

BOAT
Name FORTE Sail Nr EST 475

GPH
571,2

HULL	Length Overall	12,350 m
	Maximum Beam	3,637 m
	Displacement	7 116 kg
	Draft	2,508 m
	IMS Reg. Division	Cruiser/Racer
	Dynamic Allowance	0,277%
	Fwd Accommodation	Yes
	Hull Construction	Cored
	Carbon Rudder	No
	Trim Tab	No
	IMS L	11,383 VCGD -0,055 VCGM -0,084
	Sink	23,35 kg/mm Wetted Area 31,22 m²



2009
ORC International
Certificate

GENERAL
Class X-41
Designer JEPPESEN
Builder X YACHTS
Series 01.2006
Age 05.2007
Age Allowance 0,195%
Offset File X41.OFF - 15.03.2007 2:30:02
Measurement by Tetsmann - 02.06.2008

SCORING OPTIONS	OFFSHORE			INSHORE		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	571,2			636,9		
Time On Time	1,0504			1,0599		
Performance Line	PLT	PLD		PLT	PLD	
	0,919	102,0		1,101	297,6	
Triple Number	Low	Medium	High	Low	Medium	High
	1,0263	1,3356	1,5079	0,7793	1,0702	1,2466

Rating Office
Estonian Yachting Union
Veiko Rosme
Regati 1, 11911, Tallinn
Estonia

TIME ALLOWANCES	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	980,8	797,2	701,7	662,2	639,0	624,9	614,0
52°	635,4	524,9	477,7	458,7	448,6	442,6	437,7
60°	593,0	503,0	460,6	441,7	433,3	427,8	422,8
75°	557,0	487,3	447,3	426,9	412,3	405,6	398,1
90°	538,8	464,5	430,9	419,2	410,5	394,6	376,8
110°	545,3	475,0	438,3	411,2	390,0	380,0	362,1
120°	581,4	493,0	451,0	424,0	398,0	373,0	345,6
135°	678,2	542,2	482,4	447,1	423,5	401,4	352,4
150°	815,1	645,7	541,1	486,5	451,8	428,5	387,8
Run VMG	941,2	745,6	624,8	553,4	503,0	466,6	421,0

Certificate
Number EST475
ORC Ref EST00000077
Issued On 2.05.2009
VPP Ver. 1.11
Valid until 31.12.2009

Crew Weight
Declared 850 kg
Default* 829 kg

Special Scoring
ToD ToT
Double 574,0 1,0452
Non Spinnaker 616,8 0,9727

Selected Courses	978,6	782,7	675,1	615,3	577,6	551,9	522,7
Windward / Leeward	978,6	782,7	675,1	615,3	577,6	551,9	522,7
Circular Random	789,1	636,2	554,1	506,2	476,5	456,7	430,9
Ocean for PCS	843,7	665,6	566,6	506,1	466,1	437,2	395,1
Non Spinnaker	873,7	695,0	597,0	538,7	502,1	478,1	448,7

Sails Limitations		
Genoas 0	Jibs 5	Spinnakers 4
Spinnaker configuration Symmetric		

Storm Sails Areas
Heavy Weather Jib 39,55
Storm Jib (JL=11,13) 14,65
Storm Trysail 15,03

Velocity Prediction in Knots for True Wind Speeds	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	43,7°	44,1°	40,3°	38,5°	37,5°	37,0°	36,7°
Beat VMG	3,67	4,52	5,13	5,44	5,63	5,76	5,86
52°	5,67	6,86	7,54	7,85	8,02	8,13	8,22
60°	6,07	7,16	7,82	8,15	8,31	8,42	8,51
75°	6,46	7,39	8,05	8,43	8,73	8,88	9,04
90°	6,68	7,75	8,36	8,59	8,77	9,12	9,56
110°	6,60	7,58	8,21	8,76	9,23	9,47	9,94
120°	6,19	7,30	7,98	8,49	9,05	9,65	10,42
135°	5,31	6,64	7,46	8,05	8,50	8,97	10,22
150°	4,42	5,58	6,65	7,40	7,97	8,40	9,28
Run VMG	3,82	4,83	5,76	6,51	7,16	7,71	8,55
Gybe Angles	141,5°	144,2°	150,2°	160,5°	166,9°	171,6°	174,5°

