

BOAT	GPH	HULL
Name RATS ON FIRE Sail Nr ESP-9400	535.0	Length Overall 13.829m Maximum Beam 3.888m Displacement 10,079kg Draft 2.861m Plan Review IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.000% Hull Construction Cored Carbon Rudder Yes Crew Arm Extension
GENERAL		IMSL 12.670m VCGD -0.269m Sink 27.05kg/mm RL 11.726m VCGM -0.333m WS 37.01m² LSM0 12.491m Displacement/Length ratio 5.1716
Class SWAN 45 Designer FRERS German Builder NAUTOR SA Series 01/2001 Age 08/2002 Age Allowance 0.487% Offset File SWAN45-E9400.OD.off - 26/06/2019 Measurement by - 13/04/2013		



ORC
Offshore Racing Congress
World leader in rating technology

2020
ORC International
Certificate

Rating Office

Offshore
Racing
Congress

COPY ONLY
Invalid for
Racing

World Leader In Rating Technology

SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	522.4			582.1		
Time on Time	1.1486			1.1596		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	601.1	477.9	428.5	776.8	586.3	511.1
Time on Time	1.1229	1.4125	1.5753	0.8689	1.1513	1.3206

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	851.8	710.4	644.1	616.7	603.3	592.3	579.1
52°	563.6	480.2	450.2	439.5	434.1	431.0	422.8
60°	534.1	463.6	439.4	428.6	422.9	419.4	411.8
75°	511.2	452.9	430.5	416.7	406.4	400.0	393.0
90°	514.3	453.1	429.0	412.5	397.6	384.5	367.9
110°	538.8	455.0	424.0	403.6	390.2	378.0	358.4
120°	556.4	463.3	428.7	405.9	383.1	364.7	342.0
135°	621.8	505.5	448.6	422.6	400.5	376.9	330.2
150°	741.8	596.5	505.1	451.9	425.7	404.8	360.9
Run VMG	856.5	688.7	583.3	516.5	473.3	439.5	397.4
Selected Courses							
Windward / Leeward	854.2	699.6	613.7	566.6	538.3	515.9	488.3
Circular Random	725.8	590.9	519.8	479.1	453.6	436.1	411.8
Coastal / Long Distance	854.4	658.5	555.3	496.7	464.6	437.6	395.8
Non Spinnaker	771.4	623.3	543.9	497.4	468.3	448.5	422.1

Certificate

Number **940002**
ORC Ref **03510000MJT**
Issued On **15/07/2020**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

Crew Weight

Default **945kg**
Maximum **1,060kg**
Minimum* **795kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

ToD ToT
Non Spin GPH **560.4 1.0707**
Non Spin OSN **547.8 1.0953**

Sails Limitations

Headsails	Spinnakers
7	5

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	42.0°	40.5°	39.4°	37.9°	37.1°	36.4°	36.4°
Beat VMG	4.23	5.07	5.59	5.84	5.97	6.08	6.22
52°	6.39	7.50	8.00	8.19	8.29	8.35	8.51
60°	6.74	7.77	8.19	8.40	8.51	8.58	8.74
75°	7.04	7.95	8.36	8.64	8.86	9.00	9.16
90°	7.00	7.95	8.39	8.73	9.05	9.36	9.78
110°	6.68	7.91	8.49	8.92	9.23	9.52	10.05
120°	6.47	7.77	8.40	8.87	9.40	9.87	10.53
135°	5.79	7.12	8.03	8.52	8.99	9.55	10.90
150°	4.85	6.04	7.13	7.97	8.46	8.89	9.98
Run VMG	4.20	5.23	6.17	6.97	7.61	8.19	9.06
Gybe Angles	142.0°	146.0°	149.0°	155.0°	166.0°	180.0°	180.0°

Class Division Length

CDL = **12.194**

Storm Sails Areas

Heavy Weather Jib **47.71**
Storm Jib (JL=12.22) **17.67**
Storm Trysail **21.50**

Owner

COMMENTS	
80 kgs mas en quilla 19/07 / Añadido Zapata 12 mm 06/19	

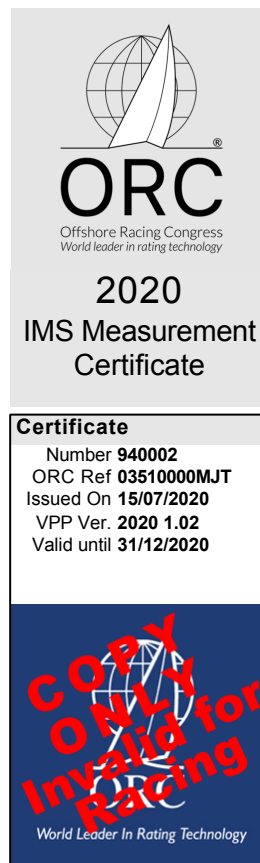
MOVABLE BALLAST
N/A

CENTERBOARD	
	N/A

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	Flying	Meas.Date	Material	Comment
0.15	0.94	1.69	3.02	4.36	5.74	18.90	56.57	Y	No	01/07/2020	Unknow	F.1 LIGHT

