

APH: **577.5** CDL: **6.720**

GPH: **649.8** CertNo: **6723.1**

**BOAT**

Class **RAKETA 670**  
Designer **Michail Tikhonov**  
Builder **Raketa yachts Ltd**  
Age date **07.2021**  
Series date **10.2018**  
Offset file **SV670.off**  
Data file **RU67023 Rukavishnikov**

**HULL**

Length Overall **6.700 m**  
Maximum Beam **2.234 m**  
Draft **1.641 m**  
Displacement **621 kg**  
DLR **3.6541**  
IMS Division **Sportboat**  
Dynamic Allowance **0.000%**  
Age Allowance **0.130%**

**PROPELLER**

Installation **No Propeller**  
Type **N/A**  
Diameter **N/A**

**CREW**

Maximum weight **320 kg**  
Minimum weight **235 kg** \*when applied  
Non Manual Power **No**  
Crew Arm Extension **0.50 m**

**SAIL AREAS (m<sup>2</sup>)**

|                 | Measured     | Rated        |
|-----------------|--------------|--------------|
| Mainsail        | <b>15.46</b> | <b>16.02</b> |
| Headsail Luffed | <b>9.99</b>  | <b>9.99</b>  |
| Headsail Flying |              |              |

Symmetric  
Asymmetric **45.64** **45.64**  
*(All asymmetric spinnakers with SHW/SFL > 85%)*

**STORM SAIL AREAS (m<sup>2</sup>)**

Trysail **4.02**  
Storm Jib **3.50**  
Heavy Weather Jib **9.45**

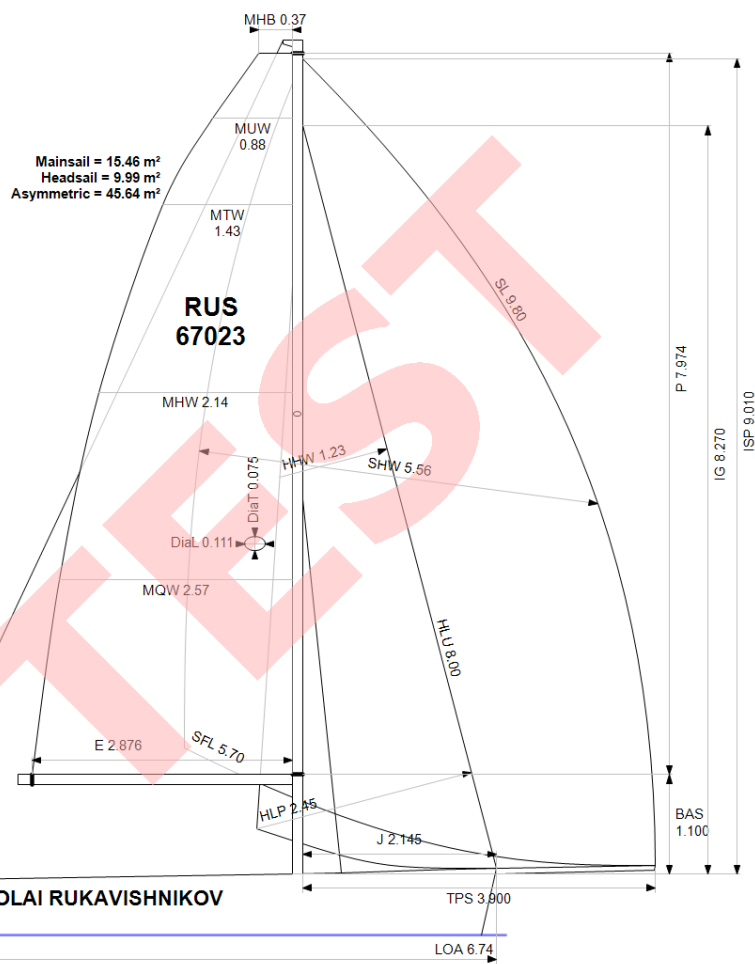
**SAIL LIMITS**

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

**STABILITY**

Righting Moment **17.1 kg·m**  
Stability Index **N/A**

*The owner and any other person in charge is responsible that boat is complying with her certificate in accordance with RRS 78.1 and ORC Rule 304.*