Owner
Uljaste Purjetajate Ordu
Raua 20-7
Tallinn, Estonia
ESS Kalev JK
I certify that I understand my responsibilities under ORC Rules and Regulations
Signature

BOAT	
Name FORTE	Sail Nr EST 475
File Est0475.dxt	Data in meters/kilograms

RIG	
Forestay Tension Aft	Spreaders 2
Inner Forestay None Fitted	Runners 0
Carbon Mast Yes	Jumpers None
Taper Hollows No	w/o Backstay No
P 15,950	E 5,385
IG 17,030	J 4,910
ISP 17,070	SFJ 0,285
SPS 3,710	SPL 5,105
BAS 1,865	TPS 0,072
BAL 0,152	FSP 0,072
MDT1 0,131	TL 1,000
MDL1 0,251	MWT 204,00
MDT2 0,129	MCG 5,810
MDL2 0,197	CPW 3,050
MW 0,251	BD 0,270
GO 0,276	BWT 35,00

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	0,0275

MIZZEN RIG AND SAILS	
N/A	

COMMENTS	

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 25.06.2007		SG 1,0020
FFM 1,440	FF 1,449	SFFP 0,200
FAM 1,068	FA 1,074	SAFP 11,995
W1 93,000	PD1 208,0	WD 12,640
W2 93,000	PD2 208,0	GSA 12,6
W3 93,000	PD3 208,0	RSA 4298,7
W4 93,000	PD4 208,0	PLM 2005,
Maximum beam station from stem		8,278
RM Measured / Default		197,7 / 201,1
Limit of positive stability		123,5°
Stability Index		127,5
Freeboard at mast at 5,195		1,203

PROPELLER		
Installation Strut Drive	PRD 0,430	
Type Folding	PBW 0,125	
Twin Screw No	PIPA 0,0032	
ST1 0,060	ST3	ST5 0,325
ST2	ST4 0,092	EDL 1,540

