

BOAT Name Aurora Pirnar Sail Nr SLO 3839	GPH 607.6	HULL Length Overall 10.600m Maximum Beam 3.250m Displacement 4,641kg Draft 2.181m Plan Review IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.000% Hull Construction Cored Carbon Rudder No Crew Arm Extension IMSL 9.499m VCGD -0.012m Sink 17.82kg/mm RL 9.060m VCGM -0.031m WS 23.28m² LSM0 9.316m Displacement/Length ratio 5.7401
GENERAL Class X-35 OD MOD. Designer Jeppesen Builder X-Yachts Series 09/2005, CIN DKXYA35163B707 Age 05/2007 Age Allowance 0.487% Offset File x35.od.off - 29/01/2015 16:31:16 Measurement by - 13/06/2011		



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	591.6			659.0		
Time on Time	1.0141			1.0243		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	687.0	540.7	486.3	883.9	660.1	581.1
Time on Time	0.9825	1.2483	1.3881	0.7637	1.0226	1.1616

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	993.3	823.9	732.5	701.5	690.6	684.9	675.3
52°	654.5	554.8	513.6	499.9	494.9	492.6	485.3
60°	620.4	535.5	502.2	487.6	481.7	478.6	470.9
75°	594.6	522.6	493.6	474.9	461.7	454.9	449.4
90°	600.7	522.9	489.8	472.1	452.7	436.4	419.0
110°	612.1	517.2	481.0	454.4	435.7	422.5	402.5
120°	630.3	526.4	486.4	457.5	429.8	406.6	380.1
135°	698.0	568.5	507.8	477.5	449.9	422.8	367.9
150°	827.7	660.6	560.7	507.2	478.9	453.1	403.5
Run VMG	955.7	762.8	646.3	573.8	522.3	489.8	440.6

Certificate

Number **I03/20**
ORC Ref **03090000JRI**
Issued On **04/06/2020**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

Crew Weight

Default 622kg
Maximum **669kg**
Minimum* **502kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

ToD	ToT
Non Spin GPH 638.0	0.9404
Non Spin OSN 620.4	0.9671

Selected Courses							
Windward / Leeward	974.5	793.3	689.4	637.7	606.5	587.4	558.0
Circular Random	827.7	672.2	590.0	543.0	514.2	495.0	468.3
Coastal / Long Distance	972.6	746.9	625.8	561.6	525.9	496.4	448.5
Non Spinnaker	882.6	710.8	618.6	565.2	532.3	510.4	480.7

Sails Limitations

Headsails	Spinnakers
5	4

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°	41.3°	39.4°	38.3°	37.9°	37.7°	37.9°
Beat VMG	3.62	4.37	4.91	5.13	5.21	5.26	5.33
52°	5.50	6.49	7.01	7.20	7.27	7.31	7.42
60°	5.80	6.72	7.17	7.38	7.47	7.52	7.65
75°	6.05	6.89	7.29	7.58	7.80	7.91	8.01
90°	5.99	6.88	7.35	7.62	7.95	8.25	8.59
110°	5.88	6.96	7.48	7.92	8.26	8.52	8.94
120°	5.71	6.84	7.40	7.87	8.38	8.85	9.47
135°	5.16	6.33	7.09	7.54	8.00	8.51	9.78
150°	4.35	5.45	6.42	7.10	7.52	7.94	8.92
Run VMG	3.77	4.72	5.57	6.27	6.89	7.35	8.17
Gybe Angles	144.5°	148.5°	151.5°	159.0°	180.0°	180.0°	180.0°

Class Division Length

CDL = **9.272**

Storm Sails Areas

Heavy Weather Jib **28.66**
Storm Jib (JL=9.48) **10.62**
Storm Trysail **11.90**

Owner

BOAT	
Name Aurora Pirnar	Sail Nr SLO 3839
File SLO3839	Data in meters/kilograms

RIG	
Forestay Tension Aft	Spreaders 2
Inner Stay None Fitted	Runners/Checkstays 0
Carbon Mast No	Jib Furler No
Fiber Rigging No	Main Furler No
Non-Circular Rigging No	
Articulated Bowsprit No	

