



ORC

Offshore Racing Congress
World leader in rating technology

**2019
ORC Club
Certificate**

Rating Office

EYU
Purje 8
11911, Tallinn
Estonia

Certificate

Number **Est745**
Issued On **9/15/2019**
ORC Ref **EST00000864**
VPP Ver. **2019 1.01**
Valid until **12/31/2019**

Crew Weight

Default 650kg
Maximum **655kg**
Minimum* **491kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	639.5	0.9382
Double H.OSN	623.3	0.9627
Non Spin GPH	666.5	0.9002
Non Spin OSN	645.3	0.9298

Sails Limitations

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

Spinnaker configuration

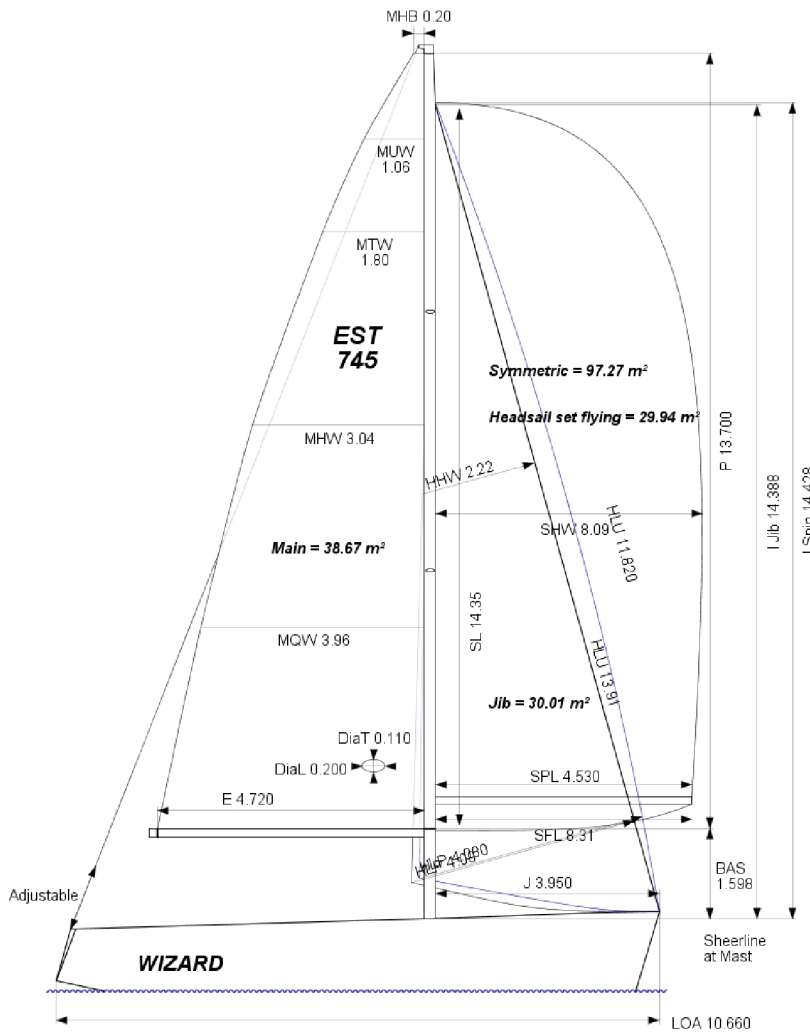
Symmetric: **Yes** **97.27**
Asymmetric: **No**
Flying H/S: **Yes** **29.94**
Spin. Pole: **Yes**

Class Division Length

CDL = 9.038

Stability (Measured)

Limit Positive Stab.: **115.3°**
Stability Index: **115.4**



BOAT		GPH		HULL		
Name	WIZARD		628.6	Data File	Est0745	
Sail Nr	EST 745			Offset File	F242.OFF	
				Displacement	5,708kg	
				LOA	10.660m	
				MB	3.636m	
				Draft	2.208m	
CLASS				IMS Division	Cruiser/Racer	
Class	First 35			Dynamic All.	0.204%	
Designer	Bruce Farr			Fwd Accom.	Yes	
Builder	Beneteau			Construction	Solid	
Series	02/2009			Fiber Rigging	No	
Age Date	01/2010			Aramid Core	No	
Age Allowance	0.325%			Carbon Rudder	No	
				Light Stanchions		
COMMENTS				IMSL	9.739m	
Mast weight to be checked				VCGD	0.166m	
				Sink	19.31kg/mm	
				RL	8.336m	
				VCGM	0.161m	
				WS	26.24m²	
				LSM0	9.604m	
				Displacement/Length ratio	6.4436	
PROPELLER				Water Ballast	0	
Installation	Strut	PRD	0.430	Trim Tab	No	
Type	Folding 2 blades	PBW	0.120	BLR Index	0.0000	
		PIPA	0.0032			
				CENTERBOARD		
				N/A		
SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	610.6			682.1		
Time on Time	0.9827			0.9896		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	721.4	556.0	498.5	933.2	684.4	596.6
Time on Time	0.9357	1.2141	1.3541	0.7233	0.9863	1.1315

BOAT	
Name WIZARD	Sail Nr EST 745
File Est0745	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 09/05/2016		SG 1.0050	
FFM 1.383	FF 1.390	SFFP 0.422	
FAM 1.079	FA 1.084	SAFP 10.320	
W1 68.4	PD1 557.2	WD 11.680	
W2 68.4	PD2 547.9	GSA 1.0	
W3 68.4	PD3 542.8	RSA 1.0	
W4 68.4	PD4 555.8	PLM 9000.0	
LCF from stem on CL / on sheer		5.829 / 6.081	
Maximum beam station from stem		6.761	
RM Measured		114.2kg·m	
RM Default		133.7kg·m	
Limit of positive stability / Stab.Index		115.3° / 115.4	
Freeboard at mast at 3.950		1.272	