WATER BALLAST	
N/A	

CENTERBOARD	
N/A	



2009
IMS Measurement
Certificate

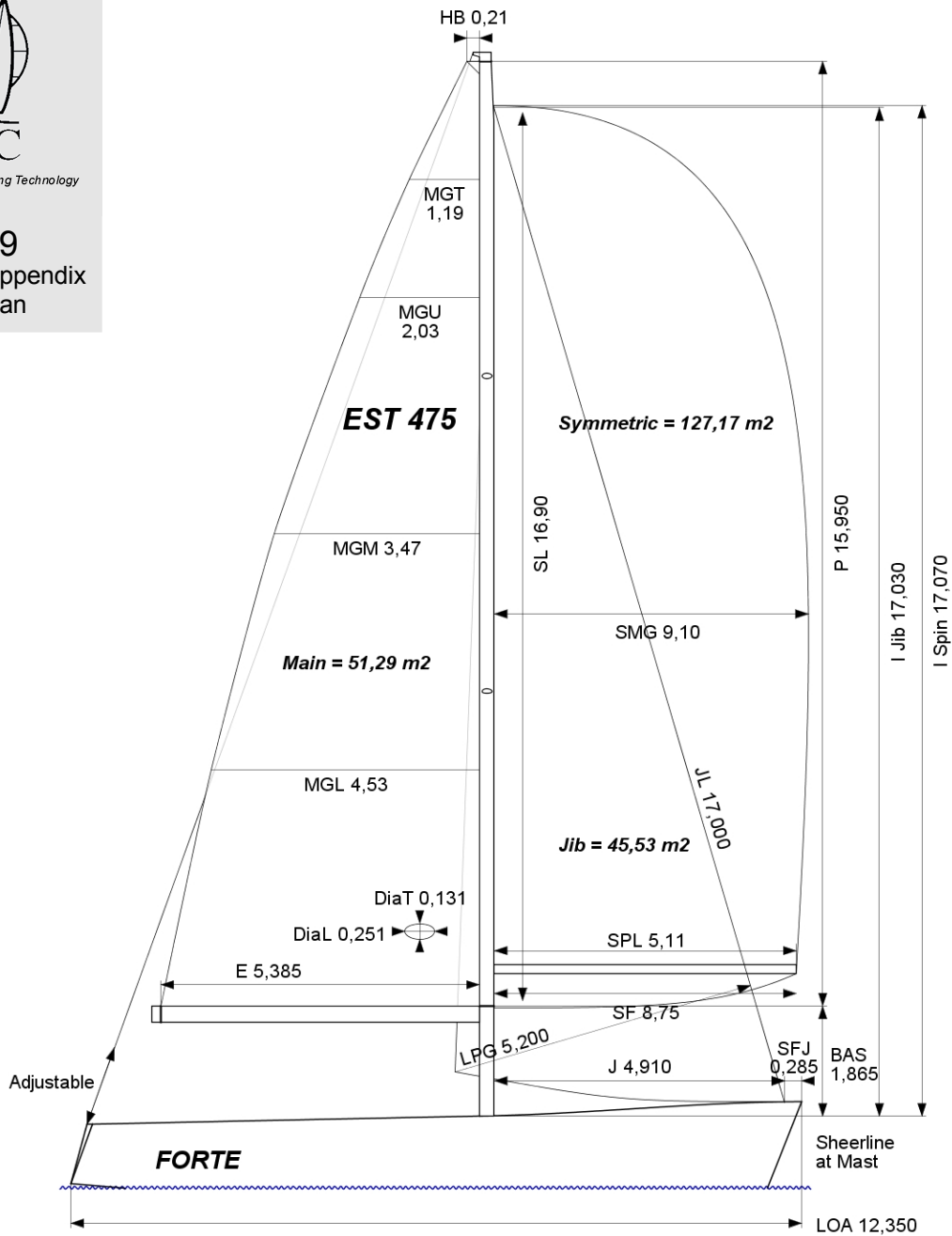
Certificate	
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VPP Ver. 1.11	
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SAILS (Maximum Areas)										
Mainsail	HB	MGT	MGU	MGM	MGL	MSW	Area	Formula		
	0,210	1,19	2,03	3,47	4,53	23,70	51,29	$P/8 \cdot (E + 2 \cdot MGL + 2 \cdot MGM + 1.5 \cdot MGU + MGT + 0.5 \cdot HB)$		
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG	Area	Formula	
	0,09	0,73	1,42	2,72	3,98	17,00	5,20	45,53	$0.1125 \cdot JL \cdot (1.445 \cdot LPG + 2 \cdot JGL + 2 \cdot JGM + 1.5 \cdot JGU + JGT + 0.5 \cdot JH)$	
Symmetric	SL	SMG	SF				Area	Formula		
	16,90	9,10	8,75				127,17	$SL \cdot (SF + 4 \cdot SMG) / 6$		



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Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL

Id	HB	MGT	MGU	MGM	MGL	MSW	Area	Measurer	Meas.Dat	Manufactur	Material	Comment
1	0,210	1,19	2,03	3,47	4,53	23,70	51,29	Tetsmann	28.04.2009		Unknown	

JIBS / GENOAS

Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Ovrlp	Area	Measure	Meas.Dat	Manufactur	Material	Comment
1	0,09	0,73	1,42	2,72	3,98	5,20	17,00	106%	45,54				Unknown	
2	0,09	0,73	1,44	2,70	3,87	5,22	17,00	106%	45,17				Unknown	
3	0,10	0,73	1,42	2,66	3,86	5,20	16,95	106%	44,74				Unknown	

SYMMETRIC SPINNAKERS

Id	SL	SMG	SF	Area	Measurer	Meas.Dat	Manufactur	Material	Comment
1	16,90	9,10	8,75	127,17	Tetsmann	02.06.2008		Unknown	

ASYMMETRIC SPINNAKERS

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