

BOAT
Name NORA
Sail Nr EST415

GPH
630,1

HULL
Length Overall 10,840 m
Maximum Beam 3,282 m
Displacement 6 308 kg
Draft 2,030 m
IMS Reg. Division Cruiser/Racer
Dynamic Allowance 0,677%
Fwd Accommodation Yes
Hull Construction Cored
Carbon Rudder No
Trim Tab No
IMS L 10,348 VCGD -0,084 VCGM 0,104
Sink 19,52 kg/mm Wetted Area 26,10 m²



2009
ORC International
Certificate

GENERAL
Class BAVARIA 35 Match
Designer J&J DESIGN
Builder BAVARIA YACHTBAU
Series 01.2004
Age 04.2006
Age Allowance 0,325%
Offset File ba35mk2d.off - 6.06.2006 16:04:48
Measurement by A.TETSMANN - 01.07.2007

SCORING OPTIONS		
	OFFSHORE	INSHORE
	COASTAL / LONG DISTANCE	WINDWARD / LEEWARD
Time On Distance	630,1	702,6
Time On Time	0,9522	0,9607
Performance Line	PLT 0,839 PLD 106,6	PLT 0,983 PLD 287,8
Triple Number	Low 0,9282 Medium 1,2126 High 1,3647	Low 0,7044 Medium 0,9735 High 1,1393

Rating Office
Estonian Yachting Union
Veiko Rosme
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	1063,6	875,8	773,4	728,5	702,5	686,7	673,6
52°	686,4	569,3	524,4	502,4	489,4	482,1	476,0
60°	640,6	543,8	504,0	480,7	471,9	466,8	461,9
75°	601,4	525,6	486,9	466,0	454,1	447,5	439,7
90°	594,8	514,7	474,7	457,3	449,2	441,1	420,0
110°	619,1	528,2	485,4	461,7	443,4	424,2	405,5
120°	663,6	548,0	500,6	469,6	451,4	431,0	394,4
135°	766,6	613,6	534,7	493,8	467,5	450,4	411,4
150°	920,4	719,7	600,7	534,3	495,8	469,5	434,5
Run VMG	1062,7	831,0	693,6	602,4	545,3	507,2	460,4

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Number EST415
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VPP Ver. 1.11
Valid until 31.12.2009

Crew Weight
Declared 540 kg
Default* 664 kg

Special Scoring
ToD ToT
Double 632,6 0,9484
Non Spinnaker 665,4 0,9018

Selected Courses							
Windward / Leeward	1082,7	866,0	745,1	674,5	631,4	603,7	572,6
Circular Random	871,9	702,2	611,0	558,0	525,5	504,4	477,9
Ocean for PCS	932,2	734,7	624,9	558,3	515,0	484,5	441,2
Non Spinnaker	937,7	747,9	644,2	582,8	544,8	520,1	490,4

Sails Limitations
Genoa 3 Jibs 2 Spinnakers 3
Spinnaker configuration Symmetric

Storm Sails Areas
Heavy Weather Jib 29,08
Storm Jib (JL=9,54) 10,77
Storm Trysail 11,97

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	44,0°	44,0°	41,5°	39,1°	37,8°	37,1°	36,5°
Beat VMG	3,38	4,11	4,66	4,94	5,12	5,24	5,34
52°	5,25	6,32	6,86	7,17	7,36	7,47	7,56
60°	5,62	6,62	7,14	7,49	7,63	7,71	7,79
75°	5,99	6,85	7,39	7,72	7,93	8,05	8,19
90°	6,05	6,99	7,58	7,87	8,01	8,16	8,57
110°	5,81	6,82	7,42	7,80	8,12	8,49	8,88
120°	5,42	6,57	7,19	7,67	7,97	8,35	9,13
135°	4,70	5,87	6,73	7,29	7,70	7,99	8,75
150°	3,91	5,00	5,99	6,74	7,26	7,67	8,28
Run VMG	3,39	4,33	5,19	5,98	6,60	7,10	7,82
Gybe Angles	142,3°	148,7°	149,7°	161,7°	171,2°	173,1°	177,0°

