

BOAT
Name MIA
Sail Nr EST 330

GPH
640,0

HULL
Length Overall 9,550 m
Maximum Beam 2,984 m
Displacement 3 082 kg
Draft 2,103 m
IMS Reg. Division Performance
Dynamic Allowance 0,365%
Fwd Accommodation Yes
Hull Construction Solid
Carbon Rudder No
Trim Tab No
IMS L 9,527 VCGD 0,036 VCGM -0,024
Sink 14,91 kg/mm Wetted Area 19,43 m²



2010
ORC International
Certificate

GENERAL
Class Grand-Surprise
Designer Joubert-Nivelt
Builder Archambault
Series 06.2000
Age 01.2003
Age Allowance 0,650%
Offset File GDSURP.BOF - 17.04.2002 12:56:04
Measurement by A.Tetsmann - 20.05.2010

SCORING OPTIONS						
	OFFSHORE			INSHORE		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	640,0			714,9		
Time On Time	0,9375			0,9441		
Performance Line	PLT	PLD		PLT	PLD	
	0,776	71,0		0,877	225,6	
Triple Number	Low	Medium	High	Low	Medium	High
	0,9024	1,1957	1,3761	0,6869	0,9537	1,1268

Rating Office
Estonian Yachting Union
Regati 1, 11911
Tallinn
Estonia

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1127,3	927,3	802,2	744,8	714,6	695,4	689,5
52°	740,1	607,9	548,8	514,7	499,1	488,9	479,9
60°	696,9	579,9	528,9	493,3	477,9	469,0	459,5
75°	656,4	543,4	495,4	478,9	454,3	441,9	430,3
90°	602,9	521,1	474,7	457,3	446,7	437,3	403,8
110°	619,7	534,6	485,2	450,1	422,7	407,9	387,9
120°	663,0	555,5	501,6	463,5	432,4	400,8	363,8
135°	760,0	611,9	540,2	494,0	460,4	432,1	369,9
150°	903,7	721,2	603,4	541,0	497,8	465,3	412,1
Run VMG	1043,6	832,8	696,5	611,3	554,3	511,8	452,2

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Selected Courses							
Windward / Leeward	1106,4	889,9	762,0	687,3	641,7	610,4	577,7
Circular Random	892,4	716,8	620,7	563,2	526,6	501,7	469,1
Ocean for PCS	952,7	749,2	634,1	562,4	514,1	478,4	424,6
Non Spinnaker	983,1	780,6	668,2	600,1	556,3	526,8	489,4

Crew Weight
Declared 580 kg
Default* 550 kg
Non Manual Power No

Special Scoring		
	ToD	ToT
Double	647,0	0,9273
Non Spinnaker	690,4	0,8691
N/S Perf. Line	37,3	0,673

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	42,7°	42,2°	40,6°	38,4°	37,1°	36,4°	37,0°
Beat VMG	3,19	3,88	4,49	4,83	5,04	5,18	5,22
52°	4,86	5,92	6,56	6,99	7,21	7,36	7,50
60°	5,17	6,21	6,81	7,30	7,53	7,68	7,84
75°	5,48	6,62	7,27	7,52	7,92	8,15	8,37
90°	5,97	6,91	7,58	7,87	8,06	8,23	8,92
110°	5,81	6,73	7,42	8,00	8,52	8,83	9,28
120°	5,43	6,48	7,18	7,77	8,33	8,98	9,89
135°	4,74	5,88	6,66	7,29	7,82	8,33	9,73
150°	3,98	4,99	5,97	6,65	7,23	7,74	8,74
Run VMG	3,45	4,32	5,17	5,89	6,49	7,03	7,96
Gybe Angles	143,4°	148,1°	151,2°	162,8°	169,2°	171,1°	173,5°

Sails Limitations		
Genoas	Jibs	Spinnakers
0	4	3
Spinnaker configuration Symmetric		

