

BOAT Name XIO Sail Nr ITA-23520	GPH 438.6	HULL Length Overall 15.850m Maximum Beam 4.418m Displacement 7,140kg Draft 3.492m IMS Reg. Division Performance Dynamic Allowance 0.001% Fwd Accommodation No Hull Construction Carbon, Aramid, Light Carbon Rudder Yes Crew Arm Extension
GENERAL Class TP52 Designer BOTIN & PARTNERS Builder LONGITUD CERO Series 01/2011 Age 05/2011 Age Allowance 0.260% Offset File XIO-15.off - 23/05/2016 23:03:04 Measurement by - 22/05/2019		IMSL 15.282m VCGD -1.241m Sink 31.88kg/mm RL 16.073m VCGM -1.243m WS 40.04m² LSM0 14.815m Displacement/Length ratio 2.1958



2019
ORC International
Certificate

Rating Office

Offshore
Racing
Congress

COPY ONLY
Invalid for
RACING

World Leader In Rating Technology

SCORING OPTIONS						
Time on Distance	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	426.9			484.6		
Time on Time	1.4054			1.3928		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	502.3	391.3	332.7	652.4	492.7	414.4
Time on Time	1.3438	1.7250	2.0288	1.0347	1.3700	1.6288

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	722.5	594.1	548.6	526.7	511.0	498.4	491.8
52°	467.9	400.6	382.0	371.1	363.0	351.8	340.3
60°	437.6	386.4	366.0	352.2	343.0	333.8	318.8
75°	417.6	374.1	342.6	324.8	313.6	305.9	286.0
90°	420.8	376.6	339.2	309.3	291.6	279.9	264.2
110°	452.9	382.4	349.2	322.4	299.3	270.6	232.4
120°	467.8	387.8	343.8	316.5	295.8	270.8	234.9
135°	524.0	412.3	367.8	326.1	288.0	259.7	226.0
150°	630.6	489.0	416.8	371.8	338.8	299.6	236.1
Run VMG	728.1	564.7	481.2	433.5	391.2	346.0	272.6

Certificate

Number **235201**
ORC Ref **ITA00053038**
Issued On **06/06/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight

Default **1,206kg**
Maximum **1,170kg**
Minimum* **878kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	449.6	1.3346
Double H.OSN	440.3	1.3628
Non Spin GPH	473.3	1.2677
Non Spin OSN	464.6	1.2915

Selected Courses							
Windward / Leeward	725.3	579.4	514.9	480.1	451.1	422.2	382.2
Circular Random	605.8	489.5	426.3	387.7	361.1	340.7	310.0
Coastal / Long Distance	725.6	545.5	462.4	410.0	375.7	342.1	291.3
Non Spinnaker	662.3	531.5	459.4	415.0	385.0	362.8	330.6

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	43.7°	41.4°	39.3°	37.8°	36.7°	35.9°	36.1°
Beat VMG	4.98	6.06	6.56	6.83	7.05	7.22	7.32
52°	7.69	8.99	9.42	9.70	9.92	10.23	10.58
60°	8.23	9.32	9.84	10.22	10.50	10.79	11.29
75°	8.62	9.62	10.51	11.08	11.48	11.77	12.59
90°	8.56	9.56	10.61	11.64	12.35	12.86	13.63
110°	7.95	9.41	10.31	11.17	12.03	13.30	15.49
120°	7.70	9.28	10.47	11.38	12.17	13.29	15.32
135°	6.87	8.73	9.79	11.04	12.50	13.86	15.93
150°	5.71	7.36	8.64	9.68	10.63	12.02	15.25
Run VMG	4.94	6.38	7.48	8.30	9.20	10.41	13.21
Gybe Angles	140.8°	141.0°	147.1°	151.6°	144.6°	143.9°	144.0°

