BOAT

Name **MINNIC**
Sail Nr **GER 6260**

GPH

464.5

GENERAL

Class	**BRENTA 60**
Designer	**LUCA BRENTA**
Builder	**KNIERIM**
Series	**01/2009, CIN 1**
Age	**01/2009**
Age Allowance	**0.228%**
Offset File	**GER6260.off - 22/04/2014 17:59:06**
Measurement by	**BRINK/HEINRITZ - 16/04/2014**

HULL

Length Overall	**18.600m**
Maximum Beam	**4.302m**
Displacement	**16,228kg**
Draft	**3.399m**
IMS Reg. Division	**Cruiser/Racer**
Dynamic Allowance	**0.002%**
Fwd Accommodation	**Yes**
Hull Construction	**Carbon**
Carbon Rudder	**Yes**
Crew Arm Extension	

IMSL	**17.150m**	VCGD	**-0.566m**	Sink	**42.09kg/mm**
RL	**15.398m**	VCGM	**-0.608m**	WS	**56.47m²**
LSM0	**16.910m**	Displacement/Length ratio			**3.3561**

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SCORING OPTIONS

	OFFSHORE COASTAL / LONG DISTANCE			INSHORE WINDWARD / LEEWARD		
Time On Distance	**452.9**			**513.0**		
Time On Time	**1.3248**			**1.3157**		
	PLT	PLD		PLT	PLD	
Performance Line	**0.859**	**18.7**		**1.133**	**214.7**	
	Low	Medium	High	Low	Medium	High
Triple Number	**1.2574**	**1.6448**	**1.8788**	**0.9528**	**1.3077**	**1.5256**

TIME ALLOWANCES

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	**799.7**	**644.6**	**573.0**	**538.1**	**517.6**	**501.1**	**487.8**
52°	**514.2**	**419.1**	**385.1**	**372.3**	**365.3**	**359.5**	**350.6**
60°	**477.6**	**395.6**	**370.4**	**360.2**	**353.5**	**348.5**	**336.1**
75°	**444.9**	**379.0**	**356.9**	**342.9**	**333.4**	**326.5**	**314.7**
90°	**444.0**	**379.1**	**355.1**	**334.8**	**317.9**	**307.4**	**295.0**
110°	**468.6**	**385.0**	**359.1**	**345.0**	**329.8**	**313.2**	**274.8**
120°	**491.3**	**396.0**	**359.8**	**338.7**	**324.2**	**310.9**	**277.2**
135°	**556.5**	**443.0**	**382.9**	**356.4**	**332.5**	**307.3**	**266.7**
150°	**672.5**	**530.9**	**445.6**	**393.2**	**363.3**	**345.0**	**301.1**
Run VMG	**776.6**	**613.0**	**514.6**	**454.1**	**419.5**	**398.4**	**347.7**
Selected Courses							
Windward / Leeward	**788.2**	**628.8**	**543.8**	**496.1**	**468.5**	**449.7**	**417.7**
Circular Random	**645.8**	**518.6**	**450.4**	**410.4**	**384.9**	**366.8**	**339.9**
Ocean for PCS	**803.5**	**615.2**	**509.2**	**444.3**	**401.6**	**370.9**	**325.7**
Non Spinnaker	**692.7**	**552.5**	**475.7**	**429.3**	**399.0**	**377.7**	**348.7**

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	**44.3°**	**43.2°**	**41.6°**	**39.6°**	**38.5°**	**37.5°**	**36.9°**
Beat VMG	**4.50**	**5.59**	**6.28**	**6.69**	**6.95**	**7.18**	**7.38**
52°	**7.00**	**8.59**	**9.35**	**9.67**	**9.85**	**10.02**	**10.27**
60°	**7.54**	**9.10**	**9.72**	**9.99**	**10.18**	**10.33**	**10.71**
75°	**8.09**	**9.50**	**10.09**	**10.50**	**10.80**	**11.03**	**11.44**
90°	**8.11**	**9.50**	**10.14**	**10.75**	**11.32**	**11.71**	**12.20**
110°	**7.68**	**9.35**	**10.03**	**10.43**	**10.92**	**11.49**	**13.10**
120°	**7.33**	**9.09**	**10.00**	**10.63**	**11.10**	**11.58**	**12.99**
135°	**6.47**	**8.13**	**9.40**	**10.10**	**10.83**	**11.71**	**13.50**
150°	**5.35**	**6.78**	**8.08**	**9.16**	**9.91**	**10.44**	**11.95**
Run VMG	**4.64**	**5.87**	**7.00**	**7.93**	**8.58**	**9.04**	**10.35**
Gybe Angles	**140.2°**	**142.1°**	**144.2°**	**150.2°**	**152.4°**	**150.9°**	**145.6°**

