

BOAT
Name Cassandra Sail Nr EST 166

GPH
648.8

HULL	
Length Overall	9.990m
Maximum Beam	3.372m
Displacement	4,747kg
Draft	2.008m
IMS Reg. Division	Cruiser/Racer
Dynamic Allowance	0.239%
Fwd Accommodation	No
Hull Construction	Solid
Carbon Rudder	No
Crew Arm Extension	
IMSL	9.145m VCGD -0.060m Sink 16.62kg/mm
RL	8.040m VCGM -0.053m WS 22.40m²
LSMO	9.009m Displacement/Length ratio 6.4922



2019
ORC International
Certificate

GENERAL
Class First 34,7
Designer Benetau
Builder Farr
Series 10/2005
Age 01/2018
Age Allowance 0.455%
Offset File F235.OFF - 7/27/2006 4:07:34 PM
Measurement by Peeter Ramst - 05/05/2019

Rating Office
EYU
Purje 8
11911, Tallinn
Estonia

SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	629.8			701.4		
Time on Time	0.9527			0.9623		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	746.8	573.7	511.1	964.7	705.2	610.0
Time on Time	0.9039	1.1766	1.3206	0.6997	0.9572	1.1066

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1102.3	915.9	805.1	744.7	724.2	717.1	710.5
52°	719.2	608.0	548.5	522.9	512.0	508.0	505.5
60°	679.7	578.1	532.2	510.7	499.0	493.8	491.1
75°	652.2	557.6	520.3	500.4	485.4	473.7	463.0
90°	660.0	552.6	509.5	489.2	479.8	464.4	438.5
110°	657.9	545.9	504.2	479.2	456.0	437.6	418.1
120°	679.3	559.6	510.2	484.1	459.9	436.5	400.0
135°	752.4	613.1	536.1	502.1	478.3	454.2	409.0
150°	888.6	705.6	597.9	533.3	502.3	479.9	435.7
Run VMG	1026.1	814.8	689.2	606.0	547.3	511.2	466.9

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VPP Ver. 2019 1.01
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Crew Weight	
Default	593kg
Maximum	650kg
Minimum*	488kg
<i>*when applied by the NoR and SI</i>	
Non Manual Pwr	No

Special Scoring		
	ToD	ToT
Double H.GPH	658.4	0.9113
Double H.OSN	640.9	0.9362
Non Spin GPH	681.0	0.8811
Non Spin OSN	658.9	0.9106

Selected Courses							
Windward / Leeward	1064.2	865.3	747.1	675.3	635.7	614.1	588.7
Circular Random	895.6	722.3	629.3	575.3	542.4	521.0	494.2
Coastal / Long Distance	1060.4	812.1	673.6	592.4	552.6	522.2	471.8
Non Spinnaker	953.5	763.2	659.6	598.8	561.4	537.5	508.6

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	42.8°	41.3°	41.0°	39.4°	38.6°	39.0°	39.0°
Beat VMG	3.27	3.93	4.47	4.83	4.97	5.02	5.07
52°	5.01	5.92	6.56	6.88	7.03	7.09	7.12
60°	5.30	6.23	6.76	7.05	7.21	7.29	7.33
75°	5.52	6.46	6.92	7.19	7.42	7.60	7.78
90°	5.45	6.51	7.07	7.36	7.50	7.75	8.21
110°	5.47	6.59	7.14	7.51	7.89	8.23	8.61
120°	5.30	6.43	7.06	7.44	7.83	8.25	9.00
135°	4.78	5.87	6.71	7.17	7.53	7.93	8.80
150°	4.05	5.10	6.02	6.75	7.17	7.50	8.26
Run VMG	3.51	4.42	5.22	5.94	6.58	7.04	7.71
Gybe Angles	145.5°	150.2°	151.9°	158.1°	180.0°	180.0°	180.0°

Class Division Length
CDL = 8.593

Storm Sails Areas	
Heavy Weather Jib	23.11
Storm Jib (JL=8.51)	8.56
Storm Trysail	9.96

Owner
Barco Blanco MTÜ
Ojasoo 6-3
Kuussaare, Estonia
SMS

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

BOAT	
Name Cassandra	Sail Nr EST 166
File Est0166	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 05/05/2019		SG 1.0050	
FFM 1.286	FF 1.292	SFFP 0.172	
FAM 1.026	FA 1.034	SAFP 9.530	
W1 60.2	PD1 512.5	WD 10.760	
W2 60.2	PD2 518.7	GSA 1.0	
W3 60.2	PD3 493.8	RSA 1.0	
W4 60.2	PD4 500.8	PLM 9000.0	
LCF from stem on CL / on sheer		5.405 / 5.638	
Maximum beam station from stem		6.642	
RM Measured		100.8kg·m	
RM Default		100.2kg·m	
Limit of positive stability / Stab.Index		125.4° / 125.4	
Freeboard at mast at 3.640		1.157	



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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 12.720	E 4.470	MDT1 0.115	MW 0.170
IG 13.010	J 3.640	MDL1 0.170	GO 0.190
ISP 13.253	SFJ	MDT2 0.115	BD 0.130
BAS 1.560	SPL 3.640	MDL2 0.138	MWT 126.50
FSP 0.066	TPS	TL 1.000	MCG 4.667

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.410		
Type Folding 2 blades	PBW		
Twin Screw No	PIPA 0.0030		
ST1 0.035	ST3 0.182	ST5 0.280	
ST2 0.182	ST4 0.100	EDL 1.800	

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COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.190	0.97	1.68	2.85	3.71	33.67	34.34	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	71.05		SL · (SFL + 4·SHW) / 6	
	13.15	13.15	13.15	6.53	6.30				
Asymmetric Not Available									