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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 13.700	E 4.720	MDT1 0.110	MW 0.200
IG 14.388	J 3.950	MDL1 0.200	GO 0.220
ISP 14.428	SFJ 0.000	MDT2 0.110	BD 0.160
BAS 1.598	SPL 4.530	MDL2 0.156	MWT 154.00
FSP 0.070	TPS	TL 0.850	MCG 4.870

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.430		
Type Folding 2 blades	PBW 0.120		
Twin Screw No	PIPA 0.0032		
ST1 0.042	ST3 0.180	ST5 0.230	
ST2 0.180	ST4 0.112	EDL 2.120	

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COMMENTS	
Mast weight to be checked	

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	0.20	1.06	1.80	3.04	3.96	38.67	EST 7	10/04/2019	WB-Sails	Carbon						
HEADSAILS (4)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
F1	0.12	0.64	1.18	2.22	3.18	4.09	13.91	104%	30.02			EST 7	02/04/2019	WB-Sails	Carbon	
1	0.04	0.80	1.60	2.93	3.77	4.08	11.82	103%	29.94		Y	EST 7	02/07/2019	WB-Sails	Carbon	Staysail
F2	0.11	0.60	1.11	2.12	3.13	4.09	13.94	104%	29.37			EST 7	02/04/2019	WB-Sails	Carbon	
HVY	0.12	0.50	0.91	1.87	2.96	4.09	13.57	104%	26.71			EST 7	02/04/2019	WB-Sails	Carbon	
SYMMETRIC SPINNAKERS (4)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
4	14.35	14.35	14.35	8.09	8.31	97.27	SLO 03	03/05/2019	OneSails	Nylon	red					
1	14.20	14.20	14.20	8.00	7.77	94.13	EST 7	10/04/2019	WB-Sails	Nylon	S1, white					
2	14.35	14.35	14.35	7.87	7.82	94.00	EST 7	10/04/2019	Quantum	Nylon	S2, pink					
3	14.43	14.43	14.43	7.18	7.10	86.15	EST 7	10/04/2019	North Sails	Nylon	S3, white					
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				

MEASUREMENT INVENTORY				
Measurer				
Date 09/05/2016				
Comment Waves and wind				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
7	Engine	YANMAR	29HP	
Id	Item	Weight	Description	

MEASUREMENT INVENTORY									
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condn	Description	
1	Tank	FUEL	PP	75.0	8.65		0-0	Empty	
2	Tank	WATER	PP	100.0	4.55		0-0	Empty	
3	Tank	WATER	PP	100.0	4.55		0-0	Empty	
4	Tank	HOLDING	PP	80.0	8.85		0-0	Empty	
5	Tank	Boiler		25.0	4.45		0-0		
Id	Item	Weight	Distance	VCG Description					
1	Battery	6.75	75Ah						
2	Battery	7.95	2 x 110Ah						
1	Misc	9.55	Webasto heater						

2009

ORC Club Certificate Appendix

BOAT			
Name	WIZARD	Certificate Number	Est745
Sail Nr	EST 745	Issued On	9/15/2019

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1076.3	890.3	783.6	731.4	715.6	711.1	701.1
52°	702.9	593.6	533.6	509.4	501.3	498.2	493.7
60°	664.1	564.9	517.1	496.4	487.3	483.8	480.9
75°	633.5	539.6	501.5	482.5	470.0	463.0	456.9
90°	630.7	535.9	495.0	478.8	462.2	446.2	428.0
110°	631.4	525.0	485.1	461.7	444.3	432.8	409.1
120°	649.2	535.0	489.5	463.8	440.0	418.7	395.8
135°	716.1	582.1	511.6	480.2	456.2	432.0	386.9
150°	852.3	677.3	571.5	510.4	481.3	458.8	414.7
Run VMG	984.2	782.1	659.8	580.9	527.9	492.4	447.9
Selected Courses							
Windward / Leeward	1030.2	836.2	721.7	656.1	621.8	601.7	574.5
Circular Random	865.6	698.7	609.6	558.4	527.5	507.5	482.1
Coastal / Long Distance	1025.6	784.6	650.6	575.0	537.1	507.7	461.1
Non Spinnaker	934.6	747.2	645.3	585.7	549.3	525.7	496.3

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	42.8°	41.1°	40.5°	39.5°	39.0°	39.0°	39.0°
Beat VMG	3.34	4.04	4.59	4.92	5.03	5.06	5.13
52°	5.12	6.06	6.75	7.07	7.18	7.23	7.29
60°	5.42	6.37	6.96	7.25	7.39	7.44	7.49
75°	5.68	6.67	7.18	7.46	7.66	7.77	7.88
90°	5.71	6.72	7.27	7.52	7.79	8.07	8.41
110°	5.70	6.86	7.42	7.80	8.10	8.32	8.80
120°	5.55	6.73	7.36	7.76	8.18	8.60	9.10
135°	5.03	6.18	7.04	7.50	7.89	8.33	9.30
150°	4.22	5.32	6.30	7.05	7.48	7.85	8.68
Run VMG	3.66	4.60	5.46	6.20	6.82	7.31	8.04
Gybe Angles	144.9°	149.2°	150.3°	157.0°	174.8°	180.0°	180.0°