



World Leader in Rating Technology

2018 ORC Club Certificate

Rating Office

EYU
Regati 1
11911, Tallinn
Estonia

Certificate

Number **Est774**
Issued On **8/7/2018**
ORC Ref **EST0000329**
VPP Ver. **2018 1.00**
Valid until **12/31/2018**

Crew Weight

Default 600kg
Maximum **650kg**
Minimum* **488kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

| | ToD | ToT |
|--------------|--------------|---------------|
| Double H.GPH | 627.0 | 0.9569 |
| Double H.OSN | 611.8 | 0.9807 |
| Non Spin GPH | 653.0 | 0.9188 |
| Non Spin OSN | 633.8 | 0.9467 |

Sails Limitations

Headsails **5** Spinnakers **3**

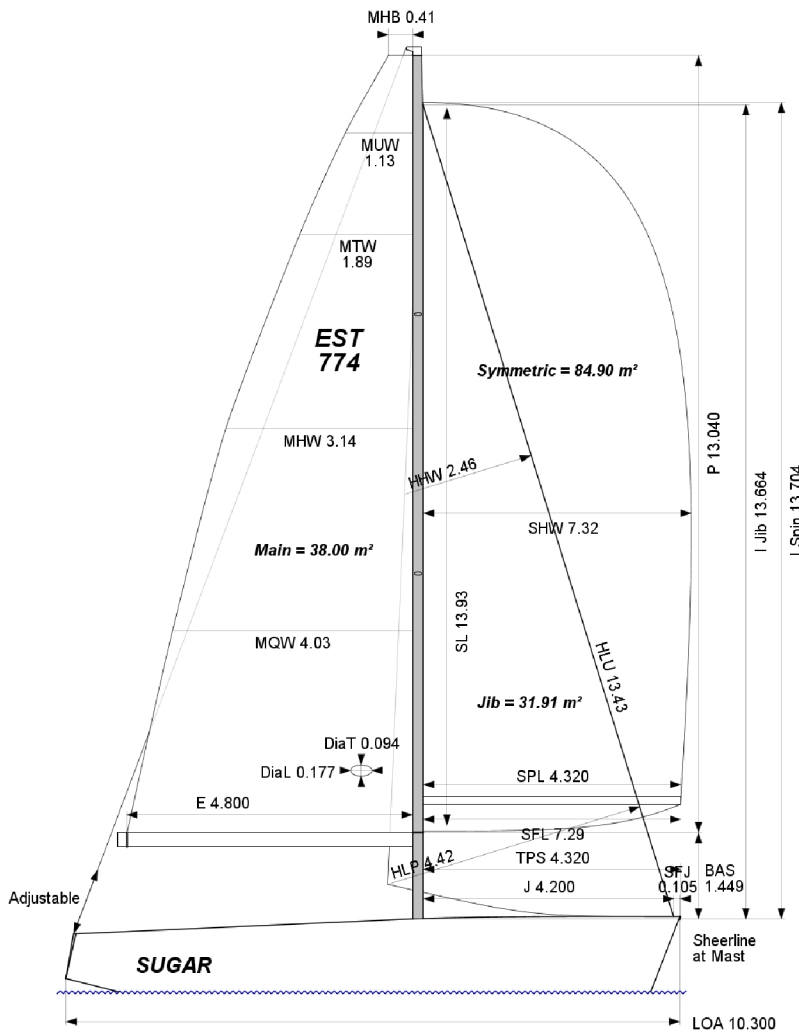
Spinnaker configuration
Symmetric: **Yes** **84.90**
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = 8.887

Stability (Measured)