P 13.900	E 4.890	MDT1 0.125	MW 0.184
IG 14.500	J 4.186	MDL1 0.184	GO 0.204
ISP 14.520	SFJ	MDT2 0.122	BD 0.220
BAS 1.745	SPL 4.170	MDL2 0.140	MWT 168.00
FSD 0.034	TPS	TL 1.210	MCG 4.700

INCLINING TEST AND FREEBOARDS

Inclining Test Current Inclining			
Flotation date 10/04/2019		SG 1.0270	
FFM 1.328	FF 1.328	SFFP 0.075	
FAM 0.964	FA 0.964	SAFP 10.275	
W1 80.0	PD1 594.2	WD 11.230	
W2 80.0	PD2 588.1	GSA 1.0	
W3 80.0	PD3 593.5	RSA 1.0	
W4 80.0	PD4 589.8	PLM 9000.0	
LCF from stem on CL / on sheer		6.013 / 6.207	
Maximum beam station from stem		7.300	
RM Measured		119.6kg-m	
RM Default		122.9kg-m	
Limit of positive stability / Stab.Index		119.9° / 121.1	
Freeboard at mast at 4.186		1.103	



ORC
Offshore Racing Congress
World leader in rating technology

2020
IMS Measurement Certificate

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.415		
Type Folding 2 blades	PBW		
Twin Screw No	PIPA 0.0033		
ST1 0.042	ST3 0.180	ST5 0.255	
ST2 0.180	ST4 0.112	EDL 2.390	

Certificate	
Number I03/20	
ORC Ref 03090000JRI	
Issued On 04/06/2020	
VPP Ver. 2020 1.02	
Valid until 31/12/2020	

COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.17	1.07	1.86	3.18	4.12	40.72	41.59	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	90.56		SL · (SFL + 4·SHW) / 6	
	14.36	14.36	14.36	7.52	7.76				
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	Flying	Meas.Date	Material	Comment
0.10	0.65	1.20	2.26	3.31	4.42	14.39	32.42	Y	No	13/03/2017	Unknow	
0.11	0.62	1.10	2.24	3.30	4.41	14.44	32.13	Y	No	25/04/2017	Unknow	
0.10	0.48	0.91	1.82	2.84	3.90	14.19	26.90	Y	No	11/03/2017	Unknow	
0.07	0.36	0.66	1.38	2.19	3.09	9.72	14.21		No	07/05/2019	Dacron	

MEASUREMENT INVENTORY				
Measurer SLO03, CRO3				
Date 10/04/2019				
Comment Marina Portorož				
Internal Ballast total = 216.0				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
E1	Engine	YAN MAR	RCD-2YM15	
Id	Item	Weight Description		

