

BOAT	GPH	HULL
Name LUNA Sail Nr USA 61216	627.9	Length Overall 14.148m Maximum Beam 3.600m Displacement 10,454kg Draft 2.000m Plan Review IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.407% Hull Construction Solid Carbon Rudder No Crew Arm Extension
GENERAL		IMSL 10.833m VCGD 0.033m Sink 26.35kg/mm RL 7.420m VCGM 0.033m WS 34.81m² LSM0 10.395m Displacement/Length ratio 9.3070
Class SPIRIT 47CR Designer SEAN MCMILLAN Builder SPIRIT YACHTS Series 06/2016 Age 06/2016 Age Allowance 0.130% Offset File Spirit47.off - 24/06/2020 09:22:50 Measurement by -		



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	613.6			700.2		
Time on Time	0.9778			0.9641		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	722.8	554.8	496.1	949.8	706.7	611.2
Time on Time	0.9339	1.2166	1.3606	0.7107	0.9552	1.1044

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1117.3	924.6	830.3	775.2	739.8	723.7	718.5
52°	709.5	595.3	529.9	501.1	488.2	480.4	476.5
60°	655.8	551.7	496.5	475.4	465.9	461.2	456.7
75°	606.2	512.1	472.2	455.0	446.0	441.7	434.2
90°	598.2	508.3	469.3	449.9	436.3	425.3	412.7
110°	630.1	517.3	466.1	442.8	428.3	419.2	403.8
120°	646.5	530.5	472.4	446.3	426.6	408.6	389.3
135°	717.5	582.4	500.3	462.5	440.8	421.6	386.8
150°	847.0	674.6	571.6	505.9	473.6	453.9	424.3
Run VMG	978.1	778.9	660.0	584.1	546.1	506.8	453.5
Selected Courses							
Windward / Leeward	1047.7	851.8	745.1	679.7	643.0	615.3	586.0
Circular Random	867.1	698.9	608.8	556.8	525.3	505.5	482.6
Coastal / Long Distance	1040.7	794.7	661.3	579.3	535.0	501.2	453.6
Non Spinnaker	975.7	773.9	661.6	593.7	550.9	523.3	492.0

Certificate

Number **US6552**
ORC Ref **03410000M1V**
Issued On **06/07/2020**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

Crew Weight

Default **727kg**
Maximum **170kg**
Minimum* **85kg**
**when applied by the NoR and SI*
Non Manual Pwr **Sheets**

Special Scoring

ToD ToT
Non Spin GPH **683.8 0.8774**
Non Spin OSN **659.7 0.9095**

Sails Limitations

Headsails 5	Spinnakers 4
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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	46.1°	44.4°	45.0°	44.6°	43.5°	42.8°	42.8°
Beat VMG	3.22	3.89	4.34	4.64	4.87	4.97	5.01
52°	5.07	6.05	6.79	7.18	7.37	7.49	7.56
60°	5.49	6.53	7.25	7.57	7.73	7.81	7.88
75°	5.94	7.03	7.62	7.91	8.07	8.15	8.29
90°	6.02	7.08	7.67	8.00	8.25	8.46	8.72
110°	5.71	6.96	7.72	8.13	8.40	8.59	8.92
120°	5.57	6.79	7.62	8.07	8.44	8.81	9.25
135°	5.02	6.18	7.20	7.78	8.17	8.54	9.31
150°	4.25	5.34	6.30	7.12	7.60	7.93	8.48
Run VMG	3.68	4.62	5.45	6.16	6.59	7.10	7.94
Gybe Angles	144.5°	148.0°	147.0°	148.5°	150.5°	175.5°	178.0°

Class Division Length

CDL = **9.122**

Storm Sails Areas

Heavy Weather Jib **25.38**
Storm Jib (JL=8.92) **9.40**
Storm Trysail **15.85**

Owner

BOAT							
Name LUNA			Sail Nr		USA 61216		
File US6552			Data in		meters/kilograms		
RIG							
Forestay Tension		Aft				Spreaders 2	
Inner Stay		None Fitted	Runners/Checkstays			1	
Carbon Mast		Yes				Jib Furler	Yes
Fiber Rigging		No				Main Furler	No
Non-Circular Rigging		No					
Articulated Bowsprit		No					
P	14.900	E	6.075	MDT1	0.122	MW	0.180
IG	13.492	J	4.400	MDL1	0.244	GO	0.250
ISP	16.400	SFJ	0.937	MDT2	0.104	BD	0.219
BAS	1.675	SPL	0.000	MDL2	0.180	MWT	
FSD	0.084	TPS	4.500	TL	2.800	MCG	

INCLINING TEST AND FREEBOARDS				
Inclining Test Current Inclining				
Flotation date 21/10/2017			SG 1.0240	
FFM	1.422	FF	1.423	SFFP 1.000
FAM	1.077	FA	1.077	SAFP 13.548
W1	122.6	PD1	484.9	WD 12.820
W2	122.6	PD2	484.9	GSA 1.0
W3	122.6	PD3	484.9	RSA 1.0
W4	122.6	PD4	484.9	PLM 9000.0
LCF from stem on CL / on sheer			7.351 / 7.564	
Maximum beam station from stem			8.243	
RM Measured			255.3kg-m	
RM Default			244.9kg-m	
Limit of positive stability / Stab.Index			115.1° / 123.3	
Freeboard at mast at 5.337			1.175	

MIZZEN RIG AND SAILS	
	N/A

PROPELLER							
Installation Type	Shaft exposed Folding 3 blades				PRD	0.470	
Twin Screw	No				PBW	0.122	
					PIPA	0.0111	
PSA	33.600	PHL	0.145	ST3	0.091	ESL	0.760
PSD	0.032	ST1	0.032	ST4	0.045		
PHD	0.095	ST2	0.091	ST5	0.240		

