

BOAT Name Matilda 4 Sail Nr EST-112	GPH 595.0	HULL Length Overall 11.000m Maximum Beam 3.596m Displacement 5,170kg Draft 2.043m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.104% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class J-112E Designer JOHNSTONE Builder J-BOATS Series 10/2015 Age 07/2019 Age Allowance 0.130% Offset File J112E NK.off - 03/07/2019 20:20:16 Measurement by - 20/07/2019		IMSL 10.038m VCGD 0.098m Sink 18.79kg/mm RL 9.151m VCGM 0.060m WS 25.56m² LSM0 9.851m Displacement/Length ratio 5.4082



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	579.1			648.0		
Time on Time	1.0361			1.0417		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	676.8	528.2	473.2	875.6	648.8	569.4
Time on Time	0.9973	1.2779	1.4265	0.7709	1.0404	1.1854

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1012.9	832.5	734.0	698.1	684.4	678.9	665.9
52°	659.0	553.3	505.5	489.0	483.0	480.2	472.8
60°	620.2	529.3	491.9	476.1	469.3	465.7	459.2
75°	592.2	512.8	481.8	463.3	449.8	441.8	435.3
90°	596.3	504.0	476.2	460.3	441.8	425.3	405.1
110°	586.5	495.9	461.9	437.3	421.7	410.8	387.3
120°	602.6	503.4	466.2	437.4	410.7	391.9	364.5
135°	676.5	544.8	486.1	456.5	428.1	400.7	343.7
150°	798.2	636.6	538.9	487.6	459.7	433.7	383.0
Run VMG	921.7	735.1	622.0	553.5	506.7	473.8	424.4

Certificate
Number **EST112**
ORC Ref **EST00000803**
Issued On **28/07/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight
Default **674kg**
Maximum **770kg**
Minimum* **578kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Double H.GPH **608.5 0.9861**
Double H.OSN **594.2 1.0097**
Non Spin GPH **634.0 0.9464**
Non Spin OSN **616.1 0.9738**

Selected Courses							
Windward / Leeward	967.3	783.8	678.0	625.8	595.5	576.3	545.2
Circular Random	815.0	659.7	577.4	530.3	501.4	481.7	454.0
Coastal / Long Distance	962.7	735.7	613.4	548.6	512.6	483.5	434.3
Non Spinnaker	885.7	709.4	614.2	558.6	524.3	501.7	471.9

Sails Limitations
Headsails **5** | Spinnakers **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	42.9°	41.7°	40.4°	39.1°	39.1°	39.0°	39.0°
Beat VMG	3.55	4.32	4.90	5.16	5.26	5.30	5.41
52°	5.46	6.51	7.12	7.36	7.45	7.50	7.61
60°	5.80	6.80	7.32	7.56	7.67	7.73	7.84
75°	6.08	7.02	7.47	7.77	8.00	8.15	8.27
90°	6.04	7.14	7.56	7.82	8.15	8.46	8.89
110°	6.14	7.26	7.79	8.23	8.54	8.76	9.30
120°	5.97	7.15	7.72	8.23	8.77	9.19	9.88
135°	5.32	6.61	7.41	7.89	8.41	8.98	10.47
150°	4.51	5.66	6.68	7.38	7.83	8.30	9.40
Run VMG	3.91	4.90	5.79	6.50	7.10	7.60	8.48
Gybe Angles	143.2°	147.6°	150.6°	157.3°	174.2°	180.0°	180.0°

Class Division Length
CDL = **9.595**

Storm Sails Areas
Heavy Weather Jib **30.49**
Storm Jib (JL=9.77) **11.30**
Storm Triesail **11.30**

Owner

BOAT	
Name Matilda 4	Sail Nr EST-112
File Est0112	Data in meters/kilograms

RIG	
Forestay Tension Aft	Spreaders 2
Inner Stay None Fitted	Runners 0
Carbon Mast Yes	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 13.650	E 4.730 MDT1 0.110 MW 0.173
IG 14.940	J 4.270 MDL1 0.180 GO 0.198
ISP 15.960	SFJ 0.222 MDT2 0.102 BD 0.237
BAS 1.700	SPL 4.820 MDL2 0.146 MWT 108.50
FSP 0.076	TPS 5.700 TL 1.460 MCG 4.470

