



**2020
ORC Club
Certificate**

Rating Office

**Offshore
Racing
Congress**

**COPY ONLY
Invalid for
Racing**

World Leader In Rating Technology

Certificate

Number **US6539**
 Issued On **08/06/2020**
 ORC Ref **03410000K63**
 VPP Ver. **2020 1.02**
 Valid until **31/12/2020**

Crew Weight

Default	393kg
Maximum	393kg
Minimum*	295kg

*when applied by the NoR and SI
 Non Manual Pwr **No**

Special Scoring

ToD	ToT
Non Spin GPH	675.5 0.8882
Non Spin OSN	654.3 0.9170

Sails Limitations

Headsails **5** Spinnakers **4**

Asymmetric on centerline

Spinnaker configuration
 Symmetric: **No**
 Asymmetric: **Yes 53.85**
 Flying H/S: **No**
 Spin. Pole: **No**

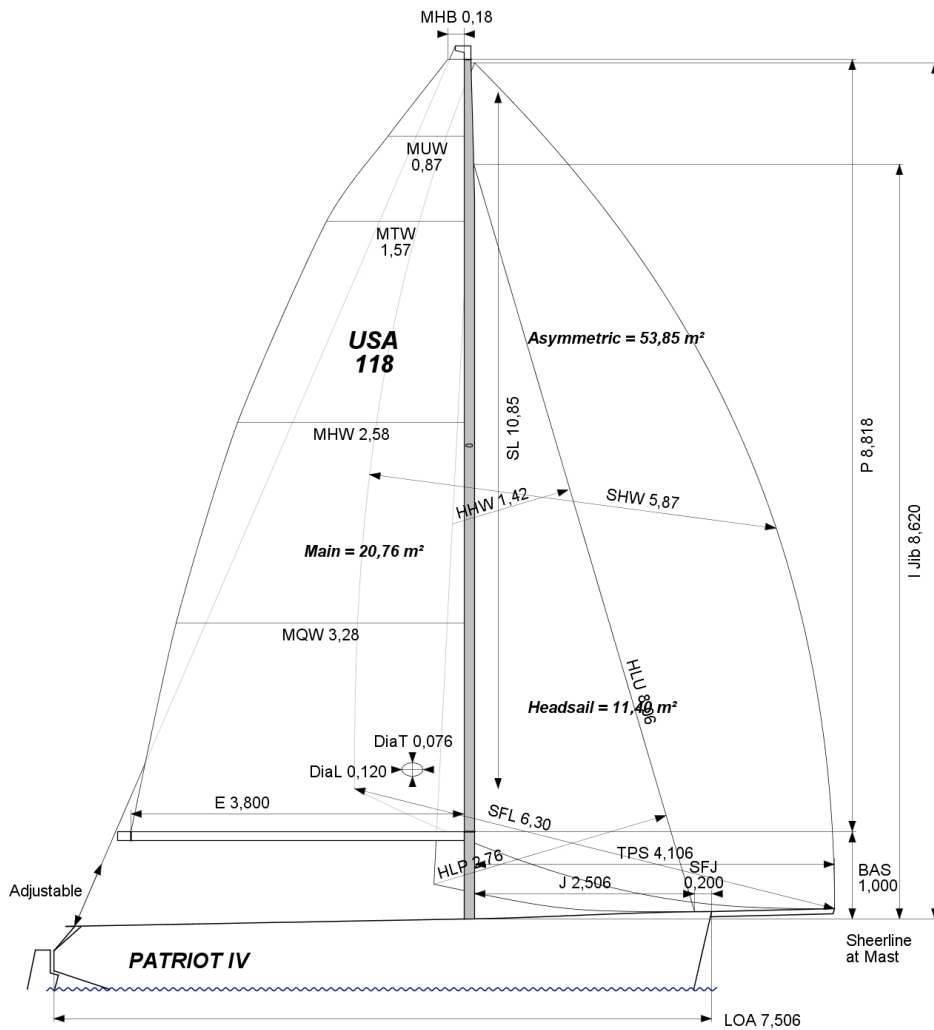
Class Division Length

CDL = 7.379

Stability (Estimated)