Rating Office

Offshore Racing Congress

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Certificate

Number **141340**
ORC Ref **GER11001585**
Issued On **21/06/2016**
VPP Ver. **2016 1.01**
Valid until **01/01/2017**

Crew Weight

Declared	**500kg**
Default*	**1,456kg**
Non Manual Pwr	**Yes**

Special Scoring

	ToD	ToT
Double H.GPH	**465.4**	**1.2892**
Double H.OSN	**454.2**	**1.3211**
Non Spin GPH	**490.9**	**1.2222**
Non Spin OSN	**481.3**	**1.2467**
N/S Perf. Line	**-19.6**	**0.735**

Sails Limitations

Headsails	Spinnakers
8	**4**

Class Division Length

CDL = **16.276**

Storm Sails Areas

Heavy Weather Jib	**72.48**
Storm Jib (JL=15.06)	**26.85**
Storm Trysail	**39.16**

Owner

BOAT

Name	**MINNIC**	Sail Nr	**GER 6260**
File	**GER6260.dxt**	Data in	**meters/kilograms**

RIG

Forestay Tension	**Aft**	Spreaders	**3**
Inner Stay	**None Fitted**	Runners	**0**
Carbon Mast	**Yes**	Jumper Struts	**None**
Taper Hollows	**No**	Jib Furler	**No**
Fiber Rigging	**Yes**	Main Furler	**No**
Lenticular Rigging	**No**	Without Backstay	**No**
Articulated Bowsprit	**No**		

P	**24.740**	E	**9.045**	MDT1	**0.180**	MW	**0.320**
IG	**22.815**	J	**6.500**	MDL1	**0.320**	GO	**0.420**
ISP	**27.020**	SFJ	**0.465**	MDT2	**0.144**	BD	**0.525**
BAS	**2.000**	SPL		MDL2	**0.270**	MWT	**483.50**
FSP	**0.090**	TPS	**6.820**	TL	**2.860**	MCG	**8.750**

MIZZEN RIG AND SAILS

N/A

COMMENTS

KYC

INCLINING TEST AND FREEBOARDS

Inclining Test **Current Inclining**

Flotation date **16/04/2014** SG **1.0070**

FFM	**1.614**	FF	**1.623**	SFFP	**0.400**
FAM	**1.325**	FA	**1.330**	SAFP	**17.926**
W1	**219.50**	PD1	**191.0**	WD	**14.900**
W2	**219.50**	PD2	**191.0**	GSA	**1.0**
W3	**219.50**	PD3	**191.0**	RSA	**1.0**
W4	**219.50**	PD4	**191.0**	PLM	**4000.0**

LCF from stem on CL / on sheer	**9.982 / 10.205**
Maximum beam station from stem	**11.200**
RM Measured	**599.3kg·m**
RM Default	**631.2kg·m**
Limit of positive stability / Stab.Index	**142.8° / 154.9**
Freeboard at mast at 6.965	**1.452**

PROPELLER

Installation	**Strut**	PRD	**0.500**
Type	**Folding 3 blades**	PBW	**0.135**
Twin Screw	**No**	PIPA	**0.0042**

ST1	**0.065**	ST3	**0.160**	ST5	**0.305**
ST2	**0.180**	ST4	**0.110**	EDL	**3.525**

MOVEABLE BALLAST

N/A

CENTERBOARD

N/A

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SAILS (Maximum Areas)

Mainsail	**MHB**	**MUW**	**MTW**	**MHW**	**MQW**	**Area**	**Area (r)**	**Formula**
	0.180	1.68	3.14	5.60	7.50	129.03	131.36	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)
Symmetric								
Not Available								
Asymmetric	**SLU**	**SLE**	**SL**	**SHW**	**SFL**			
	27.30	25.60	26.45	11.05	12.00	247.75		AS · (SFL + 4·SHW) / 6

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
0.08	0.89	1.67	3.36	5.03	6.67	22.68	76.17				Kevlar	3Di

MEASUREMENT INVENTORY

Measurer **HEINRITZ**
Date **16/04/2014**
Comment

Id	*Item*	*Weight*	*Distance*	*VCG*	*Description*

Id	*Item*	*Maker*	*Model*
1	Engine	VOLVO PENTA	D2/75

Id	*Item*	*Weight*	*Description*

MEASUREMENT INVENTORY

Id	*Item*	*Tank Use*	*Tank Type*	*Capcty*	*Dist.*	*VCG*	*Condtn*	*Description*
1	Tank	FUEL	SS	250.0	13.90		~~0.0~~	empty
2	Tank	WATER	SS	250.0	13.90		~~0.0~~	empty
3	Tank	WASTE	SS	25.0	11.10		~~0.0~~	empty
4	Tank	WASTE	SS	25.0	5.20		~~0.0~~	empty
5	Tank	BOILER	SS	70.0	11.90		~~0.0~~	empty

