


BOAT
Name MINNI Sail Nr EST 50

GPH
616.5

HULL
Length Overall 10.600m
Maximum Beam 3.250m
Displacement 4,589kg
Draft 2.178m
IMS Reg. Division Cruiser/Racer
Dynamic Allowance 0.027%
Fwd Accommodation Yes
Hull Construction Cored
Carbon Rudder No
Crew Arm Extension
IMSL 9.486m VCGD 0.071m Sink 17.76kg/mm
RL 8.820m VCGM 0.055m WS 23.18m²
LSM0 9.302m Displacement/Length ratio 5.7015




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2016
ORC International
Certificate

GENERAL
Class X-35
Designer JEPPESEN
Builder X YACHTS
Series 09/2005
Age 01/2006
Age Allowance 0.357%
Offset File X35.OFF - 17/12/2005 11:51:04
Measurement by Tetsmann - 26/06/2016

Rating Office

Offshore
Racing
Congress



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SCORING OPTIONS	OFFSHORE			INSHORE		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	599.5			669.0		
Time On Time	1.0009			1.0090		
Performance Line	PLT	PLD		PLT	PLD	
	0.687	42.9		0.873	217.9	
Triple Number	Low	Medium	High	Low	Medium	High
	0.9537	1.2362	1.3930	0.7358	1.0049	1.1628

TIME ALLOWANCES		6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity								
Beat VMG	1049.3	870.0	761.3	711.0	690.6	680.5	666.6	
52°	682.5	572.6	517.4	497.5	490.4	486.8	479.5	
60°	640.8	543.4	502.5	484.0	476.1	471.9	464.9	
75°	606.7	523.5	491.7	470.6	454.4	446.1	439.6	
90°	608.8	524.9	489.1	471.4	451.0	431.7	411.8	
110°	627.5	522.6	483.9	455.4	436.3	423.2	401.8	
120°	645.9	533.8	490.3	461.9	432.7	407.9	382.2	
135°	713.9	579.2	512.2	481.3	454.6	427.5	373.0	
150°	844.5	671.2	567.8	510.7	482.0	457.3	408.0	
Run VMG	975.1	775.0	654.9	579.0	526.4	492.8	444.8	

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VPP Ver. 2016 1.01
Valid until 31/12/2016

Selected Courses		6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Windward / Leeward	1012.2	822.5	708.1	645.0	608.5	586.7	555.7	
Circular Random	849.3	685.9	598.2	547.1	515.4	494.2	465.8	
Ocean for PCS	1041.2	804.4	670.9	589.3	536.2	498.9	446.7	
Non Spinnaker	903.6	724.4	627.0	569.7	534.0	510.3	479.5	

Crew Weight
Declared 740kg
Default* 621kg
Non Manual Pwr No

Special Scoring	
ToD	ToT
Double H.GPH 622.2	0.9643
Double H.OSN 607.0	0.9885
Non Spin GPH 647.0	0.9274
Non Spin OSN 628.6	0.9545
N/S Perf. Line 16.0	0.613

Velocity Prediction in Knots for True Wind Speeds		6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity								
Beat Angles	43.6°	42.4°	41.7°	39.8°	38.6°	38.2°	37.7°	
Beat VMG	3.43	4.14	4.73	5.06	5.21	5.29	5.40	
52°	5.28	6.29	6.96	7.24	7.34	7.40	7.51	
60°	5.62	6.62	7.16	7.44	7.56	7.63	7.74	
75°	5.93	6.88	7.32	7.65	7.92	8.07	8.19	
90°	5.91	6.86	7.36	7.64	7.98	8.34	8.74	
110°	5.74	6.89	7.44	7.90	8.25	8.51	8.96	
120°	5.57	6.74	7.34	7.79	8.32	8.83	9.42	
135°	5.04	6.22	7.03	7.48	7.92	8.42	9.65	
150°	4.26	5.36	6.34	7.05	7.47	7.87	8.82	
Run VMG	3.69	4.64	5.50	6.22	6.84	7.31	8.09	
Gybe Angles	144.9°	149.1°	151.1°	158.1°	180.0°	180.0°	180.0°	

Sails Limitations	
Headsails 6	Spinnakers 3

Class Division Length
CDL = 9.153

Storm Sails Areas
Heavy Weather Jib 28.66
Storm Jib (JL=9.47) 10.61
Storm Triesail 10.67