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
0.12	0.59	1.11	2.09	2.96	3.75	13.00	26.08			16/01/2018	Unknow	must
0.11	0.59	1.09	2.02	2.90	3.71	12.90	25.37	N		08/07/2015	Unknow	hall

MEASUREMENT INVENTORY				
Measurer Peeter Ramst EST 5				
Date 05/05/2019				
Comment Roomassaare				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
1	Engine	YANMAR	3YM20ST	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

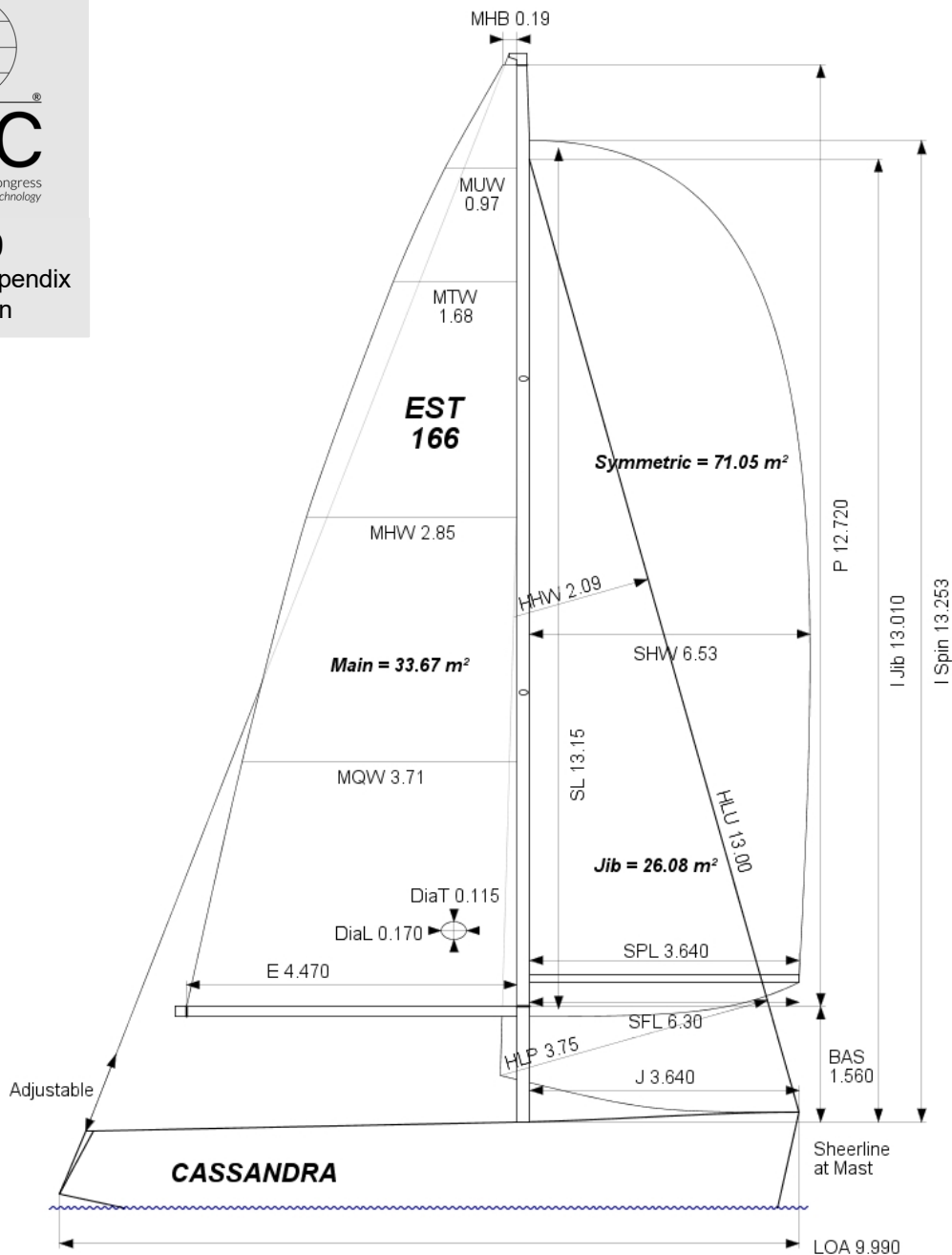
MEASUREMENT INVENTORY							
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn Description</i>
1	Tank	Water	PVC	60.0	4.06		0-0
2	Tank	Fuel	PVC	60.0	7.51		20-0
3	Tank	Septic	PVC	60.0	2.75		0-0
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>			
3	Battery		3.91	70 Ah			
2	Battery		3.70	70 Ah			
1	Battery		3.25	70 Ah			
1	Misc		7.22	Boiler			
2	Misc	10.0	8.00	Webasto			



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
52	0.19	0.97	1.68	2.85	3.71	33.67	SISIL	15/10/2018	NS	Unknown	

HEADSAILS (2)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
12	0.12	0.59	1.11	2.09	2.96	3.75	13.00	103%	26.08			EST 1	16/01/2018	NS	Unknown	must
11	0.11	0.59	1.09	2.02	2.90	3.71	12.90	102%	25.37	N		EST 5	08/07/2015	NS	Unknown	hall

SYMMETRIC SPINNAKERS (2)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
43	13.15	13.15	13.15	6.53	6.30	71.06	EST 2	01/05/2010	NS	Nylon	sinine
42	13.14	13.14	13.14	6.48	6.37	70.72	EST 2	01/05/2010	NS	Nylon	hall

ASYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
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