Id	*Item*	*Weight*	*Distance*	*VCG*	*Description*
1	Battery		9.45		4 x 270 AH
2	Battery		13.90		2 x 70 AH
1	Misc		2.50		BOWTHRUSTER
2	Misc		14.85		STERNTHRUSTER
3	Misc		16.40		GENERATOR
4	Misc		16.40		HYDRAULICS

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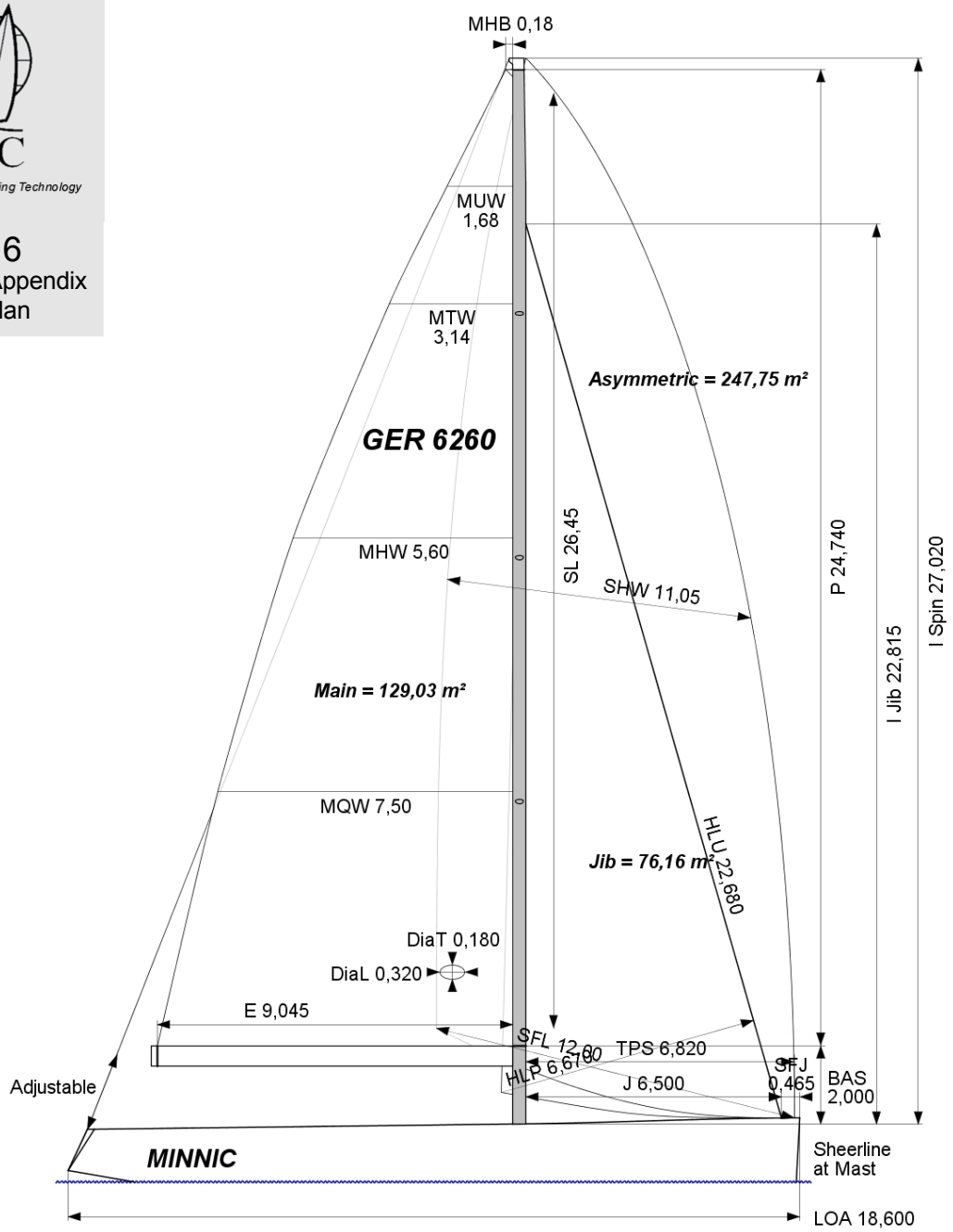
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
0	0.180	1.68	3.14	5.60	7.50	129.03	USA 75		NORTH	Kevlar	3Di

HEADSAILS

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
0	0.08	0.89	1.67	3.36	5.03	6.67	22.68	103%	76.17			USA 75		NORTH	Kevlar	3Di

SYMMETRIC SPINNAKERS

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

ASYMMETRIC SPINNAKERS

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
89725	27.30	25.60	26.45	11.05	12.00	247.75	asym	BALSER		NORTH	Nylon	A5