



ORC
Offshore Racing Congress
World leader in rating technology

2020
ORC Club
Certificate

Rating Office

Offshore
Racing
Congress



Certificate

Number **US6057**
Issued On **08/06/2020**
ORC Ref **03410000K8J**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

Crew Weight

Default 951kg
Maximum **1,143kg**
Minimum* **857kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

| | ToD | ToT |
|--------------|--------------|---------------|
| Non Spin GPH | 602.2 | 0.9963 |
| Non Spin OSN | 584.8 | 1.0260 |

Sails Limitations

Headsails **6** Spinnakers **4**

Asymmetric on centerline

Spinnaker configuration
Symmetric: **Yes** **136.34**
Asymmetric: **Yes** **156.48**
Flying H/S: **No**
Spin. Pole: **Yes**

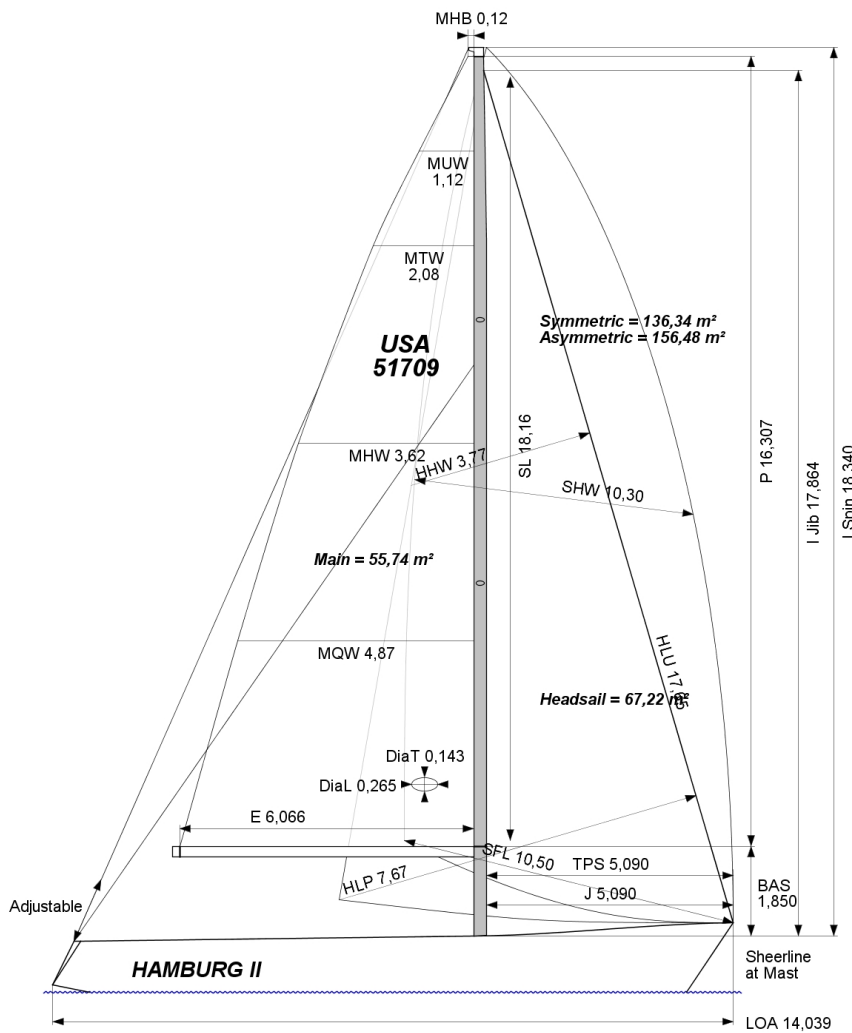
Class Division Length

CDL = 11.540

Stability (Measured)