Storm Sails Areas	
Heavy Weather Jib	17,21
Storm Jib (JL=7,34)	6,37
Storm Trysail	9,12

Owner
Puusuusk OÜ
Kalevi 32-4
Tallinn, Estonia
I certify that I understand my responsibilities under ORC Rules and Regulations
Signature

BOAT	
Name MIA	Sail Nr EST 330
File Est0330.dxt	Data in meters/kilograms

RIG	
Forestay Tension Aft	Spreaders 2
Inner Forestay None Fitted	Runners 0
Carbon Mast No	Jumpers None
Taper Hollows No	Jib Furler No
Fiber Rigging No	w/o Backstay No
P 11,870	E 4,390 MDT1 0,104 TL 0,890
IG 11,240	J 3,410 MDL1 0,158 MWT 94,00
ISP 11,720	SFJ 0,130 MDT2 0,077 MCG 4,140
SPS 1,560	SPL 3,950 MDL2 0,098 CPW 2,040
BAS 1,360	TPS 0,000 MW 0,158 BD 0,145
BAL 0,152	FSP 0,000 GO 0,173 BWT 24,00

MIZZEN RIG AND SAILS	
N/A	

COMMENTS

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 06.05.2005		SG 1,0020
FFM 0,905	FF 0,912	SFFP 0,200
FAM 0,690	FA 0,693	SAFP 9,050
W1 41,100	PD1 203,0	WD 9,300
W2 41,100	PD2 201,0	GSA 12,6
W3 41,100	PD3 204,0	RSA 4298,7
W4 41,100	PD4 202,0	PLM 2005,
Maximum beam station from stem		6,050
RM Measured / Default		66,0 / 65,8
Limit of positive stability		108,4°
Stability Index		106,8
Freeboard at mast at 3,540		0,747

PROPELLER			
Installation Shaft	PRD 0,410		
Type Folding	PBW 0,111		
Twin Screw No	PIPA 0,0024		
PSA	PHL 0,110	ST3 0,082	ESL 0,820
PSD 0,025	ST1 0,016	ST4 0,047	
PHD 0,050	ST2 0,075	ST5 0,167	