Rated boat velocities in knots

| Wind Velocity | 6 kt   | 8 kt   | 10 kt  | 12 kt  | 14 kt  | 16 kt  | 20 kt  |
|---------------|--------|--------|--------|--------|--------|--------|--------|
| Beat Angles   | 43.8°  | 42.0°  | 39.1°  | 37.2°  | 37.3°  | 37.6°  | 37.8°  |
| Beat VMG      | 3.17   | 3.87   | 4.36   | 4.58   | 4.61   | 4.61   | 4.66   |
| 52°           | 4.86   | 5.74   | 6.15   | 6.50   | 6.62   | 6.67   | 6.82   |
| 60°           | 5.15   | 5.92   | 6.35   | 6.83   | 7.03   | 7.12   | 7.31   |
| 75°           | 5.37   | 6.04   | 6.55   | 7.16   | 7.76   | 8.00   | 8.24   |
| 90°           | 5.57   | 6.35   | 6.87   | 7.22   | 8.00   | 8.90   | 9.62   |
| 110°          | 5.63   | 6.48   | 7.41   | 8.12   | 8.69   | 9.24   | 10.39  |
| 120°          | 5.50   | 6.36   | 7.23   | 8.39   | 9.28   | 9.99   | 11.48  |
| 135°          | 4.95   | 5.98   | 6.72   | 7.62   | 8.78   | 10.33  | 13.25  |
| 150°          | 4.19   | 5.32   | 6.04   | 6.69   | 7.50   | 8.57   | 12.17  |
| Run VMG       | 3.63   | 4.60   | 5.24   | 5.80   | 6.49   | 7.42   | 10.54  |
| Gybe Angles   | 143.9° | 148.3° | 151.0° | 147.8° | 144.8° | 143.0° | 141.1° |

Club  
Certificate  
2022

Boat  
**Nikolai Rukavishnikov**  
RUS 67023

Novokolomiazhskii av 11-70  
St-Petersburg  
Russia

| Time Allowances in secs/NM |        |       |       |       |       |       |       |
|----------------------------|--------|-------|-------|-------|-------|-------|-------|
| Wind Velocity              | 6 kt   | 8 kt  | 10 kt | 12 kt | 14 kt | 16 kt | 20 kt |
| Beat VMG                   | 1137.1 | 930.4 | 826.6 | 786.8 | 780.4 | 780.3 | 772.3 |
| 52°                        | 740.9  | 627.4 | 585.3 | 553.9 | 543.9 | 539.4 | 527.8 |
| 60°                        | 698.6  | 608.2 | 567.1 | 527.0 | 512.2 | 505.4 | 492.7 |
| 75°                        | 670.7  | 596.2 | 549.3 | 502.5 | 463.9 | 450.1 | 436.9 |
| 90°                        | 646.3  | 566.6 | 524.0 | 498.3 | 450.0 | 404.3 | 374.4 |
| 110°                       | 638.9  | 555.4 | 486.1 | 443.3 | 414.5 | 389.6 | 346.5 |
| 120°                       | 654.6  | 566.3 | 498.3 | 429.0 | 388.1 | 360.3 | 313.5 |
| 135°                       | 727.5  | 602.2 | 535.5 | 472.3 | 409.9 | 348.4 | 271.6 |
| 150°                       | 858.9  | 677.2 | 595.6 | 537.8 | 480.1 | 420.0 | 295.8 |
| Run VMG                    | 991.8  | 782.0 | 686.8 | 621.0 | 554.3 | 484.9 | 341.5 |
| Selected Courses           |        |       |       |       |       |       |       |
| Windward / Leeward         | 1064.4 | 856.2 | 756.7 | 703.9 | 667.4 | 632.6 | 556.9 |
| All purpose                | 817.3  | 679.4 | 608.8 | 562.8 | 528.4 | 499.2 | 450.5 |

| Single Number Scoring Options |                  |              |
|-------------------------------|------------------|--------------|
| Course                        | Time On Distance | Time On Time |
| Windward / Leeward            | 725.9            | 0.8265       |
| All purpose                   | 577.5            | 1.0389       |

**Custom scoring options for Russia**

| Single Number          | Time On Distance | Time On Time |
|------------------------|------------------|--------------|
| Predominantly Upwind   | 643.2            | 0.9328       |
| Predominantly Downwind | 573.8            | 1.0456       |

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Data in meters/kilograms (Metric)

**HULL AND APPENDAGES (Lightship Trim)**

|                   |                         |              |              |                                |               |
|-------------------|-------------------------|--------------|--------------|--------------------------------|---------------|
| Class             | <b>RAKETA 670</b>       | LOA          | <b>6.700</b> | VCGD                           | <b>-0.155</b> |
| Measurement       | <b>10.05.2022</b>       | Max. Beam    | <b>2.234</b> | VCGM                           | <b>-0.313</b> |
| HIN               | <b>RU-RY 67023 G921</b> | Draft        | <b>1.641</b> | RM Measured (kg·m)             | <b>17.1</b>   |
| Plan review       |                         | Displacement | <b>621</b>   | RM Default (kg·m)              | <b>17.1</b>   |
| Hull construction | <b>Solid</b>            | Wetted area  | <b>8.02</b>  | Limit of positive stability(°) | <b>N/A</b>    |
| Aramid Hull Core  | <b>No</b>               | IMS L        | <b>6.235</b> | Stability Index                | <b>N/A</b>    |
| Carbon Rudder     | <b>No</b>               | LSM0         | <b>5.538</b> |                                |               |
| Light stanchions  | <b>No</b>               | Acc. length  | <b>6.735</b> |                                |               |
| Trim tab          | <b>No</b>               | Sink (kg/mm) | <b>6.43</b>  |                                |               |