Limit Positive Stab.: **114.8°**
Stability Index: **121.1**

Owner



| BOAT | | GPH | | HULL | | |
|--|--------------------------------|--------------------|---------------|-----------------------------------|---|---------------|
| Name HAMBURG II Sail Nr USA 51709 | | 574.2 | | Data File US6057 | LOA 14.039m | |
| | | | | Offset File US31092.OFF | MB 4.231m | |
| | | | | Displacement 11,437kg | Draft 2.352m | |
| | | | | IMS Division Cruiser/Racer | Dynamic All. 0.178% | |
| | | | | Plan Review | Construction Cored | |
| | | | | Fiber Rigging No | Aramid Core No | |
| | | | | Crew Arm Ex 0.00 | Carbon Rudder No | |
| | | | | | Light Stanchions No | |
| | | | | IMSL 12.474m | VCGD -0.082m | |
| | | | | RL 10.606m | VCGM -0.096m | |
| | | | | WS 41.23m² | | |
| | | | | LSM0 12.542m | Displacement/Length ratio 5.7971 | |
| | | | | Water Ballast 0 | Trim Tab No | |
| | | | | BLR Index 0.0000 | | |
| | | | | CENTERBOARD | | |
| | | | | NA | | |
| CLASS | | | | | | |
| Class J-46 | | | | | | |
| Designer JOHNSTONE | | | | | | |
| Builder TPI COMPOSITES | | | | | | |
| Series 03/1995 | | | | | | |
| Age Date 06/2002 | | | | | | |
| Age Allowance 0.487% | | | | | | |
| COMMENTS | | | | | | |
| | | | | | | |
| PROPELLER | | | | | | |
| Installation Shaft exposed | | PRD 0.509 | | | | |
| Type Feathering 3 blades | | PBW 0.155 | | | | |
| | | PIPA 0.0052 | | | | |
| SCORING OPTIONS | | | | | | |
| | COASTAL / LONG DISTANCE | | | WINDWARD / LEEWARD | | |
| Time on Distance | 557.9 | | | 623.6 | | |
| Time on Time | 1.0755 | | | 1.0825 | | |
| Triple Number | Low | Medium | High | Low | Medium | High |
| Time on Distance | 668.3 | 506.1 | 445.9 | 870.6 | 629.0 | 534.0 |
| Time on Time | 1.0100 | 1.3336 | 1.5139 | 0.7753 | 1.0731 | 1.2641 |

2020

ORC Club Certificate Appendix

| BOAT | | | |
|-------------|-------------------|--------------------|-------------------|
| Name | HAMBURG II | Certificate Number | US6057 |
| Sail Nr | USA 51709 | 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 | 976.5 | 803.0 | 702.0 | 648.4 | 624.0 | 611.0 | 601.6 |
| 52° | 635.7 | 530.9 | 474.5 | 452.0 | 442.9 | 438.0 | 433.4 |
| 60° | 596.4 | 504.0 | 460.1 | 441.6 | 432.0 | 426.8 | 421.8 |
| 75° | 566.7 | 485.1 | 450.1 | 432.9 | 420.8 | 411.4 | 401.1 |
| 90° | 574.0 | 487.6 | 449.3 | 429.9 | 417.3 | 404.6 | 383.1 |
| 110° | 595.9 | 488.8 | 442.7 | 421.0 | 402.8 | 386.6 | 368.5 |
| 120° | 613.0 | 501.2 | 448.8 | 424.6 | 404.7 | 384.8 | 351.8 |
| 135° | 692.3 | 553.6 | 476.2 | 440.6 | 419.8 | 400.1 | 361.0 |
| 150° | 823.9 | 651.0 | 546.9 | 482.8 | 447.4 | 426.5 | 390.4 |
| Run VMG | 951.4 | 751.7 | 631.5 | 557.5 | 504.4 | 463.6 | 419.5 |
| Selected Courses | | | | | | | |
| Windward / Leeward | 964.0 | 777.3 | 666.7 | 602.9 | 564.2 | 537.3 | 510.6 |
| Circular Random | 799.3 | 641.8 | 556.6 | 506.6 | 475.5 | 455.2 | 430.1 |
| Coastal / Long Distance | 962.7 | 729.1 | 598.6 | 523.5 | 484.7 | 455.6 | 411.2 |
| Non Spinnaker | 849.3 | 677.5 | 583.1 | 527.0 | 491.8 | 468.6 | 439.8 |

| 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° | 41.6° | 40.1° | 38.6° | 37.9° | 37.9° |
| Beat VMG | 3.69 | 4.48 | 5.13 | 5.55 | 5.77 | 5.89 | 5.98 |
| 52° | 5.66 | 6.78 | 7.59 | 7.96 | 8.13 | 8.22 | 8.31 |
| 60° | 6.04 | 7.14 | 7.82 | 8.15 | 8.33 | 8.43 | 8.54 |
| 75° | 6.35 | 7.42 | 8.00 | 8.32 | 8.56 | 8.75 | 8.98 |
| 90° | 6.27 | 7.38 | 8.01 | 8.37 | 8.63 | 8.90 | 9.40 |
| 110° | 6.04 | 7.36 | 8.13 | 8.55 | 8.94 | 9.31 | 9.77 |
| 120° | 5.87 | 7.18 | 8.02 | 8.48 | 8.90 | 9.35 | 10.23 |
| 135° | 5.20 | 6.50 | 7.56 | 8.17 | 8.57 | 9.00 | 9.97 |
| 150° | 4.37 | 5.53 | 6.58 | 7.46 | 8.05 | 8.44 | 9.22 |
| Run VMG | 3.78 | 4.79 | 5.70 | 6.46 | 7.14 | 7.77 | 8.58 |
| Gybe Angles | 143.0° | 147.0° | 147.0° | 148.8° | 160.0° | 180.0° | 180.0° |