Limit Positive Stab.: **116.2°**
Stability Index: **112.9**



| BOAT | | GPH | | HULL | | |
|------------------|-------------------------|---------------|---------------|---------------------------|----------------------|---------------|
| Name | SUGAR | | | Data File | Est0774 | |
| Sail Nr | EST-774 | | | Offset File | IY998MP.off | |
| | | 621.8 | | Displacement | 4,486kg | |
| | | | | LOA | 10.300m | |
| | | | | MB | 3.536m | |
| | | | | Draft | 1.895m | |
| CLASS | | | | IMS Division | Cruiser/Racer | |
| Class | ITALIA 9.98 F | | | Dynamic All. | 0.035% | |
| Designer | POLLI | | | Fwd Accom. | Yes | |
| Builder | ITALIA YACHTS | | | Construction | Cored | |
| Series | 09/2014 | | | Fiber Rigging | Yes | |
| Age Date | 04/2016 | | | Aramid Core | No | |
| Age Allowance | 0.130% | | | Carbon Rudder | No | |
| | | | | Light Stanchions | No | |
| COMMENTS | | | | IMSL | 9.370m | |
| | | | | VCGD | 0.124m | |
| | | | | Sink | 17.63kg/mm | |
| | | | | RL | 8.403m | |
| | | | | VCGM | 0.126m | |
| | | | | WS | 23.35m² | |
| | | | | LSM0 | 9.077m | |
| | | | | Displacement/Length ratio | 5.9984 | |
| PROPELLER | | | | Water Ballast | 0 | |
| Installation | Strut | PRD | 0.380 | Trim Tab | No | |
| Type | Folding 2 blades | PBW | 0.120 | BLR Index | 0.0000 | |
| | | PIPA | 0.0039 | | | |
| CENTERBOARD | | | | | N/A | |
| | | | | | | |
| SCORING OPTIONS | | | | | | |
| | COASTAL / LONG DISTANCE | | | WINDWARD / LEEWARD | | |
| Time on Distance | 604.5 | | | 677.5 | | |
| Time on Time | 0.9926 | | | 0.9964 | | |
| Triple Number | Low | Medium | High | Low | Medium | High |
| Time on Distance | 712.2 | 550.4 | 492.0 | 919.2 | 678.7 | 595.3 |
| Time on Time | 0.9478 | 1.2264 | 1.3719 | 0.7343 | 0.9945 | 1.1339 |

| | |
|---------------------|---------------------------------|
| BOAT | |
| Name SUGAR | Sail Nr EST-774 |
| File Est0774 | Data in meters/kilograms |

| | | | |
|--|------------------|-----------------------|--|
| INCLINING TEST AND FREEBOARDS | | | |
| Inclining Test Current Inclining | | | |
| Flotation date 13/04/2018 | | SG 1.0240 | |
| FFM 1.269 | FF 1.268 | SFFP 0.000 | |
| FAM 0.628 | FA 0.631 | SAFP 10.300 | |
| W1 66.1 | PD1 579.8 | WD 11.380 | |
| W2 66.1 | PD2 575.6 | GSA 1.0 | |
| W3 66.1 | PD3 575.4 | RSA 1.0 | |
| W4 66.1 | PD4 579.3 | PLM 9000.0 | |
| LCF from stem on CL / on sheer | | 5.603 / 5.832 | |
| Maximum beam station from stem | | 7.304 | |
| RM Measured | | 102.6kg·m | |
| RM Default | | 113.4kg·m | |
| Limit of positive stability / Stab.Index | | 116.2° / 112.9 | |
| Freeboard at mast at 4.305 | | 1.228 | |



2018
Measurements
Datasheet

| | | | | |
|--------------------------------|----------------------------|-------------------|-------------------|--|
| 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 Yes | Main Furler No | | | |
| Lenticular Rigging No | Without Backstay No | | | |
| Articulated Bowsprit No | | | | |
| P 13.040 | E 4.800 | MDT1 0.094 | MW 0.177 | |
| IG 13.664 | J 4.200 | MDL1 0.177 | GO 0.191 | |
| ISP 13.704 | SFJ 0.105 | MDT2 0.083 | BD 0.236 | |
| BAS 1.449 | SPL 4.320 | MDL2 0.151 | MWT 120.20 | |
| FSP 0.076 | TPS 4.320 | TL 1.100 | MCG 5.090 | |