Owner
SAMPO PANK AS
Narva mnt. 11
Tallinn, Estonia
ESS Kalev JK
I certify that I understand my responsibilities under ORC Rules and Regulations
Signature

BOAT	
Name NORA	Sail Nr EST415
File Est0415.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	w/o Backstay No
P 13,820	E 4,950 MDT1 0,108 TL 2,770
IG 14,620	J 3,830 MDL1 0,212 MWT 155,00
ISP 14,700	SFJ 0,140 MDT2 0,108 MCG 5,430
SPS	SPL 3,810 MDL2 0,150 CPW 1,650
BAS 1,600	TPS MW 0,180 BD
BAL	FSP 0,066 GO 0,195 BWT 28,00

HEAVY ITEMS			
Bow Thruster No	Generator No	Air Condition No	
Windlass No	Jib Furler No	Desalinator No	
Heavy Deck No	Main Furler No		
Headliners No	Water Heater No		
Anchor Weight	Heavy Items Adjustment	0,0000	
Anchor LCG	Total Gyradius Adjustment	0,0371	

MIZZEN RIG AND SAILS	
N/A	

COMMENTS

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 04.05.2006	SG 1,0020	
FFM 1,180	FF 1,190	SFFP 0,120
FAM 1,005	FA 1,011	SAFP 10,517
W1 60,100	PD1 210,0	WD 10,700
W2 60,100	PD2 203,0	GSA 12,6
W3 60,100	PD3 202,0	RSA 4298,7
W4 60,100	PD4 203,0	PLM 2005,
Maximum beam station from stem		7,073
RM Measured / Default		110,0 / 125,1
Limit of positive stability		111,5°
Stability Index		117,1
Freeboard at mast at 3,970		1,059

PROPELLER		
Installation Strut Drive	PRD 0,430	
Type Folding	PBW 0,105	
Twin Screw No	PIPA 0,0037	
ST1 0,065	ST3	ST5 0,315
ST2	ST4 0,102	EDL 2,175