MEASUREMENT INVENTORY				
Measurer ESP 295 Date 24/06/2019 Comment Internal Ballast total = 0.0				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG</i> <i>Description</i>
001	Fwd Items	5.0		

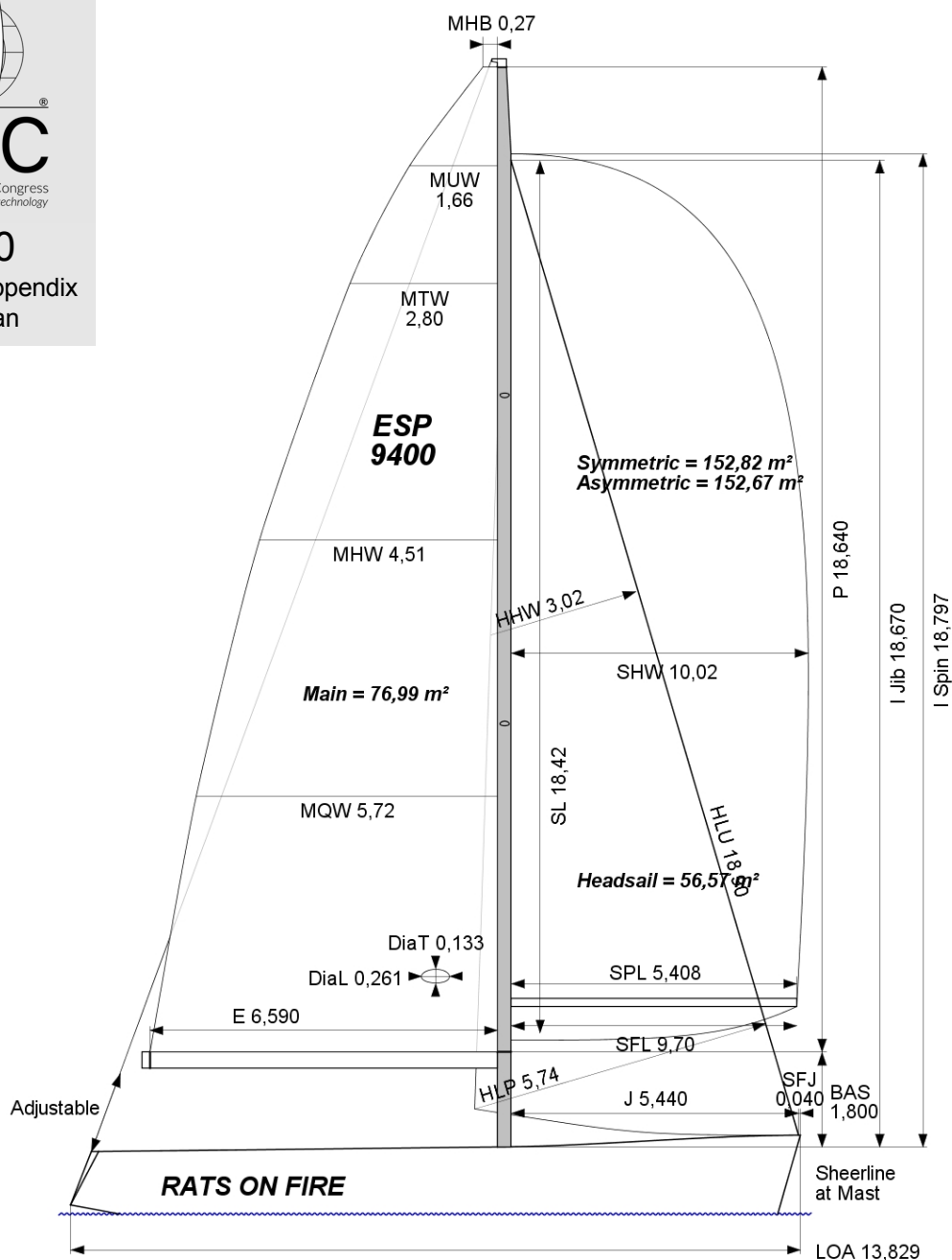
MEASUREMENT INVENTORY								
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn</i>	<i>Description</i>
3	Tank	H2O	PVC		6.70	0.00	0-0	
2	Tank	GAS OIL	INOX		8.10	-0.20	30-0	
1	Tank	GAS OIL	INOX	150.0	6.70	0.00	20-0	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG</i>	<i>Description</i>			
3	Misc				PROTECCIONES PLÁSTICO DE PANAS			
2	Misc		5.30	0.00	ENERPACK			
1	Misc		6.00	0.40	FUNDA MESA			





ORC
Offshore Racing Congress
World leader in rating technology

2020
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
004	0.27	1.66	2.80	4.51	5.72	77.00		24/06/2019	NS	Unknown						
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
002	0.15	0.94	1.69	3.02	4.36	5.74	18.90	106%	56.57	Y	No		01/07/2020	TACK VELAS	Unknow	F.1 LIGHT
SYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
S1	18.42	18.42	18.42	10.02	9.70	152.83				Unknown						
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
4	19.55	17.90	18.73	9.80	9.72	152.68	asym				Unknown					