**PROPELLER**

Propeller Type **No Propeller**  
Hydro generator **No** PIPA **0.0000**

**RIG**

|                      |              |      |              |     |              |
|----------------------|--------------|------|--------------|-----|--------------|
| Forestay tension     | <b>Fixed</b> | P    | <b>7.974</b> | E   | <b>2.876</b> |
| Inner stay           | <b>Fixed</b> | IG   | <b>8.270</b> | J   | <b>2.145</b> |
| Carbon mast          | <b>No</b>    | ISP  | <b>9.010</b> | BAS | <b>1.100</b> |
| Headsail furler      | <b>No</b>    | MDT1 | <b>0.075</b> | FSD | <b>0.000</b> |
| Mainsail furler      | <b>No</b>    | MDL1 | <b>0.111</b> | SFJ | <b>0.000</b> |
| Articulated bowsprit | <b>No</b>    | MDT2 | <b>0.075</b> | SPL | <b>0.000</b> |
| Non-circular rigging | <b>No</b>    | MDL2 | <b>0.111</b> | WPL |              |
| Fiber rigging        | <b>No</b>    | TL   | <b>1.000</b> | TPS | <b>3.900</b> |
| Runners/Checkstays   | <b>0</b>     | MW   | <b>0.111</b> | BD  | <b>0.111</b> |
| Spreaders            | <b>1</b>     | GO   | <b>0.135</b> | MWT | <b>30.10</b> |
|                      |              |      |              | MCG | <b>3.250</b> |

**FLOTATION AND STABILITY**

|                    |                              |       |               |       |              |
|--------------------|------------------------------|-------|---------------|-------|--------------|
| Calculation method | <b>VCG estimated</b>         | SFFP  | <b>0.228</b>  | SAFP  | <b>6.699</b> |
| Flotation Date     | <b>02.05.2022</b>            | FFM   | <b>0.729</b>  | FAM   | <b>0.527</b> |
| Measurer           | <b>RUS 216</b>               | FF    | <b>0.732</b>  | FA    | <b>0.529</b> |
| Comment            | <b>YC BEREZKI, Chivtrevo</b> | LCFcl | <b>3.353</b>  | LCFsh | <b>3.523</b> |
|                    |                              | SG    | <b>1.0000</b> | HBI   | <b>0.671</b> |

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**MAINSAIL**

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| <i>Id</i> | <i>MHB</i> | <i>MUW</i> | <i>MTW</i> | <i>MHW</i> | <i>MQW</i> | <i>Area</i> | <i>Meas.Date</i> | <i>Maker</i> | <i>Material</i> | <i>Comment</i> |
|-----------|------------|------------|------------|------------|------------|-------------|------------------|--------------|-----------------|----------------|
| 67001     | 0.37       | 0.88       | 1.43       | 2.14       | 2.57       | 15.46       | 20.03.2022       |              | Dacron          |                |

**HEADSAIL**

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| <i>Id</i> | <i>HHB</i> | <i>HUW</i> | <i>HTW</i> | <i>HHW</i> | <i>HQW</i> | <i>HLP</i> | <i>HLU</i> | <i>Btn</i> | <i>Flying</i> | <i>FT</i> | <i>Area</i> | <i>Meas.Date</i> | <i>Maker</i> | <i>Material</i> | <i>Comment</i> |
|-----------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|-----------|-------------|------------------|--------------|-----------------|----------------|
| 001       | 0.07       |            | 0.65       | 1.23       | 1.86       | 2.45       | 8.00       | Yes        | No            |           | 9.99        | 20.03.2022       |              | Dacron          | 235 g/m2       |

**ASYMMETRIC SPINNAKER**

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| <i>Id</i> | <i>SLU</i> | <i>SLE</i> | <i>SL</i> | <i>SHW</i> | <i>SFL</i> | <i>Ratio</i> | <i>Area</i> | <i>Meas.Date</i> | <i>Maker</i> | <i>Material</i> | <i>Comment</i> |
|-----------|------------|------------|-----------|------------|------------|--------------|-------------|------------------|--------------|-----------------|----------------|
| 67001     | 10.80      | 8.80       | 9.80      | 5.56       | 5.70       | 98%          | 45.64       | 20.03.2022       |              | Nylon           |                |