COMMENTS

MOVABLE BALLAST	
	N/A

CENTERBOARD	
	N/A



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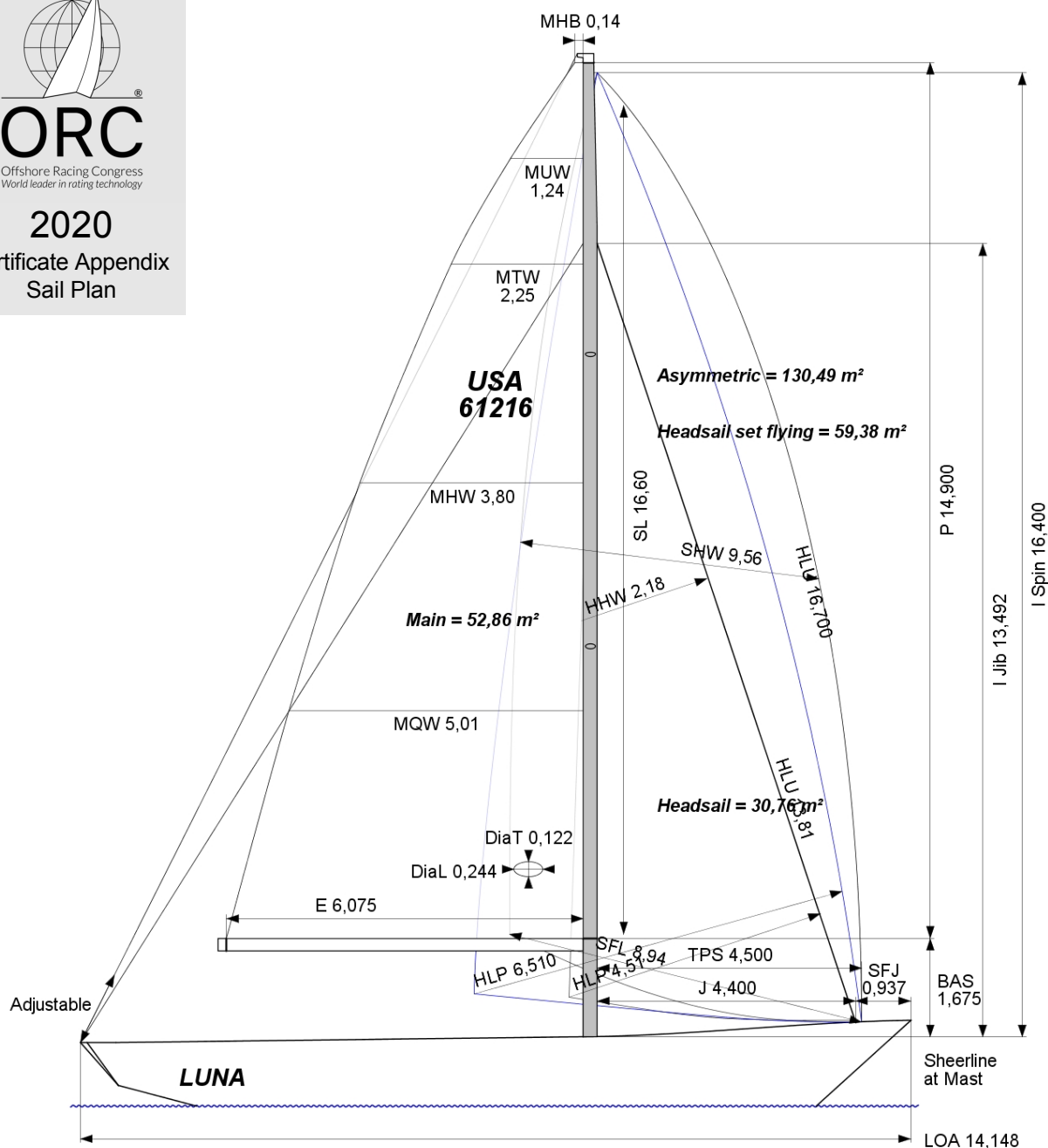
SAILS (Maximum Areas)								
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula
	0.14	1.24	2.25	3.80	5.01	52.86	54.19	$P/8 \cdot (E + 2 \cdot MQW + 2 \cdot MHW + 1.5 \cdot MTW + MUW + 0.5 \cdot MHB)$
Symmetric								
Not Available								
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL			
	17.48	15.71	16.59	9.56	8.94	130.49		$AS \cdot (SFL + 4 \cdot SHW) / 6$

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	Flying	Meas.Date	Material	Comment
0.10	1.08	2.06	3.79	5.20	6.51	16.70	59.38		Yes		Unknow	Code 55
0.10	0.99	1.90	3.57	5.05	6.47	16.60	56.92		Yes		Unknow	LRH
0.07	0.57	1.09	2.18	3.34	4.51	13.81	30.76		No		Unknow	ROLLER JIB 2017

2020
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
PK55155	0.14	1.24	2.25	3.80	5.01	52.86				Unknown	MAINSAIL 2017

HEADSAILS (3)

	HHB	HUW	HTW	HHW	HQW	HLP	HLU	OvrLp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
OUS137	0.10	1.08	2.06	3.79	5.20	6.51	16.70	148%	59.38		Yes				Unknow	Code 55
LRH	0.10	0.99	1.90	3.57	5.05	6.47	16.60	147%	56.92		Yes			NORTH	Unknow	LRH
PK55154	0.07	0.57	1.09	2.18	3.34	4.51	13.81	102%	30.76		No				Unknow	ROLLER JIB 2017

SYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
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ASYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
PK55157	17.48	15.71	16.60	9.56	8.94	130.50	asym				Unknown	MASTHEAD A2 2017