WATER BALLAST	
N/A	

CENTERBOARD	
N/A	



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IMS Measurement
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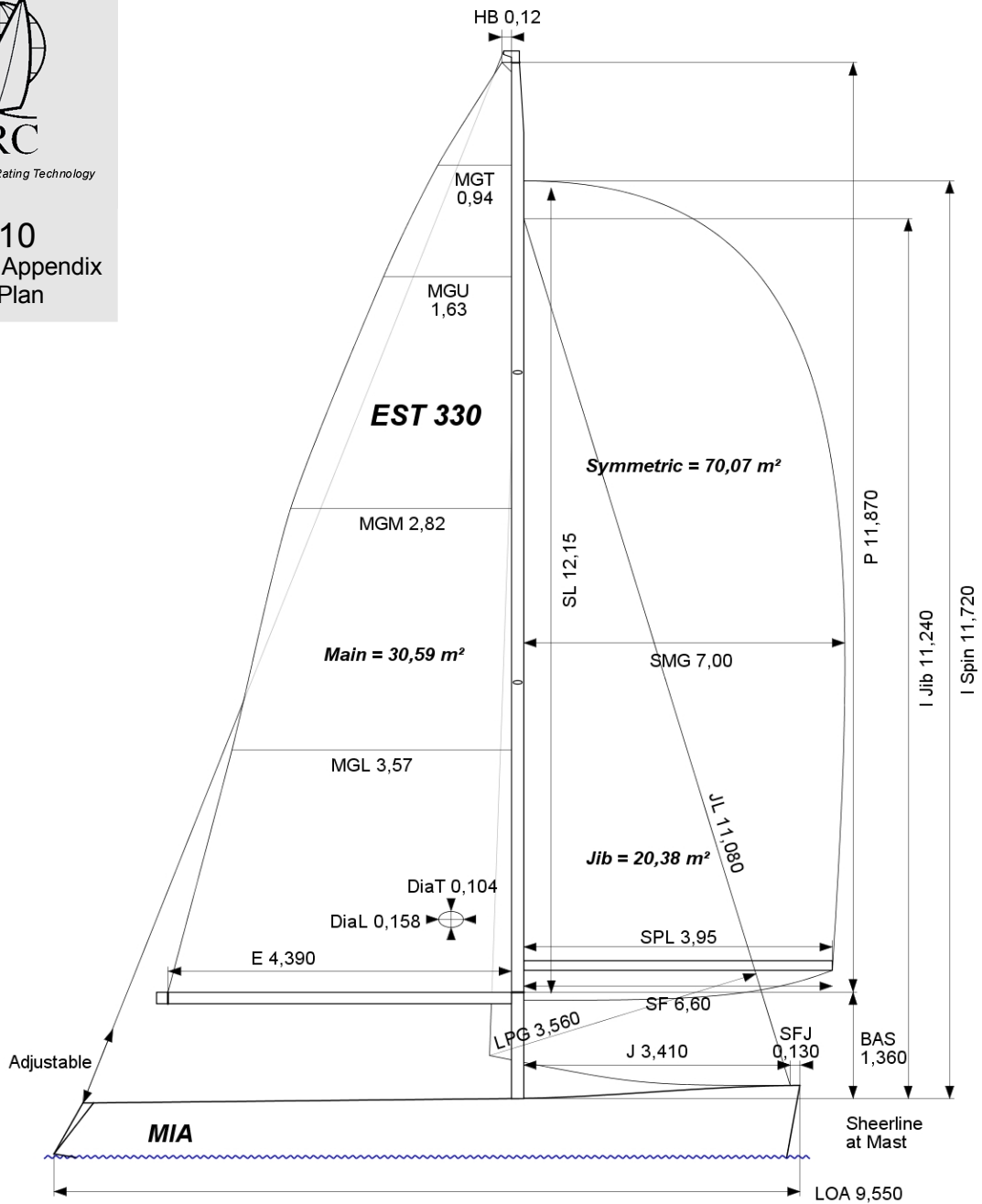
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SAILS (Maximum Areas)									
Mainsail	HB	MGT	MGU	MGM	MGL	MSW	Area	Area (r)	Formula
	0,125	0,94	1,63	2,82	3,57	14,00	30,59	31,25	$P/8 \cdot (E + 2 \cdot MGL + 2 \cdot MGM + 1.5 \cdot MGU + MGT + 0.5 \cdot HB)$
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG		
	0,07	0,50	0,97	1,87	2,74	11,08	3,56	20,38	$0.1125 \cdot JL \cdot (1.445 \cdot LPG + 2 \cdot JGL + 2 \cdot JGM + 1.5 \cdot JGU + JGT + 0.5 \cdot JH)$
Symmetric	SL	SMG	SF						
	12,15	7,00	6,60					70,07	$SL \cdot (SF + 4 \cdot SMG) / 6$



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Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL

Id	HB	MGT	MGU	MGM	MGL	MSW	Area	Measur	Meas.Dat	Manufacturer	Material	Comment
1	0,125	0,94	1,63	2,82	3,57	14,00	30,59	AT	01.07.2008		Unknown	

JIBS / GENOAS

Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Ovrlp	Area	Measur	Meas.Dat	Manufacturer	Material	Comment
1	0,07	0,50	0,97	1,87	2,74	3,56	11,08	104%	20,39	AT	01.07.2008		Unknown	

SYMMETRIC SPINNAKERS

Id	SL	SMG	SF	Area	Measur	Meas.Dat	Manufacturer	Material	Comment
1	12,15	7,00	6,60	70,07				Unknown	

ASYMMETRIC SPINNAKERS

Id	SLU	SLE	ASL	AMG	ASF	Area	Kind	Measur	Meas.Dat	Manufacturer	Material	Comment
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