

BOAT
Name SB 20 Sail Nr SB20-

GPH
710.3

HULL
Length Overall 6.141m
Maximum Beam 2.142m
Displacement 696kg
Draft 1.508m
IMS Reg. Division Sportboat
Dynamic Allowance 0.067%
Fwd Accommodation No
Hull Construction Solid
Carbon Rudder No
Crew Arm Extension 0.50
IMSL 5.931m VCGD -0.180m Sink 6.46kg/mm
RL 6.153m VCGM -0.159m WS 8.54m²
LSM0 5.773m Displacement/Length ratio 3.6175



World Leader in Rating Technology

2019 (Test)
ORC International
One Design Certificate

Rating Office

GENERAL
Class SB20 ONE DESIGN
Designer TONY CASTRO
Builder LASER
Series 08/2003
Age 01/2006
Age Allowance 0.487%
Offset File lasb3.od - 15/01/2019 16:01:21
Measurement by MAUGERI - 16/03/2012

SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	692.1			781.2		
Time on Time	0.8670			0.8640		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	791.7	639.3	558.9	1008.5	785.5	682.2
Time on Time	0.8526	1.0558	1.2078	0.6693	0.8593	0.9894

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1186.3	990.6	885.1	851.2	844.2	844.7	843.6
52°	783.4	675.6	635.5	616.2	609.2	606.1	595.1
60°	744.0	655.8	620.9	594.9	583.8	578.3	564.1
75°	718.0	642.9	605.9	569.3	543.7	532.2	522.0
90°	682.2	615.4	587.7	561.8	525.2	494.0	468.4
110°	674.1	602.3	547.7	514.5	493.1	468.3	427.2
120°	690.7	611.2	551.5	497.2	463.0	436.2	390.2
135°	761.0	643.7	585.5	530.0	473.9	420.4	318.0
150°	891.3	717.2	640.3	596.6	552.7	494.8	344.3
Run VMG	1029.2	828.2	738.8	679.1	628.0	571.3	397.6

Certificate
Number SB20
ORC Ref N/A
Issued On 15/01/2019
VPP Ver. 2019 1.01
Invalid for Racing

Crew Weight
Default 314kg
Maximum 270kg
Minimum* 185kg
<i>*when applied by the NoR and SI</i>
Non Manual Pwr No

Special Scoring
ToD ToT
Non Spin GPH 760.1 0.7894
Non Spin OSN 734.7 0.8167

Selected Courses							
Windward / Leeward	1107.7	909.4	811.9	765.2	736.1	708.0	620.6
Circular Random	956.6	783.4	691.7	637.1	599.8	569.9	517.4
Coastal / Long Distance	1099.9	857.5	738.3	666.7	621.3	577.3	490.8
Non Spinnaker	1047.2	845.9	737.8	674.3	633.8	605.3	563.3

Sails Limitations	
Headsails 5	Spinnakers 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	41.8°	41.1°	38.0°	36.8°	36.7°	37.1°	38.1°
Beat VMG	3.03	3.63	4.07	4.23	4.26	4.26	4.27
52°	4.60	5.33	5.66	5.84	5.91	5.94	6.05
60°	4.84	5.49	5.80	6.05	6.17	6.23	6.38
75°	5.01	5.60	5.94	6.32	6.62	6.76	6.90
90°	5.28	5.85	6.13	6.41	6.85	7.29	7.69
110°	5.34	5.98	6.57	7.00	7.30	7.69	8.43
120°	5.21	5.89	6.53	7.24	7.77	8.25	9.23
135°	4.73	5.59	6.15	6.79	7.60	8.56	11.32
150°	4.04	5.02	5.62	6.03	6.51	7.28	10.46
Run VMG	3.50	4.35	4.87	5.30	5.73	6.30	9.06
Gybe Angles	145.8°	148.9°	150.6°	175.9°	177.6°	142.8°	141.7°

Class Division Length
CDL = 6.043

Storm Sails Areas
Heavy Weather Jib 7.66
Storm Jib (JL=4.90) 2.84
Storm Trysail 4.46

Owner
I certify that I understand my responsibilities under ORC Rules and Regulations
Signature

BOAT	
Name SB 20	Sail Nr SB20-
File lasb3	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 7.950	E 3.200
IG 7.340	J 2.180
ISP 8.940	SFJ 0.050
BAS 0.940	SPL 0.000
FSP	TPS 4.050
MDT1 0.070	MW 0.090
MDL1 0.100	GO 0.145
MDT2 0.070	BD 0.140
MDL2 0.082	MWT 31.10
TL 1.400	MCG 3.290

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 18/05/2016		SG 1.0230	
FFM 0.708	FF 0.708	SFFP 0.270	
FAM 0.461	FA 0.461	SAFP 6.071	
W1 17.9	PD1 568.3	WD 6.160	
W2 17.9	PD2 566.3	GSA 1.0	
W3 17.9	PD3 569.1	RSA 1.0	
W4 17.9	PD4 565.9	PLM 9000.0	
LCF from stem on CL / on sheer		3.546 / 3.680	
Maximum beam station from stem		4.000	
RM Measured		15.3kg-m	
RM Default		15.8kg-m	
Limit of positive stability / Stab.Index		106.6° / 97.5	
Freeboard at mast at 2.230		0.595	