Owner

BOAT	
Name MINNI	Sail Nr EST 50
File Est0050.dxt	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Boom Inclining			
Flotation date 26/06/2016		SG 1.0000	
FFM 1.318	FF 1.327	SFFP 0.075	
FAM 0.963	FA 0.970	SAFP 10.275	
W1 66.1	PD1 95.0	WD 4.505	
W2 66.1	PD2 94.5	GSA 12.6	
W3 66.1	PD3 95.0	RSA 4298.7	
W4 66.1	PD4 94.0	PLM 2005.0	
LCF from stem on CL / on sheer		6.000 / 6.194	
Maximum beam station from stem		7.300	
RM Measured		110.1kg·m	
RM Default		120.8kg·m	
Limit of positive stability / Stab.Index		115.3° / 116.3	
Freeboard at mast at 4.185		1.105	

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 13.250	E 4.600	MDT1 0.125	MW 0.184
IG 14.500	J 4.185	MDL1 0.185	GO 0.204
ISP 14.530	SFJ	MDT2 0.125	BD 0.220
BAS 1.745	SPL 4.180	MDL2 0.177	MWT 156.00
FSP 0.068	TPS	TL 0.230	MCG 4.600


MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.420		
Type Folding 2 blades	PBW 0.128		
Twin Screw No	PIPA 0.0033		
ST1 0.042	ST3 0.182	ST5 0.255	
ST2 0.178	ST4 0.112	EDL 2.390	

COMMENTS	

MOVEABLE BALLAST	
N/A	



CENTERBOARD	
N/A	



ORC
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2016
IMS Measurement Certificate

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VPP Ver. **2016 1.01**
Valid until **31/12/2016**

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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.360	1.09	1.80	2.98	3.86	36.85	37.63	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	92.06		SL · (SFL + 4·SHW) / 6	
	14.34	14.34	14.34	7.75	7.52				
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
0.14	0.68	1.25	2.33	3.36	4.41	14.50	33.24			06/06/2016	Unknow	Medium 2016
0.13	0.67	1.23	2.31	3.33	4.43	14.50	33.05				Unknow	Light 2016
0.09	0.61	1.18	2.25	3.30	4.33	14.33	31.89			01/07/2015	Carbon	Light
0.09	0.61	1.18	2.26	3.30	4.39	14.14	31.64			01/07/2015	Kevlar	Light
0.11	0.62	1.17	2.17	3.20	4.30	14.32	31.23			01/07/2015	Carbon	Medium
0.10	0.60	1.17	2.19	3.23	4.39	14.15	31.18			01/07/2015	Kevlar	Medium

