

BOAT Name ORION Sail Nr USA-12282	GPH 578.7	HULL Length Overall 12.200m Maximum Beam 3.638m Displacement 7,034kg Draft 2.221m IMS Reg. Division Dynamic Allowance 0.101% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder Yes Crew Arm Extension 0.00
GENERAL Class J122 Designer ALAN JOHNSTONE Builder J EUROPE Series 01/2006 Age 05/2006 Age Allowance 0.325% Offset File us42407.off - 27/05/2014 12:43:22 Measurement by D. DAVIS - 17/05/2014		IMSL 11.064m VCGD -0.041m Sink 22.89kg/mm RL 9.570m VCGM -0.060m WS 30.53m² LSMO 10.922m Displacement/Length ratio 5.3988




World Leader in Rating Technology

2016
ORC International
Certificate

Rating Office

Offshore
Racing
Congress



World Leader in Rating Technology

SCORING OPTIONS	OFFSHORE COASTAL / LONG DISTANCE			INSHORE WINDWARD / LEEWARD		
	PLT	PLD		PLT	PLD	
Time On Distance	563.2			630.4		
Time On Time	1.0653			1.0707		
Performance Line	0.734	44.3		0.930	219.4	
Triple Number	Low 1.0177	Medium 1.3161	High 1.4836	Low 0.7827	Medium 1.0655	High 1.2345

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1016.4	838.2	732.9	682.6	659.7	647.3	631.3
52°	656.5	547.6	489.9	469.0	461.0	456.7	450.3
60°	613.8	516.1	473.0	455.3	447.2	442.5	437.1
75°	578.3	493.9	460.9	442.2	428.0	418.9	411.1
90°	578.0	484.0	461.5	442.2	424.4	407.3	385.3
110°	570.8	478.4	445.3	428.6	415.3	402.9	379.8
120°	585.4	486.5	450.0	423.2	402.0	388.0	363.8
135°	648.2	525.6	468.9	441.9	416.1	389.4	337.2
150°	765.6	615.6	520.7	469.9	443.7	419.9	371.6
Run VMG	884.0	710.8	601.2	534.2	490.9	458.2	412.3

Certificate

Number **US6115**
ORC Ref **USA00000675**
Issued On **09/01/2017**
VPP Ver. **2016 1.01**
Valid until **28/02/2017**

Crew Weight

Declared **755kg**
Default* **781kg**
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	618.5	0.9701
Non Spin OSN	601.7	0.9972
N/S Perf. Line	3.3	0.621

Selected Courses							
Windward / Leeward	950.2	774.5	667.0	608.4	575.3	552.8	521.8
Circular Random	796.7	643.5	561.5	513.8	484.1	463.8	436.1
Ocean for PCS	975.8	754.8	630.1	553.7	503.9	468.9	419.2
Non Spinnaker	869.2	694.5	599.0	542.4	506.9	483.3	453.0

Sails Limitations

Headsails	Spinnakers
7	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	44.1°	42.9°	42.5°	40.7°	39.9°	39.1°	38.6°
Beat VMG	3.54	4.30	4.91	5.27	5.46	5.56	5.70
52°	5.48	6.57	7.35	7.68	7.81	7.88	8.00
60°	5.87	6.98	7.61	7.91	8.05	8.14	8.24
75°	6.23	7.29	7.81	8.14	8.41	8.59	8.76
90°	6.23	7.44	7.80	8.14	8.48	8.84	9.34
110°	6.31	7.52	8.09	8.40	8.67	8.93	9.48
120°	6.15	7.40	8.00	8.51	8.96	9.28	9.89
135°	5.55	6.85	7.68	8.15	8.65	9.25	10.68
150°	4.70	5.85	6.91	7.66	8.11	8.57	9.69
Run VMG	4.07	5.06	5.99	6.74	7.33	7.86	8.73
Gybe Angles	143.5°	147.4°	150.2°	156.5°	171.3°	180.0°	180.0°

Class Division Length
CDL = **10.318**

Storm Sails Areas

Heavy Weather Jib **38.59**
Storm Jib (JL=10.99) **14.29**
Storm Triesail **14.61**

Owner

BOAT	
Name ORION	Sail Nr USA-12282
File US6115.dxt	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 17/05/2014		SG 1.0040	
FFM 1.367	FF 1.375	SFFP 0.300	
FAM 0.982	FA 0.988	SAFP 11.850	
W1 105.8	PD1 261.0	WD 12.731	
W2 105.8	PD2 261.0	GSA 18.9	
W3 105.8	PD3 261.0	RSA 6500.0	
W4 105.8	PD4 261.0	PLM 2000.0	
LCF from stem on CL / on sheer		6.756 / 6.978	
Maximum beam station from stem		7.800	
RM Measured		180.1kg·m	
RM Default		182.2kg·m	
Limit of positive stability / Stab.Index		119.8° / 123.6	
Freeboard at mast at 4.874		1.161	

RIG			
Forestay Tension Aft	Spreaders 2		
Inner Stay None Fitted	Runners 0		
Carbon Mast Yes	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 15.644	E 5.337	MDT1 0.130	MW 0.205
IG 16.630	J 4.574	MDL1 0.232	GO 0.280
ISP 17.665	SFJ 0.300	MDT2 0.130	BD 0.225
BAS 1.751	SPL 6.450	MDL2 0.180	MWT 233.50
FSP 0.072	TPS 0.000	TL 1.920	MCG 6.460

