



World Leader in Rating Technology

2018 ORC Club Certificate

Rating Office

EYU
Regati 1
11911, Tallinn
Estonia

Certificate

Number **EST050**
Issued On **5/8/2018**
ORC Ref **EST00000091**
VPP Ver. **2018 1.00**
Valid until **12/31/2018**

Crew Weight

Default 621kg
Maximum **736kg**
Minimum* **552kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	619.1	0.9692
Double H.OSN	604.1	0.9932
Non Spin GPH	646.5	0.9281
Non Spin OSN	627.1	0.9569

Sails Limitations

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

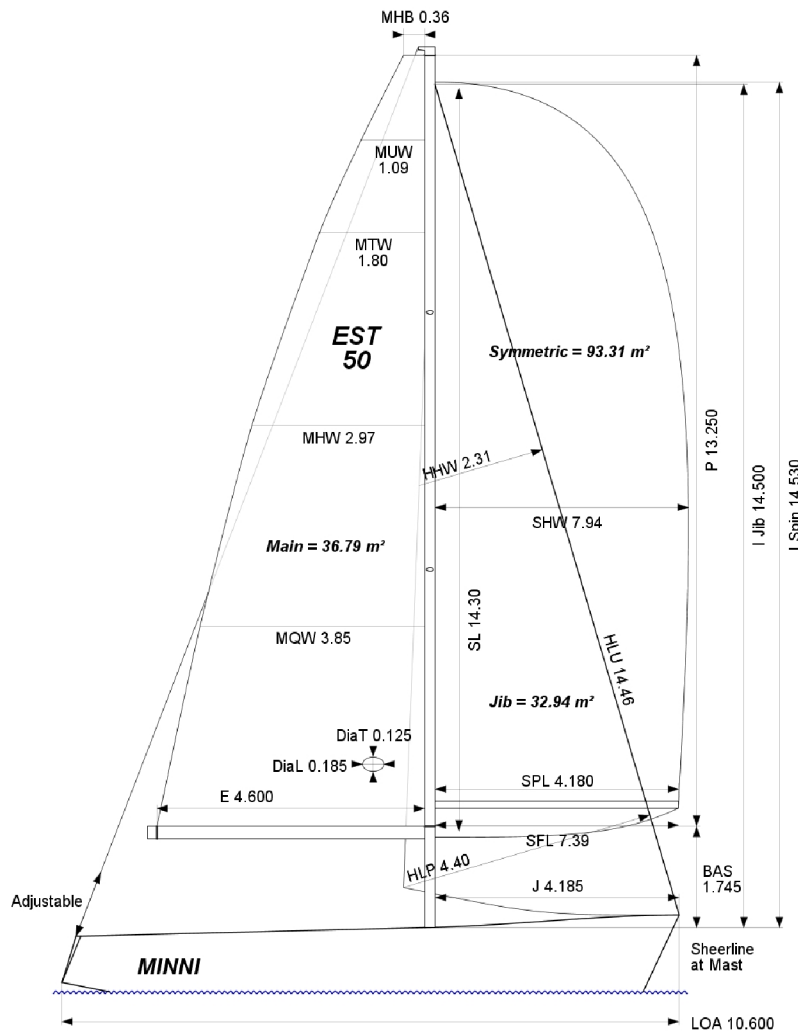
Spinnaker configuration
Symmetric: **Yes** 93.31
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = 9.234

Stability (Measured)

Limit Positive Stab.: **115.3°**
Stability Index: **116.3**



BOAT		GPH		HULL		
Name	MINNI			Data File	Est0050	
Sail Nr	EST 50			Offset File	X35.OFF	
		613.0		Displacement	4,589kg	
				LOA	10.600m	
				MB	3.250m	
				Draft	2.178m	
CLASS				IMS Division	Cruiser/Racer	
Class	X-35			Dynamic All.	0.036%	
Designer	JEPPESEN			Fwd Accom.	Yes	
Builder	X YACHTS			Construction	Cored	
Series	09/2005			Fiber Rigging	No	
Age Date	01/2006			Aramid Core	No	
Age Allowance	0.422%			Carbon Rudder	No	
COMMENTS				Light Stanchions		
				IMSL	9.486m	
				VCGD	0.071m	
				Sink	17.76kg/mm	
				RL	8.981m	
				VCGM	0.055m	
				WS	23.18m²	
				LSM0	9.302m	
				Displacement/Length ratio	5.7015	
PROPELLER				Water Ballast	0	
Installation	Strut	PRD	0.420	Trim Tab	No	
Type	Folding 2 blades	PBW	0.128	BLR Index	0.0000	
		PIPA	0.0033	CENTERBOARD		
				N/A		
SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	595.5			663.5		
Time on Time	1.0075			1.0173		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	698.3	543.8	487.9	896.4	664.2	583.3
Time on Time	0.9666	1.2413	1.3835	0.7530	1.0162	1.1572