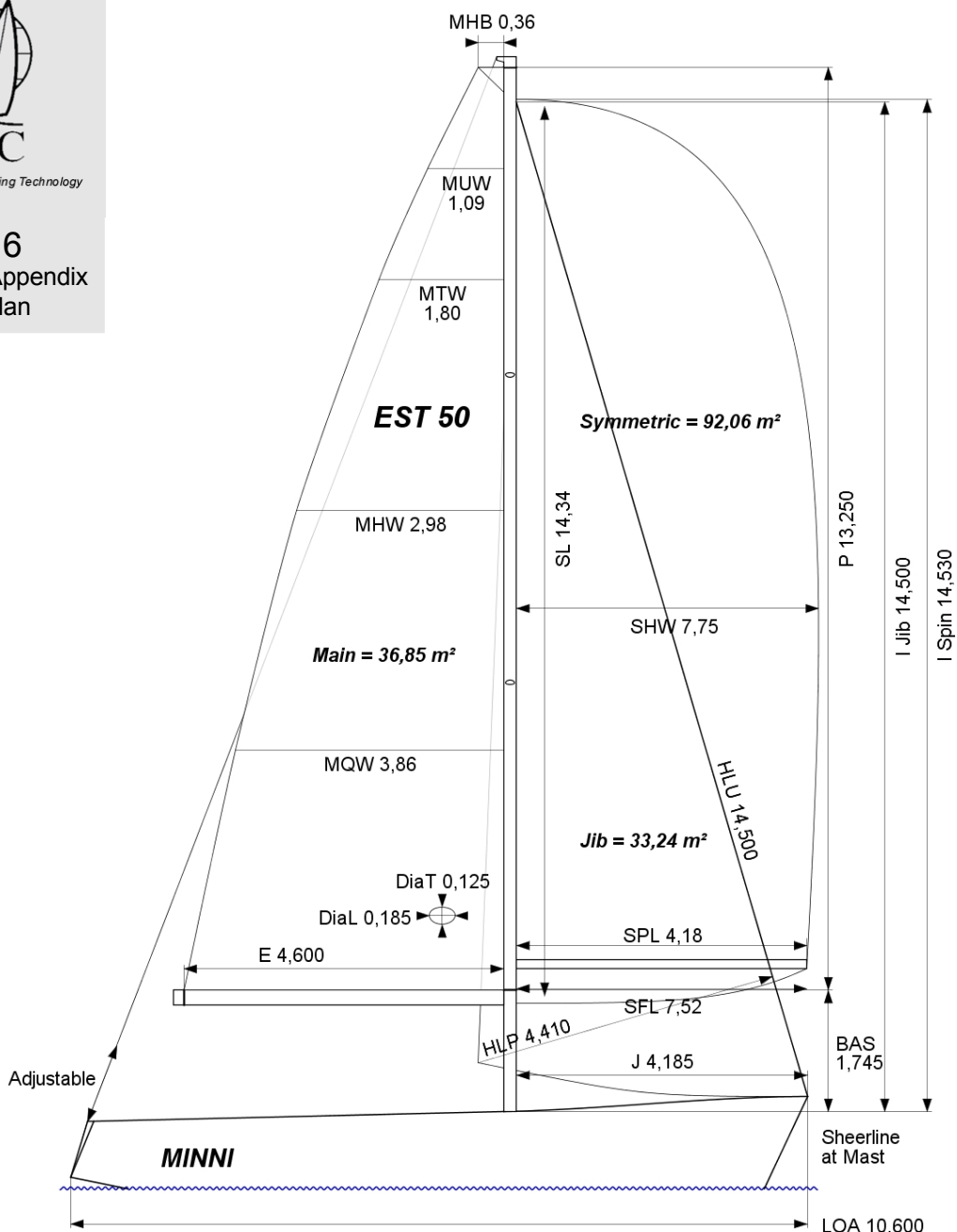
MEASUREMENT INVENTORY				
Measurer A Tetsmann EST 1				
Date 26/06/2016				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
1	Engine	Yanmar	3YM20C	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

MEASUREMENT INVENTORY						
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG Condtn Description</i>
1	Tank fuel		st.stl	60.0	6.15	20-0 fuel
2	Tank H2O		pvc	120.0	5.52	0-0 Water
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>		
1	Battery	44.3	4.85	170 Ah gel - services		
2	Battery	17.4	5.18	55 Ah - engine		
1	Misc	20.0	5.52	Table		
2	Misc	15.0	7.60	Boiler		
3	Misc	7.0	9.60	Autopilot		



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2016
Certificate Appendix
Sail Plan



SAILS INVENTORY																
MAINSAIL																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
3	0.360	1.09	1.80	2.98	3.86	36.85	EST 1	06/06/2016	OneSails	Unknown						
HEADSAILS																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
6	0.14	0.68	1.25	2.33	3.36	4.41	14.50	105%	33.24			EST 1	06/06/2016	OneSails	Unknown	Medium 2016
7	0.13	0.67	1.23	2.31	3.33	4.43	14.50	106%	33.05					OneSails	Unknown	Light 2016
1	0.09	0.61	1.18	2.25	3.30	4.33	14.33	103%	31.89			EST 1	01/07/2015		Carbon	Light
3	0.09	0.61	1.18	2.26	3.30	4.39	14.14	105%	31.64			EST 1	01/07/2015		Kevlar	Light
2	0.11	0.62	1.17	2.17	3.20	4.30	14.32	103%	31.23			EST 1	01/07/2015		Carbon	Medium
4	0.10	0.60	1.17	2.19	3.23	4.39	14.15	105%	31.18			EST 1	01/07/2015		Kevlar	Medium
SYMMETRIC SPINNAKERS																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
5	14.34	14.34	14.34	7.75	7.52	92.06	110 K17	11/07/2008		Unknown	S2 0,5oz					
3	14.20	14.20	14.20	7.70	7.40	90.41	EST 1	01/07/2015		Unknown	S4 0,75oz					
1	14.26	14.26	14.26	7.65	7.34	90.17	110 K17	04/01/2007			2S 0,5oz					
2	14.22	14.22	14.22	7.60	7.36	89.49	EST 1	01/07/2015		Unknown	S1,5 0,5oz					
4	14.30	14.30	14.30	7.08	7.23	84.73	EST 1	01/07/2015		Unknown	S4 1,5oz					
ASYMMETRIC SPINNAKERS																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				