Limit Positive Stab.: **103.9°**
 Stability Index: **95.4**

Owner



BOAT Name Patriot IV Sail Nr USA 118		GPH 628.4	HULL Data File US6539 LOA 7.506m Offset File MELG24.OD.Off MB 2.490m Displacement 821kg Draft 1.522m				
CLASS Class Melges 24 Designer Reichel/Pugh Builder Melges Boatworks Series 12/1992 Age Date 01/1998 Age Allowance 0.487%			IMS Division Sportboat Dynamic All. 0.000% Plan Review Construction Solid Fiber Rigging No Aramid Core No Crew Arm Ex Carbon Rudder No Light Stanchions No				
COMMENTS			IMSL 7.240m VCGD 0.050m Sink 8.70kg/mm RL 7.527m VCGM 0.030m WS 10.46m² LSM0 6.754m Displacement/Length ratio 2.6648 Water Ballast 0 Trim Tab No BLR Index 0.0000				
PROPELLER Type No Propeller			CENTERBOARD N/A				
SCORING OPTIONS							
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD			
Time on Distance	610.6			696.0			
Time on Time	0.9827			0.9698			
Triple Number	Low	Medium	High	Low	Medium	High	
Time on Distance	718.5	560.6	479.2	923.3	702.2	598.9	
Time on Time	0.9394	1.2041	1.4087	0.7311	0.9612	1.1271	

2020

ORC Club Certificate Appendix

BOAT							
Name	Patriot IV	Certificate Number	US6539				
Sail Nr	USA 118	Issued On	08/06/2020				

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1087.1	889.4	794.5	769.7	763.6	760.9	756.8
52°	708.4	600.2	559.6	543.1	535.7	532.2	518.5
60°	667.5	582.1	540.9	515.0	504.7	499.8	483.2
75°	634.2	566.1	522.4	476.8	457.5	448.0	429.7
90°	623.7	548.3	514.6	470.9	423.1	401.9	384.1
110°	613.2	534.9	471.6	439.3	409.8	386.3	327.7
120°	628.5	544.3	477.7	418.5	387.5	365.2	313.8
135°	701.4	579.7	517.2	454.8	394.2	341.6	275.6
150°	830.0	656.4	573.2	520.8	463.2	409.3	292.8
Run VMG	958.4	757.9	662.3	601.4	534.8	472.6	338.0
Selected Courses							
Windward / Leeward	1022.8	823.7	728.4	685.5	649.2	616.8	547.4
Circular Random	864.5	700.2	611.0	556.6	519.4	490.4	443.0
Coastal / Long Distance	1016.4	775.5	658.0	586.4	536.2	494.1	414.8
Non Spinnaker	945.0	757.5	655.1	593.5	553.0	523.8	480.2

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	43.5°	42.0°	39.4°	38.1°	37.9°	38.3°	38.6°
Beat VMG	3.31	4.05	4.53	4.68	4.71	4.73	4.76
52°	5.08	6.00	6.43	6.63	6.72	6.76	6.94
60°	5.39	6.18	6.66	6.99	7.13	7.20	7.45
75°	5.68	6.36	6.89	7.55	7.87	8.04	8.38
90°	5.77	6.57	7.00	7.64	8.51	8.96	9.37
110°	5.87	6.73	7.63	8.20	8.78	9.32	10.99
120°	5.73	6.61	7.54	8.60	9.29	9.86	11.47
135°	5.13	6.21	6.96	7.92	9.13	10.54	13.06
150°	4.34	5.48	6.28	6.91	7.77	8.80	12.30
Run VMG	3.76	4.75	5.44	5.99	6.73	7.62	10.65
Gybe Angles	144.0°	148.0°	151.5°	148.3°	144.8°	144.5°	141.8°