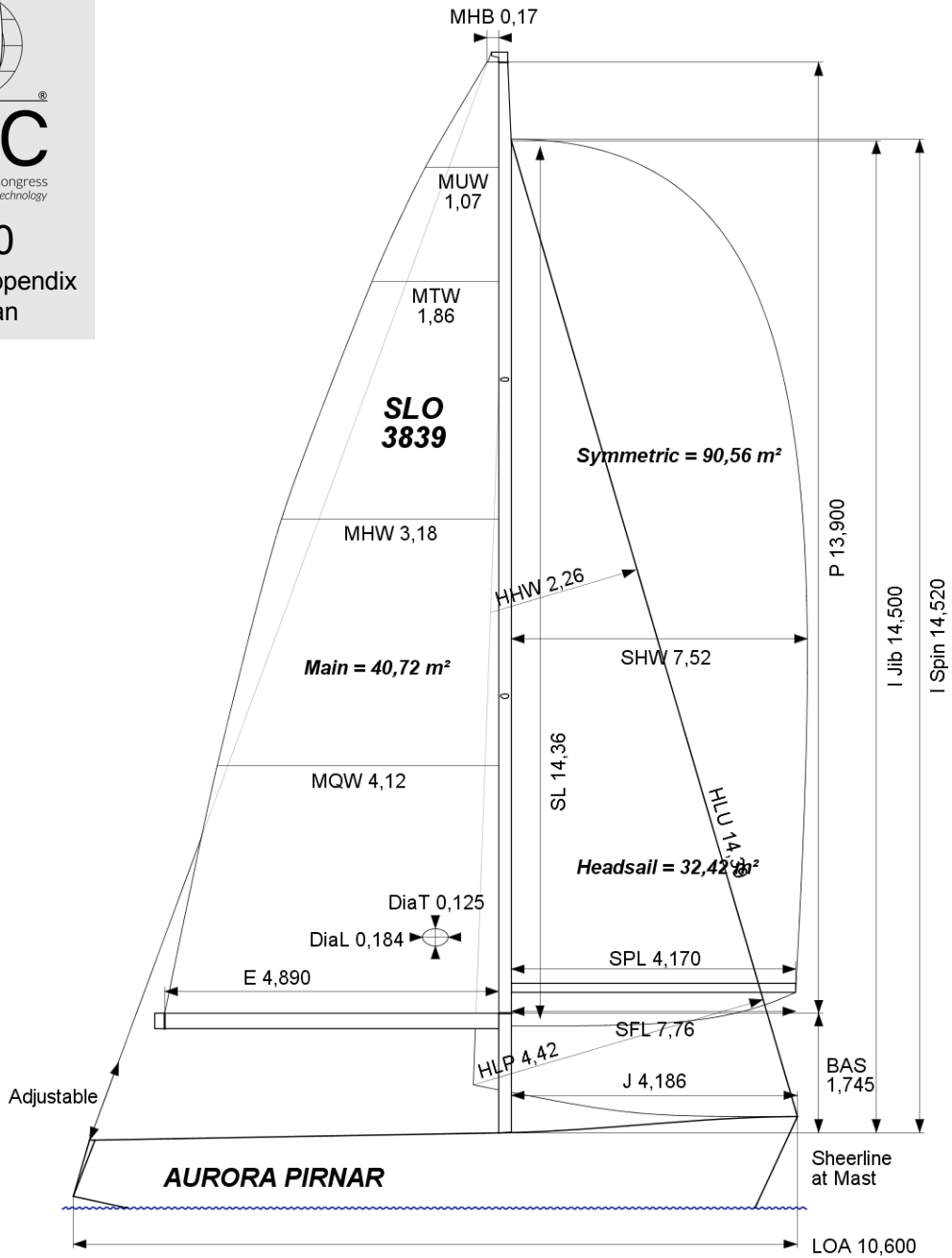
MEASUREMENT INVENTORY							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
T2	Tank	WATER	PVC	150.0	5.40		0-0 EMPTY
T1	Tank	FUEL	INOX	60.0	6.10		7-0
Id	Item	Weight	Distance	VCG Description			
BT3	Ballast	4.0	4.28	LEAD BARS ,CORRECTOR W. CLASS X-35			
BT2	Ballast	2.0	5.47	LEAD ,CORRECTOR W. CLASS X-35 OD			
BT1	Ballast	210.0	6.21	LEAD BARS IN BILGE			
B2	Battery	18.4	5.10	55 AH - ENGINE			
B1	Battery	46.8	4.80	120 AH SERVICE - EQUIPEMENTS			
GS1	Misc	3.0	9.57	GAS BOTTLE - FULL			



ORC

Offshore Racing Congress
World leader in rating technology

2020
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (2)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
M2E	0.17	1.07	1.86	3.18	4.12	40.72		25/04/2017	Elwstroom	Unknown						
M1	0.21	1.07	1.85	3.16	4.09	40.56		22/03/2011	MILLENNIU	Unknown						
HEADSAILS (4)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
J2E	0.10	0.65	1.20	2.26	3.31	4.42	14.39	106%	32.42	Y	No		13/03/2017	Elwstroom	Unknow	
J1E	0.11	0.62	1.10	2.24	3.30	4.41	14.44	105%	32.13	Y	No		25/04/2017	Elwstroom	Unknow	
J3E	0.10	0.48	0.91	1.82	2.84	3.90	14.19	93%	26.90	Y	No		11/03/2017	Elwstroom	Unknow	
J4E	0.07	0.36	0.66	1.38	2.19	3.09	9.72	74%	14.21		No		07/05/2019	Elwstroom	Dacron	
SYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
S1E	14.36	14.36	14.36	7.52	7.76	90.57		21/04/2017	Elwstroom	Nylon						
S2E	14.36	14.36	14.36	7.51	7.75	90.45		21/04/2017	Elwstroom	Nylon						
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				