BOAT	
Name MINNI	Sail Nr EST 50
File Est0050	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Boom Inclining			
Flotation date 26/06/2016		SG 1.0000	
FFM 1.318	FF 1.327	SFFP 0.075	
FAM 0.963	FA 0.970	SAFP 10.275	
W1 66.1	PD1 95.0	WD 4.505	
W2 66.1	PD2 94.5	GSA 12.6	
W3 66.1	PD3 95.0	RSA 4298.7	
W4 66.1	PD4 94.0	PLM 2005.0	
LCF from stem on CL / on sheer		6.000 / 6.194	
Maximum beam station from stem		7.300	
RM Measured		110.1kg·m	
RM Default		120.6kg·m	
Limit of positive stability / Stab.Index		115.3° / 116.3	
Freeboard at mast at 4.185		1.105	



2018
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 13.250	E 4.600	MDT1 0.125	MW 0.184
IG 14.500	J 4.185	MDL1 0.185	GO 0.204
ISP 14.530	SFJ	MDT2 0.125	BD 0.220
BAS 1.745	SPL 4.180	MDL2 0.177	MWT 156.00
FSP 0.068	TPS	TL 0.230	MCG 4.600

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MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.420		
Type Folding 2 blades	PBW 0.128		
Twin Screw No	PIPA 0.0033		
ST1 0.042	ST3 0.182	ST5 0.255	
ST2 0.178	ST4 0.112	EDL 2.390	

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					
3	0.360	1.09	1.80	2.97	3.85	36.79	EST 7	04/05/2018	OneSails	Unknown						
HEADSAILS (3)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
7a	0.13	0.67	1.24	2.31	3.34	4.40	14.46	105%	32.95			EST 7	04/05/2018		Unknown	Unknow
6a	0.10	0.63	1.20	2.27	3.30	4.36	14.31	104%	32.07			EST 7	04/05/2018		Unknown	Unknow
8	0.14	0.59	1.11	2.16	3.28	4.44	13.42	106%	29.62			SLO 03	01/06/2017	OneSails	Unknown	Unknow
SYMMETRIC SPINNAKERS (3)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
10	14.30	14.30	14.30	7.94	7.39	93.31	EST 7	04/05/2018		Unknown	S2					
9	14.14	14.14	14.14	7.92	7.80	93.04	EST 7	04/05/2018		Unknown	S1					
8	14.07	14.07	14.07	6.54	6.78	77.24	SLO 03	01/06/2017		Unknown	R					
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				

MEASUREMENT INVENTORY				
Measurer A.Tetsmann EST 1				
Date 26/06/2016				
Comment				
Id	Item	Weight	Distance	VCG Description
1	Engine			Yanmar 3YM20C
Id	Item	Weight	Distance	Description

MEASUREMENT INVENTORY								
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description
1	Tank	fuel	st.stl	60.0	6.15			20-0 fuel
2	Tank	H2O	pvc	120.0	5.52			0-0 Water
Id	Item	Weight	Distance	VCG Description				
1	Battery	44.3	4.85	170 Ah gel - services				
2	Battery	17.4	5.18	55 Ah - engine				
1	Misc	20.0	5.52	Table				
2	Misc	15.0	7.60	Boiler				
3	Misc	7.0	9.60	Autopilot				



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ORC Club Certificate Appendix

BOAT			
Name	MINNI	Certificate Number	EST050
Sail Nr	EST 50	Issued On	5/8/2018

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1014.2	840.1	741.4	704.6	692.7	688.9	677.0
52°	671.3	564.3	517.2	500.8	495.5	493.2	486.3
60°	638.6	543.2	505.5	489.1	482.4	479.3	472.9
75°	614.8	529.8	497.0	477.5	463.5	456.1	450.4
90°	622.2	528.3	492.2	475.8	456.2	439.3	420.3
110°	624.6	521.2	482.8	456.4	437.5	424.5	403.3
120°	641.0	531.1	488.3	459.0	431.3	408.2	381.7
135°	706.3	573.4	509.3	478.5	450.9	423.7	369.0
150°	834.7	664.6	562.9	507.9	479.5	454.1	404.9
Run VMG	963.8	767.4	649.2	575.5	524.4	491.3	442.5
Selected Courses							
Windward / Leeward	989.0	803.8	695.3	640.1	608.6	590.1	559.8
Circular Random	840.1	679.9	594.8	546.2	516.5	496.8	469.5
Coastal / Long Distance	986.5	756.4	630.6	563.7	527.6	498.4	450.1
Non Spinnaker	900.1	722.3	626.5	570.8	536.6	514.3	484.8

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	42.2°	41.1°	39.8°	38.3°	38.1°	38.1°	37.9°
Beat VMG	3.55	4.29	4.86	5.11	5.20	5.23	5.32
52°	5.36	6.38	6.96	7.19	7.26	7.30	7.40
60°	5.64	6.63	7.12	7.36	7.46	7.51	7.61
75°	5.86	6.79	7.24	7.54	7.77	7.89	7.99
90°	5.79	6.81	7.31	7.57	7.89	8.20	8.56
110°	5.76	6.91	7.46	7.89	8.23	8.48	8.93
120°	5.62	6.78	7.37	7.84	8.35	8.82	9.43
135°	5.10	6.28	7.07	7.52	7.98	8.50	9.76
150°	4.31	5.42	6.40	7.09	7.51	7.93	8.89
Run VMG	3.74	4.69	5.55	6.26	6.86	7.33	8.13
Gybe Angles	145.0°	148.8°	151.0°	158.1°	180.0°	180.0°	180.0°