 ST3 0.082 ESL 0.584									
										PSD 0.025 ST1 0.020 ST4 0.063									
										PHD 0.078 ST2 0.070 ST5 0.159									
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	0.58	1.02	1.81	2.50	17.09	EST8	30/05/2019											
HEADSAILS (2)																			
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment			
1	0.06	0.61	1.22	2.54	3.97	5.42	11.25	145%	29.52	No	EST8	30/05/2019							
2	0.06	0.51	0.98	1.94	2.91	3.88	11.35	104%	22.11	No	EST8	30/05/2019				Unknow			
SYMMETRIC SPINNAKERS (1)																			
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment								
1	11.50	11.50	11.50	6.87	6.90	65.90	EST8	30/05/2019											
ASYMMETRIC SPINNAKERS (0)																			
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment							



2020 Measurements Datasheet

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ORC Club Certificate Appendix

BOAT			
Name	Tuuslar	Certificate Number	Est004
Sail Nr	EST 4	Issued On	5/29/2020

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1310.9	1090.3	966.5	883.4	846.4	833.9	839.3
52°	851.1	719.4	640.0	602.1	584.7	578.0	576.4
60°	803.3	680.0	614.1	585.2	569.3	560.8	557.0
75°	773.3	652.1	596.5	571.4	554.8	541.8	527.2
90°	782.5	647.7	584.0	559.3	549.6	534.9	508.7
110°	762.2	626.5	571.7	544.0	521.3	503.9	487.3
120°	784.8	639.8	576.8	546.9	521.8	499.0	469.5
135°	860.6	699.2	602.0	563.3	537.5	512.8	471.1
150°	1001.3	795.6	671.1	596.1	562.7	538.9	494.8
Run VMG	1156.2	918.1	774.0	676.0	609.6	571.7	525.7
Selected Courses							
Windward / Leeward	1233.5	1004.2	870.2	779.7	728.0	702.8	682.5
Circular Random	1039.9	836.3	726.1	661.9	623.0	599.0	572.5
Coastal / Long Distance	1225.8	941.5	781.1	681.6	631.9	597.0	544.4
Non Spinnaker	1107.5	884.8	762.6	690.1	645.6	617.5	586.4

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	43.5°	42.0°	42.0°	41.8°	40.9°	40.5°	40.9°
Beat VMG	2.75	3.30	3.72	4.07	4.25	4.32	4.29
52°	4.23	5.00	5.63	5.98	6.16	6.23	6.25
60°	4.48	5.29	5.86	6.15	6.32	6.42	6.46
75°	4.66	5.52	6.04	6.30	6.49	6.64	6.83
90°	4.60	5.56	6.16	6.44	6.55	6.73	7.08
110°	4.72	5.75	6.30	6.62	6.91	7.14	7.39
120°	4.59	5.63	6.24	6.58	6.90	7.21	7.67
135°	4.18	5.15	5.98	6.39	6.70	7.02	7.64
150°	3.60	4.52	5.36	6.04	6.40	6.68	7.28
Run VMG	3.11	3.92	4.65	5.33	5.91	6.30	6.85
Gybe Angles	148.0°	151.5°	151.0°	159.0°	180.0°	180.0°	180.0°