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 12/07/2019		SG 1.0000	
FFM 1.338	FF 1.345	SFFP 0.488	
FAM 1.020	FA 1.028	SAFP 10.805	
W1 80.2	PD1 675.6	WD 12.560	
W2 80.2	PD2 677.7	GSA 1.0	
W3 80.2	PD3 678.0	RSA 1.0	
W4 80.2	PD4 679.6	PLM 9000.0	
LCF from stem on CL / on sheer		5.920 / 6.165	
Maximum beam station from stem		6.647	
RM Measured		117.0kg-m	
RM Default		126.9kg-m	
Limit of positive stability / Stab.Index		115.7° / 114.9	
Freeboard at mast at 4.492		1.149	



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MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.380		
Type Folding 2 blades	PBW 0.100		
Twin Screw No	PIPA 0.0031		
ST1 0.065	ST3 0.180	ST5 0.300	
ST2 0.180	ST4 0.090	EDL 2.130	

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COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.590	1.29	2.02	3.21	4.09	40.86	41.88	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	113.54		SL · (SFL + 4·SHW) / 6	
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL	119.60		AS · (SFL + 4·SHW) / 6	

HEADSAILS												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0.16	0.79	1.39	2.41	3.42	4.44	14.59	34.52	Y	N	20/07/2019	Unknow	J1
0.17	0.77	1.37	2.37	3.40	4.44	14.62	34.32	Y		20/07/2019	Unknow	J2
0.05	0.87	1.76	3.30	4.23	4.62	12.00	34.12	N	Y	02/07/2019	Unknow	Staysail
0.13	0.51	0.97	1.99	3.13	4.33	13.79	28.74	Y		03/05/2019	Unknow	J3

MEASUREMENT INVENTORY				
Measurer EST7				
Date 12/07/2019				
Comment Pirita				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
1	Engine	Volvo Penta	D1-20	
Id	Item	Weight Description		