Class Division Length

CDL = **15.679**

Storm Sails Areas

Heavy Weather Jib **52.50**
Storm Jib (JL=12.82) **19.45**
Storm Trysail **25.65**

Owner

BOAT	
Name XIO	Sail Nr ITA-23520
File I23520	Data in meters/kilograms

RIG	
Forestay Tension Aft & Forward	Spreaders 3
Inner Stay None Fitted	Runners 2
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 20.350	E 7.200
IG 19.720	J 6.200
ISP 22.400	SFJ 0.520
BAS 2.130	SPL 0.000
FSP 0.072	TPS 9.000
MDT1 0.130	MW 0.315
MDL1 0.311	GO 0.315
MDT2 0.098	BD 0.360
MDL2 0.165	MWT 274.40
TL 2.300	MCG 7.650

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 22/05/2015		SG 1.0260	
FFM 1.498	FF 1.498	SFFP 0.435	
FAM 1.152	FA 1.152	SAFP 15.846	
W1 180.9	PD1 500.9	WD 14.050	
W2 180.9	PD2 496.9	GSA 1.0	
W3 180.9	PD3 500.4	RSA 1.0	
W4 180.9	PD4 496.6	PLM 9000.0	
LCF from stem on CL / on sheer		8.684 / 8.946	
Maximum beam station from stem		12.200	
RM Measured		401.4kg-m	
RM Default		343.4kg-m	
Limit of positive stability / Stab.Index		143.0° / 141.7	
Freeboard at mast at 6.720		1.252	



ORC
Offshore Racing Congress
World leader in rating technology

2019
IMS Measurement
Certificate

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.440		
Type Folding 2 blades	PBW		
Twin Screw No	PIPA 0.0039		
ST1 0.050	ST3 0.180	ST5 0.290	
ST2 0.180	ST4 0.112	EDL 1.370	

Certificate	
Number 235201	
ORC Ref ITA00053038	
Issued On 06/06/2019	
VPP Ver. 2019 1.01	
Valid until 31/12/2019	

COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



COPY ONLY
Invalid for Racing

World Leader In Rating Technology

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	2.000	2.62	3.56	4.98	6.14	97.68	100.38	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	Area	Formula		
	25.28	21.59	23.43	13.68	14.05	268.60	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
0.15	0.95	1.75	3.15	4.67	6.29	20.20	64.49	Y	N	22/05/2019	Unknow	
0.15	0.95	1.75	3.17	4.67	6.25	20.21	64.48	Y	N	22/05/2019	Unknow	

MEASUREMENT INVENTORY				
Measurer ESP295				
Date 22/05/2015				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Description</i>	