WATER BALLAST	
N/A	

CENTERBOARD
N/A



2009
IMS Measurement
Certificate

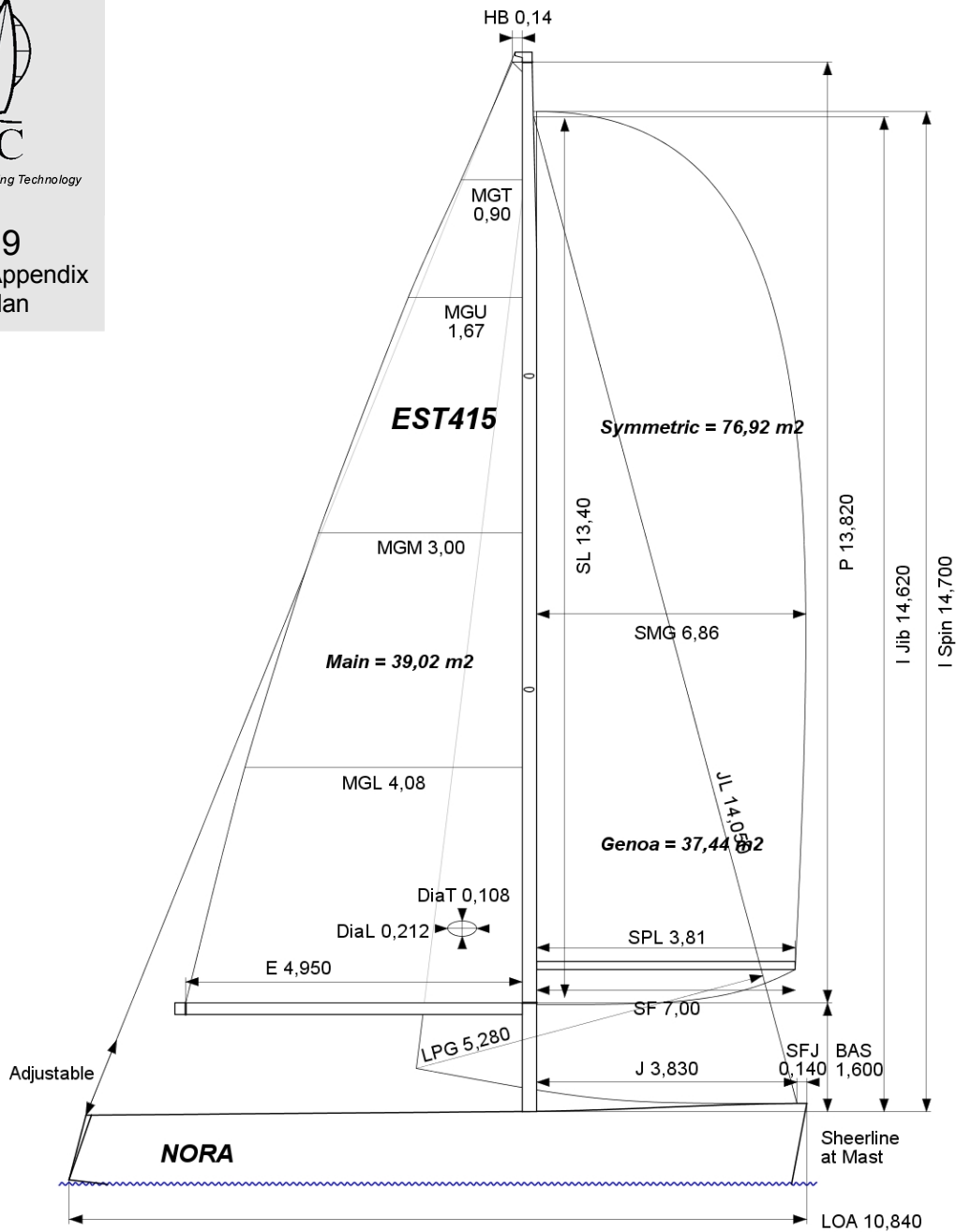
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SAILS (Maximum Areas)										
Mainsail	HB	MGT	MGU	MGM	MGL	MSW	Area	Formula		
	0,140	0,90	1,67	3,00	4,08	18,00	39,02	$P/8 \cdot (E + 2 \cdot MGL + 2 \cdot MGM + 1.5 \cdot MGU + MGT + 0.5 \cdot HB)$		
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG	Area	Formula	
	0,08	0,72	1,36	2,66	3,98	14,05	5,28	37,44	$0.1125 \cdot JL \cdot (1.445 \cdot LPG + 2 \cdot JGL + 2 \cdot JGM + 1.5 \cdot JGU + JGT + 0.5 \cdot JH)$	
Symmetric	SL	SMG	SF				Area	Formula		
	13,40	6,86	7,00				76,92	$SL \cdot (SF + 4 \cdot SMG) / 6$		



World Leader in Rating Technology

2009
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL

Id	HB	MGT	MGU	MGM	MGL	MSW	Area	Measurer	Meas.Dat	Manufacturer	Material	Comment
ORC	0,140	0,90	1,67	3,00	4,08	18,00	39,02					* Copied from legacy *

JIBS / GENOAS

Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Ovrlp	Area	Measure	Meas.Dat	Manufacturer	Material	Comment
1	0,08	0,72	1,36	2,65	3,98	5,28	14,05	138%	37,44				Unknown	

SYMMETRIC SPINNAKERS

Id	SL	SMG	SF	Area	Measurer	Meas.Dat	Manufacturer	Material	Comment
2	13,85	6,32	6,28	72,85				Unknown	
1	13,40	6,86	7,00	76,92				Unknown	

ASYMMETRIC SPINNAKERS

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