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.460		
Type Folding 2 blades	PBW 0.115		
Twin Screw No	PIPA 0.0039		
ST1 0.065	ST3 0.180	ST5 0.290	
ST2 0.180	ST4 0.110	EDL 2.200	

COMMENTS	
IRC FLOAT FBD ADJ	
IRC SCALE = 6990 OFF ADJ	
7 G FUEL FBD ADJ	

MOVEABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



World Leader in Rating Technology

2016

IMS Measurement Certificate

Certificate	
Number US6115	
ORC Ref USA00000675	
Issued On 09/01/2017	
VPP Ver. 2016 1.01	
Valid until 28/02/2017	



World Leader In Rating Technology

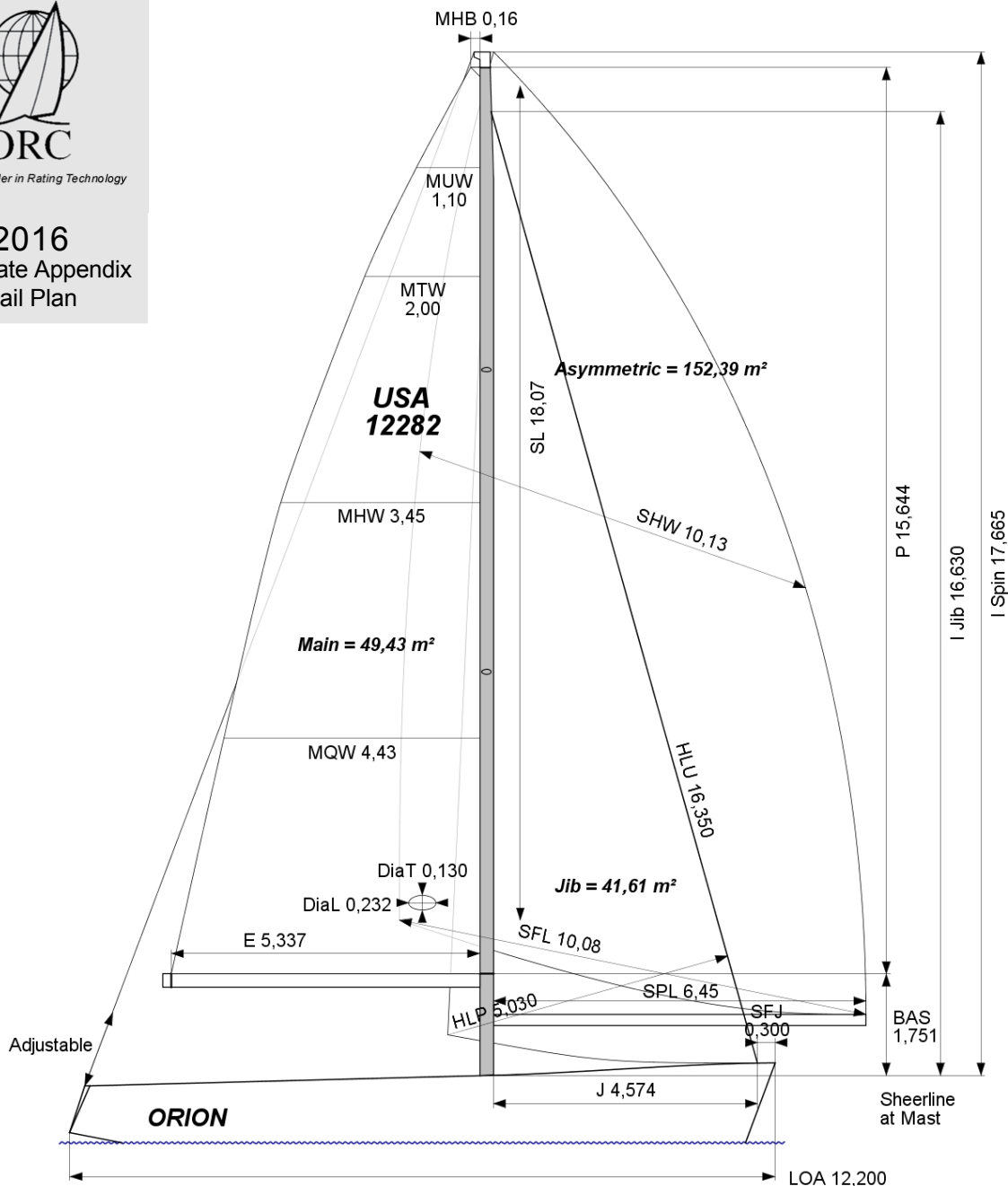
SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.160	1.10	2.00	3.45	4.43	49.43	50.36	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric									
Not Available									
Asymmetric	SLU	SLE	SL	SHW	SFL	Area	AS · (SFL + 4·SHW) / 6		
	18.07	18.07	18.07	10.13	10.08	152.39			

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
0.65	1.29	2.56	3.80	5.03	16.35	41.61						* Copied from legacy *



World Leader in Rating Technology

2016
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	0.160	1.10	2.00	3.45	4.43	49.43					* Copied from legacy

HEADSAILS

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	0.65	1.29	2.56	3.80	5.03	16.35	110%	41.61								* Copied from legacy *

SYMMETRIC SPINNAKERS

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

ASYMMETRIC SPINNAKERS

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	18.07	18.07	18.07	10.13	10.08	152.39	asym					* Copied from legacy *