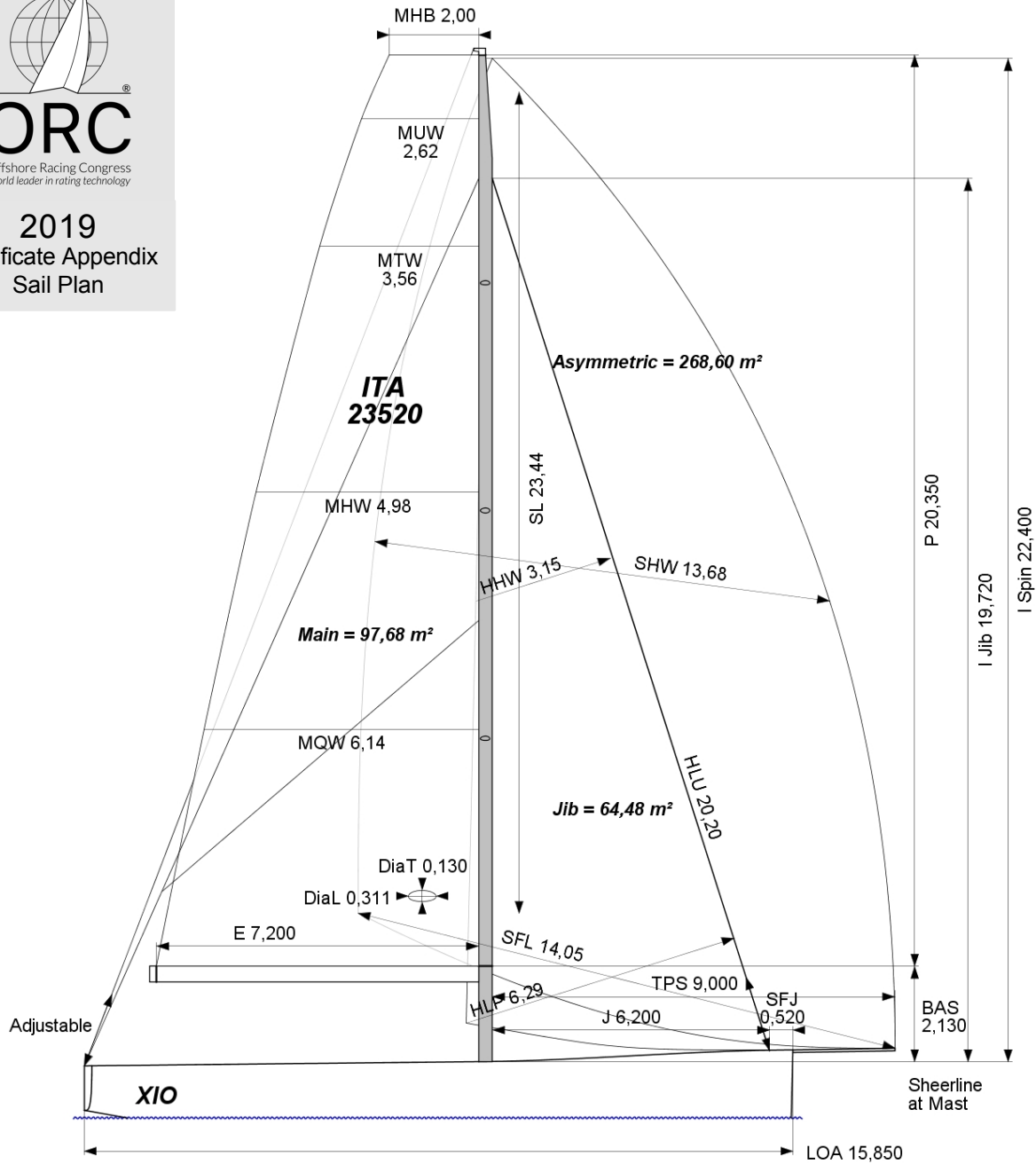
MEASUREMENT INVENTORY				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
A	Ballast	135.0	9.00	0.00 LEAD



ORC

Offshore Racing Congress
World leader in rating technology

**2019
Certificate Appendix
Sail Plan**



SAILS INVENTORY																
MAINSAIL (2)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
B	2.00	2.62	3.56	4.98	6.14	97.68		22/05/2019		Unknown						
A	1.24	2.23	3.26	4.77	6.04	93.00				Unknown						
HEADSAILS (2)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
E	0.15	0.95	1.75	3.15	4.67	6.29	20.20	101%	64.49	Y	N		22/05/2019		Unknown	
F	0.15	0.95	1.75	3.17	4.67	6.25	20.21	101%	64.48	Y	N		22/05/2019		Unknown	
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (5)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
E	25.28	21.59	23.44	13.68	14.05	268.61	asym		22/05/2019		Unknown					
A	25.43	21.14	23.29	13.43	13.57	261.15	asym		19/06/2015		Unknown					
D	25.43	21.14	23.29	13.43	13.57	261.15	asym		19/06/2015		Unknown					
B	25.05	21.36	23.20	13.15	14.90	261.06	asym		19/06/2015		Unknown					
C	24.55	21.40	22.98	12.69	13.95	247.79	asym				Unknown					