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| | |
|-----------------------------|--|
| MIZZEN RIG AND SAILS | |
| N/A | |

| | | | |
|------------------------------|--------------------|------------------|--|
| PROPELLER | | | |
| Installation Strut | PRD 0.380 | | |
| Type Folding 2 blades | PBW 0.120 | | |
| Twin Screw No | PIPA 0.0039 | | |
| ST1 0.065 | ST3 0.180 | ST5 0.350 | |
| ST2 0.180 | ST4 0.110 | EDL 1.000 | |

| | |
|-----------------|--|
| COMMENTS | |
| | |

| | |
|------------------------|--|
| MOVABLE BALLAST | |
| N/A | |

| | |
|--------------------|--|
| CENTERBOARD | |
| N/A | |

| SAILS INVENTORY | | | | | | | | | | | | | | | | |
|----------------------------------|-------|-------|-------|------|------|-------|----------|------------|-------------|-------------|----------|----------|------------|-------------|----------|---------|
| MAINSAIL (4) | | | | | | | | | | | | | | | | |
| Id | MHB | MUW | MTW | MHW | MQW | Area | Measurer | Meas.Date | Manufacture | Material | Comment | | | | | |
| D | 0.410 | 1.13 | 1.89 | 3.14 | 4.03 | 38.00 | | 23/06/2018 | ONE SAILS | Unknown | | | | | | |
| C | 0.410 | 1.14 | 1.91 | 3.06 | 4.05 | 37.86 | | 24/04/2018 | | Carbon | | | | | | |
| HEADSAILS (1) | | | | | | | | | | | | | | | | |
| Id | HHB | HUW | HTW | HHW | HQW | HLP | HLU | Ovrlp | Area | Btn | Fly | Measurer | Meas.Date | Manufacture | Material | Comment |
| G | 0.12 | 0.78 | 1.41 | 2.46 | 3.43 | 4.42 | 13.43 | 105% | 31.91 | Y | N | | 23/06/2018 | ONE SAILS | Unknow | JL |
| SYMMETRIC SPINNAKERS (1) | | | | | | | | | | | | | | | | |
| Id | SLU | SLE | SL | SHW | SFL | Area | Measurer | Meas.Date | Manufacture | Material | Comment | | | | | |
| A | 13.93 | 13.93 | 13.93 | 7.32 | 7.29 | 84.90 | | 10/07/2016 | | Unknown | | | | | | |
| ASYMMETRIC SPINNAKERS (0) | | | | | | | | | | | | | | | | |
| Id | SLU | SLE | SL | SHW | SFL | Area | Kind | Measurer | Meas.Date | Manufacture | Material | Comment | | | | |

| MEASUREMENT INVENTORY | | | | |
|----------------------------------|--------|--------|-------------|-----------------|
| Measurer 162 | | | | |
| Date 13/04/2018 | | | | |
| Comment Condizioni ottime | | | | |
| Id | Item | Weight | Distance | VCG Description |
| Id | Item | Maker | Model | |
| A | Engine | VOLVO | 20 HP | |
| Id | Item | Weight | Description | |

| MEASUREMENT INVENTORY | | | | | | | | |
|------------------------------|---------|----------|-----------|------------------------|-------|------|-------|-------------|
| Id | Item | Tank Use | Tank Type | Capcty | Dist. | VCG | Condn | Description |
| A | Tank | FUEL | PVC | 60.0 | 7.58 | 0.00 | 45.0 | L |
| B | Tank | WATER | PVC | 110.0 | 4.22 | 0.00 | 0.0 | EMPTY |
| Id | Item | Weight | Distance | VCG Description | | | | |
| A | Battery | 21.0 | 4.53 | 0.00 1x70Ah | | | | |
| B | Battery | 21.0 | 4.82 | 0.00 1x70Ah | | | | |
| A | Misc | 8.0 | 8.48 | 0.00 AUTOHELM | | | | |
| B | Misc | 10.0 | 8.88 | 0.00 HOT AIR GENERATOR | | | | |