World Leader in Rating Technology

2019

IMS Measurement Certificate

Certificate

Number **SB20**
 ORC Ref **N/A**
 Issued On **15/01/2019**
 VPP Ver. **2019 1.01**

Invalid for Racing

MIZZEN RIG AND SAILS
N/A

PROPELLER
Type No Propeller

COMMENTS

MOVABLE BALLAST
N/A

CENTERBOARD
N/A

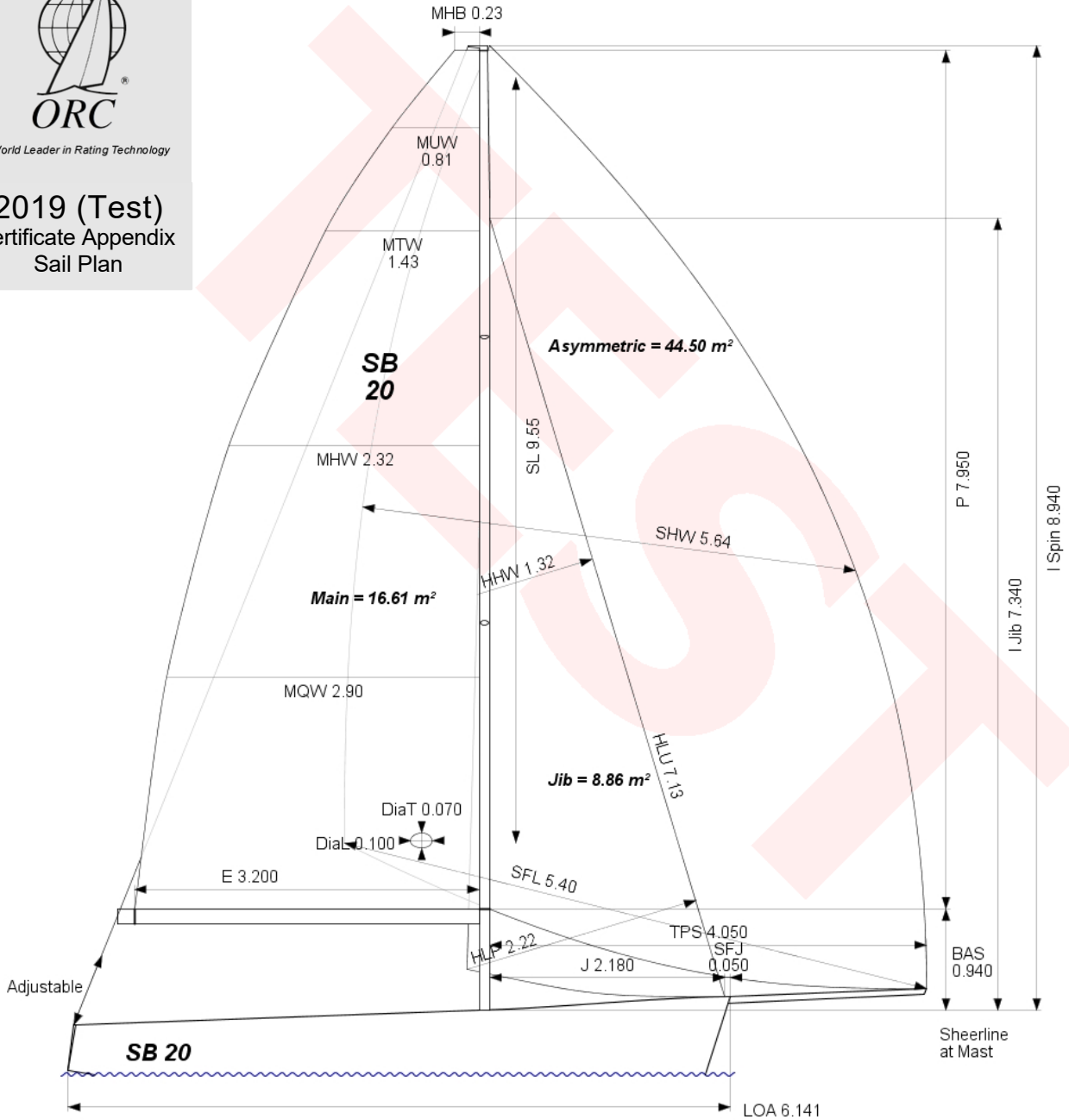
SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.230	0.81	1.43	2.32	2.90	16.61	17.28	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric									
Not Available									
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL				
	9.55	9.55	9.55	5.64	5.40	44.50		AS · (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
0.04	0.42	0.72	1.32	1.84	2.22	7.13	8.87	N	N		Unknow	



World Leader in Rating Technology

2019 (Test)
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ORC	0.23	0.81	1.43	2.32	2.90	16.61					* Copied from legacy					
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
A	0.04	0.42	0.72	1.32	1.84	2.22	7.13	102%	8.87	N	N					Unknow
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
ORC	9.55	9.55	9.55	5.64	5.40	44.51	asym					* Copied from legacy *				