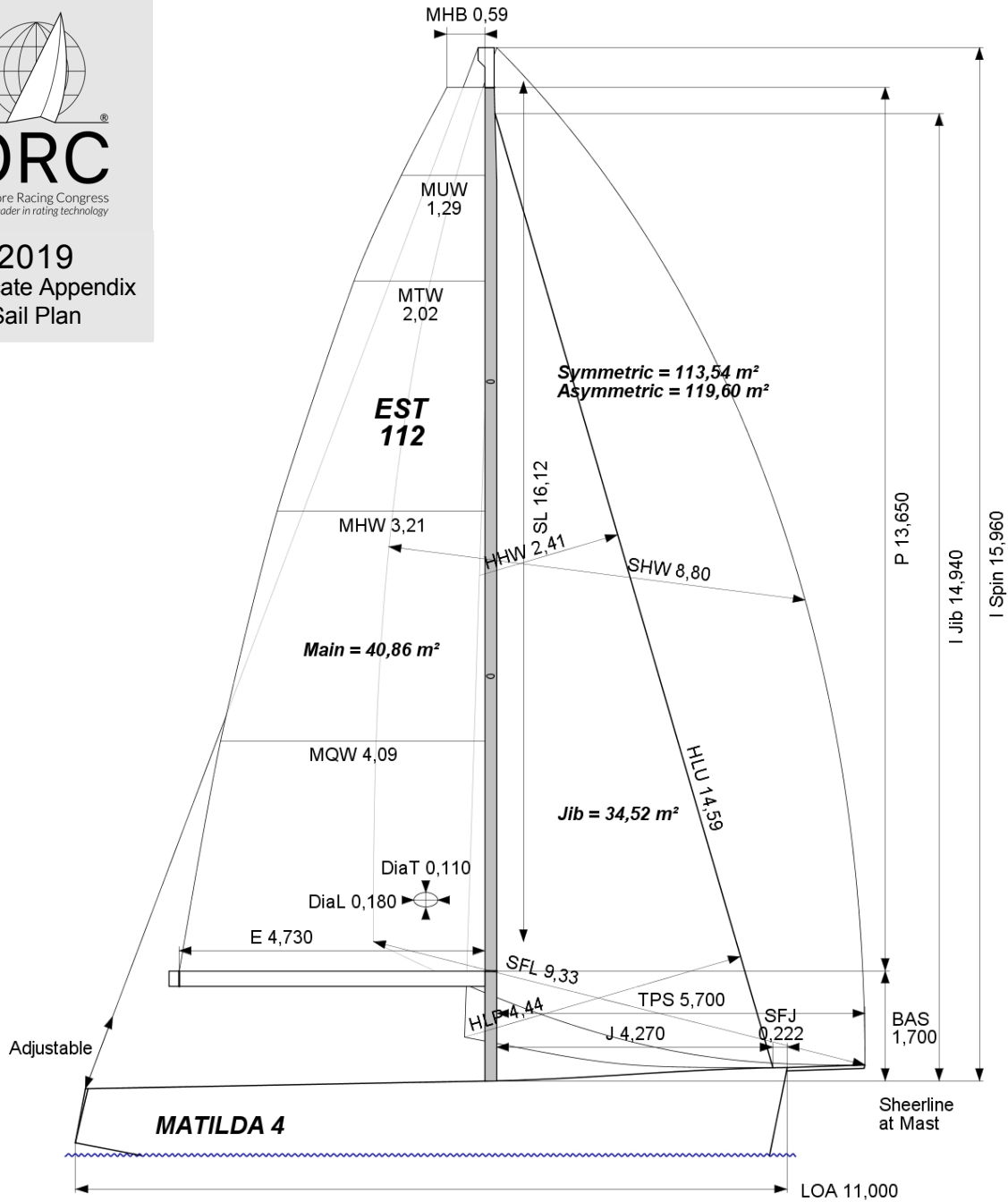
MEASUREMENT INVENTORY									
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description	
2	Tank	Fuel	plastic	80.0	8.27			13.0 Starport aft cabin	
1	Tank	Water	Neopren bag	100.0	2.00			0.0 At the bow	
Id	Item	Weight	Distance	VCG Description					
7	Ballast	150.0	5.77	Lot of pieces					
6	Ballast	85.0	5.22	6pcs (18+17+8+17+12,5+12,5)					
5	Ballast	34.0	4.72	2pcs (17+17kg) centerline					
4	Ballast	60.0	5.22	3pcs (25+18+17kg) portside					
3	Ballast	15.0	4.67	15kg portside					
2	Ballast	34.0	4.27	2pcs (16+18kg) portside					
1	Battery		4.73	2x165ah starport side					
2	Misc		10.00	Autopilot					
1	Misc		8.27	Air heater, port aft cabin					



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1a	0.59	1.29	2.02	3.21	4.09	40.86		20/07/2019	One sails	Unknown	2019

HEADSAILS (4)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btm	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1a	0.16	0.79	1.39	2.41	3.42	4.44	14.59	104%	34.52	Y	N		20/07/2019	One sails	Unknown	J1
2a	0.17	0.77	1.37	2.37	3.40	4.44	14.62	104%	34.32	Y			20/07/2019	One Sails	Unknown	J2
4	0.05	0.87	1.76	3.30	4.23	4.62	12.00	108%	34.12	N	Y		02/07/2019	One Sails	Unknown	Staysail
3	0.13	0.51	0.97	1.99	3.13	4.33	13.79	101%	28.74	Y			03/05/2019	One sails	Unknown	J3

SYMMETRIC SPINNAKERS (2)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
2	15.92	15.92	15.92	8.43	9.07	113.54		03/05/2019	One Sails	Unknown	VMG
1	15.65	15.65	15.65	8.54	8.54	111.38		03/05/2019	One sails	Unknown	Runner

ASYMMETRIC SPINNAKERS (2)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
2a	17.23	15.00	16.12	8.80	9.33	119.61	asym		20/07/2019	One sails	Unknown	A1
1	16.31	15.05	15.68	5.42	7.22	75.53	asym		16/05/2019	One Sails	Unknown	A0