

BOAT Name ROTHAUT Sail Nr GER 372	GPH 725.7	HULL Length Overall 9.710m Maximum Beam 3.032m Displacement 3,848kg Draft 1.754m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.504% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension 0.00
GENERAL Class ELVSTROEM 32 MOD. Designer ELVSTROEM Builder ELVSTROEM Series 01/1974 Age 01/1978 Age Allowance 0.487% Offset File G372.OFF - 10/06/1993 16:20:12 Measurement by - 13/10/1997		IMSL 7.707m VCGD -0.127m Sink 12.46kg/mm RL 6.325m VCGM -0.048m WS 18.08m² LSM0 7.647m Displacement/Length ratio 8.6052



ORC
Offshore Racing Congress
World leader in rating technology

2019
ORC International
Certificate

Rating Office

Offshore
Racing
Congress



**Invalid for
Racing**

ORC
World Leader In Rating Technology

SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	703.1			783.3		
Time on Time	0.8533			0.8617		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	840.0	640.5	570.8	1079.0	789.5	680.9
Time on Time	0.8036	1.0538	1.1825	0.6256	0.8550	0.9913

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1221.3	1021.6	906.0	839.6	813.3	801.2	802.9
52°	803.4	682.4	610.1	578.7	565.3	560.0	557.9
60°	762.9	649.2	589.7	563.9	550.4	544.3	541.0
75°	734.5	624.8	575.0	551.5	535.9	524.4	514.3
90°	746.1	629.9	572.4	545.2	532.6	517.5	494.4
110°	757.0	621.7	561.8	533.4	511.1	493.4	475.7
120°	779.9	635.9	567.8	537.1	512.9	490.6	458.5
135°	858.2	697.1	595.7	553.9	528.4	505.0	462.7
150°	1001.9	793.9	668.6	589.2	553.3	529.8	487.4
Run VMG	1156.9	916.1	771.5	671.4	605.1	563.8	517.9

Certificate

Number **47044**
ORC Ref **GER20040424**
Issued On **21/03/2019**
VPP Ver. **2019 1.01**
Valid until **01/01/2020**

Crew Weight

Default 470kg
Maximum **350kg**
Minimum* **263kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	731.5	0.8202
Double H.OSN	709.9	0.8452
Non Spin GPH	754.7	0.7950
Non Spin OSN	729.7	0.8222

Selected Courses							
Windward / Leeward	1189.1	968.9	838.8	755.5	709.2	682.5	660.4
Circular Random	1004.7	809.2	703.7	642.3	605.1	581.9	556.1
Coastal / Long Distance	1185.9	910.5	754.8	660.6	614.6	580.7	529.6
Non Spinnaker	1055.4	845.5	731.1	663.8	622.6	596.7	568.0

Sails Limitations

Headsails	Spinnakers
5	3

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	42.4°	40.9°	41.3°	40.9°	40.4°	40.0°	40.5°
Beat VMG	2.95	3.52	3.97	4.29	4.43	4.49	4.48
52°	4.48	5.28	5.90	6.22	6.37	6.43	6.45
60°	4.72	5.55	6.10	6.38	6.54	6.61	6.65
75°	4.90	5.76	6.26	6.53	6.72	6.86	7.00
90°	4.83	5.72	6.29	6.60	6.76	6.96	7.28
110°	4.76	5.79	6.41	6.75	7.04	7.30	7.57
120°	4.62	5.66	6.34	6.70	7.02	7.34	7.85
135°	4.19	5.16	6.04	6.50	6.81	7.13	7.78
150°	3.59	4.53	5.38	6.11	6.51	6.79	7.39
Run VMG	3.11	3.93	4.67	5.36	5.95	6.39	6.95
Gybe Angles	147.7°	151.5°	150.8°	157.3°	176.1°	180.0°	180.0°

Class Division Length

CDL = **7.017**

Storm Sails Areas

Heavy Weather Jib **16.26**
Storm Jib (JL=7.14) **6.03**
Storm Trysail **4.78**

Owner

BOAT	
Name ROTHAUT	Sail Nr GER 372
File GER372	Data in meters/kilograms

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 9.820	E 2.780 MDT1 0.090 MW 0.110
IG 10.900	J 3.720 MDL1 0.145 GO 0.135
ISP 10.900	SFJ 0.190 MDT2 0.090 BD 0.110
BAS 0.900	SPL 3.720 MDL2 0.110 MWT 77.00
FSP 0.064	TPS 0.000 TL 2.100 MCG 4.200

INCLINING TEST AND FREEBOARDS			
Inclining Test Pre-1989			
Flotation date		SG 0.0000	
FFM 1.083	FF 1.093	SFFP 1.194	
FAM 0.944	FA 0.930	SAFP 9.335	
AW 15.40	AWD 4.92	APD 33.00	PLM 1500.0
BW 30.40	BWD 4.92	BPD 66.00	
CW 15.40	CWD 4.92	CPD 32.00	
DW 30.40	DWD 4.92	DPD 64.00	
LCF from stem on CL / on sheer		5.262 / 5.422	
Maximum beam station from stem		5.835	
RM Measured		60.8kg-m	
RM Default		52.9kg-m	
Limit of positive stability / Stab.Index		122.6° / 123.2	
Freeboard at mast at 3.910		1.018	



ORC
Offshore Racing Congress
World leader in rating technology

2019
IMS Measurement
Certificate

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Shaft exposed	PRD 0.390		
Type Folding 2 blades	PBW 0.120		
Twin Screw No	PIPA 0.0050		
PSA 22.500	PHL 0.125	ST3 0.130	ESL 0.890
PSD 0.023	ST1 0.020	ST4 0.047	
PHD 0.069	ST2 0.084	ST5 0.165	