World Leader in Rating Technology

2018

ORC Club Certificate Appendix

| BOAT | | | |
|-------------|----------------|--------------------|-----------------|
| Name | SUGAR | Certificate Number | Est774 |
| Sail Nr | EST-774 | Issued On | 8/7/2018 |

| TIME ALLOWANCES | | | | | | | |
|-------------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Wind Velocity | 6 kt | 8 kt | 10 kt | 12 kt | 14 kt | 16 kt | 20 kt |
| Beat VMG | 1049.1 | 865.8 | 766.6 | 728.4 | 714.7 | 710.7 | 703.5 |
| 52° | 686.4 | 575.1 | 523.2 | 503.7 | 497.2 | 494.6 | 489.4 |
| 60° | 649.5 | 549.6 | 508.1 | 490.1 | 482.1 | 478.3 | 473.7 |
| 75° | 622.2 | 532.7 | 497.5 | 477.2 | 461.4 | 452.2 | 445.8 |
| 90° | 628.4 | 532.8 | 492.5 | 474.7 | 454.2 | 436.2 | 414.9 |
| 110° | 633.2 | 524.8 | 483.5 | 455.2 | 431.4 | 418.5 | 397.1 |
| 120° | 650.3 | 535.4 | 489.3 | 459.3 | 431.3 | 406.8 | 376.2 |
| 135° | 717.1 | 580.9 | 512.2 | 479.8 | 451.9 | 425.0 | 372.4 |
| 150° | 851.6 | 674.5 | 569.1 | 510.0 | 480.2 | 454.3 | 405.7 |
| Run VMG | 983.3 | 778.8 | 656.6 | 579.0 | 526.2 | 491.5 | 442.0 |
| Selected Courses | | | | | | | |
| Windward / Leeward | 1016.2 | 822.3 | 711.6 | 653.7 | 620.4 | 601.1 | 572.8 |
| Circular Random | 856.0 | 691.0 | 603.1 | 552.5 | 521.7 | 501.3 | 474.2 |
| Coastal / Long Distance | 1012.9 | 772.5 | 642.5 | 571.8 | 533.1 | 501.9 | 450.6 |
| Non Spinnaker | 911.4 | 730.3 | 632.5 | 575.6 | 540.7 | 517.9 | 488.7 |

| 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 | 43.8° | 41.9° | 40.9° | 39.9° | 40.2° | 40.2° | 40.6° |
| Beat VMG | 3.43 | 4.16 | 4.70 | 4.94 | 5.04 | 5.07 | 5.12 |
| 52° | 5.24 | 6.26 | 6.88 | 7.15 | 7.24 | 7.28 | 7.36 |
| 60° | 5.54 | 6.55 | 7.08 | 7.35 | 7.47 | 7.53 | 7.60 |
| 75° | 5.79 | 6.76 | 7.24 | 7.54 | 7.80 | 7.96 | 8.08 |
| 90° | 5.73 | 6.76 | 7.31 | 7.58 | 7.93 | 8.25 | 8.68 |
| 110° | 5.69 | 6.86 | 7.45 | 7.91 | 8.35 | 8.60 | 9.07 |
| 120° | 5.54 | 6.72 | 7.36 | 7.84 | 8.35 | 8.85 | 9.57 |
| 135° | 5.02 | 6.20 | 7.03 | 7.50 | 7.97 | 8.47 | 9.67 |
| 150° | 4.23 | 5.34 | 6.33 | 7.06 | 7.50 | 7.92 | 8.87 |
| Run VMG | 3.66 | 4.62 | 5.48 | 6.22 | 6.84 | 7.33 | 8.14 |
| Gybe Angles | 145.2° | 149.1° | 150.9° | 157.6° | 180.0° | 180.0° | 180.0° |