Certificate	
Number 47044	
ORC Ref GER20040424	
Issued On 21/03/2019	
VPP Ver. 2019 1.01	
Valid until 01/01/2020	

COMMENTS

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



Invalid for Racing
ORC
World Leader In Rating Technology

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.120	0.58	1.03	1.78	2.36	16.26	16.47	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	10.85	10.85	10.85	6.69	6.70	60.50		SL · (SFL + 4·SHW) / 6	
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
0.00	0.00	0.00	0.00	0.00	5.51	0.00	32.50					generated_from_old_dataset

MEASUREMENT INVENTORY				
Measurer				
Date				
Comment				
Id	Item	Weight	Distance	VCG Description
4	Anchor	22.0	4.40	ANCHOR I & II
4	Foals	7.0	4.20	
Id	Item	Maker	Model	
1	Engine	FARYMAN	FK3EL 16PS	
Id	Item	Weight Description		

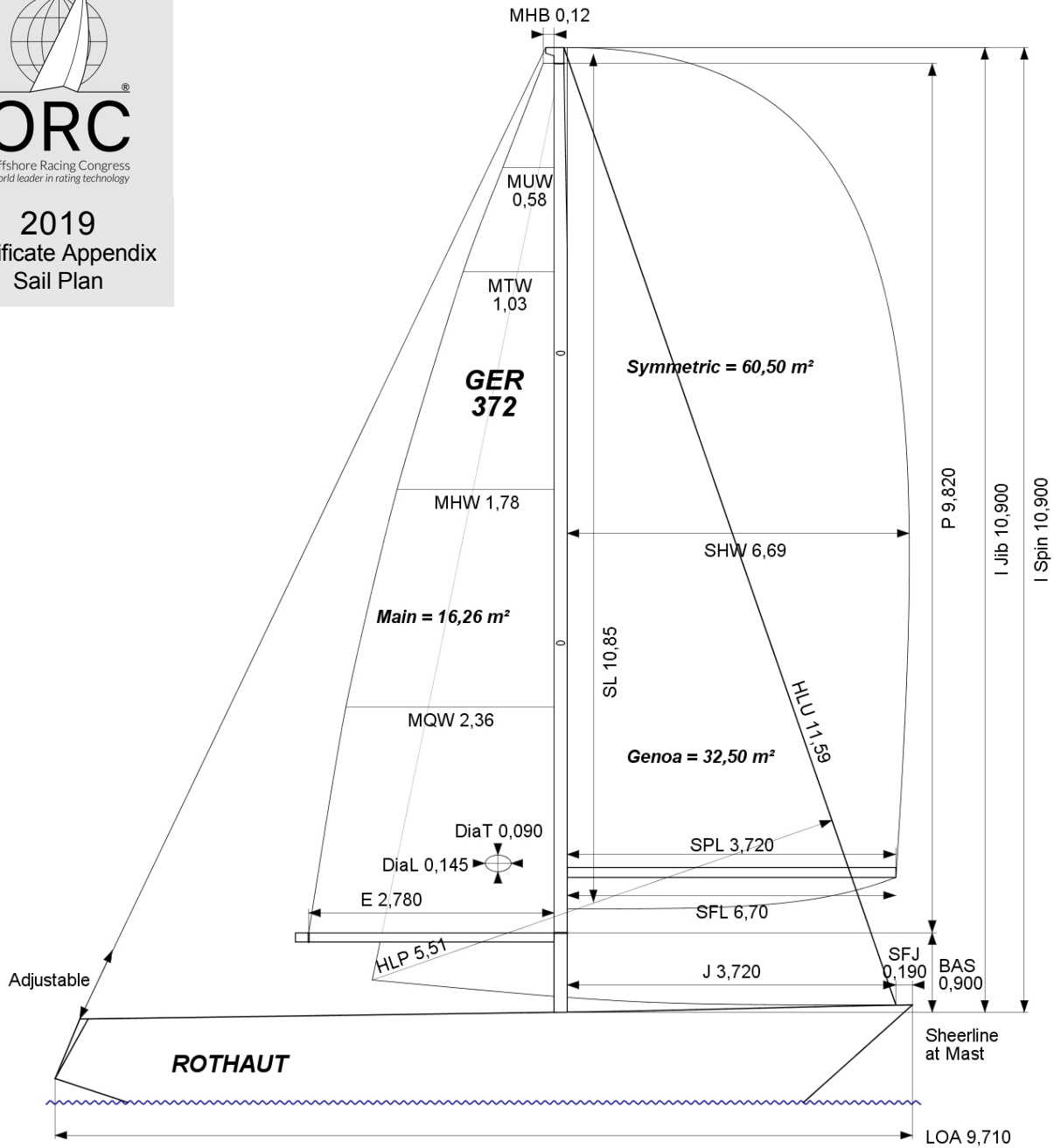
MEASUREMENT INVENTORY				
Id	Item	Weight	Distance	VCG Description
1	Battery	23.0	4.30	
2	Battery	23.0	4.30	



ORC

Offshore Racing Congress
World leader in rating technology

2019
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	0.12	0.58	1.03	1.78	2.36	16.26					* Copied from legacy

HEADSAILS (1)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
0	0.00	0.00	0.00	0.00	0.00	5.51	0.00	148%	32.50							generated_from_old_d

SYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
0	10.85	10.85	10.85	6.69	0.00	60.50					generated_from_old_dataset

ASYMMETRIC SPINNAKERS (0)

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