

Club
Certificate
2022

Boat
Yuri Gagarin
RUS 67001

Novokolomiazhskii av 11-70
St-Petersburg
Russia

APH: **584.5** CDL: **6.550**

GPH: **655.8** CertNo: **6701.1**

BOAT

Class **RAKETA 670**
Designer **Michail Tikhonov**
Builder **Raketa yachts Ltd**
Age date **05.2019**
Series date **10.2018**
Offset file **SV670.off**
Data file **RU67001 GAGARIN**
05-05-22T

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

SAIL AREAS (m²)

	Measured	Rated
Mainsail	15.46	16.02
Headsail Luffed	9.99	9.99
Headsail Flying		
Symmetric		
Asymmetric	45.64	45.64

(All asymmetric spinnakers with SHW/SFL > 85%)

STORM SAIL AREAS (m²)

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

SAIL LIMITS

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

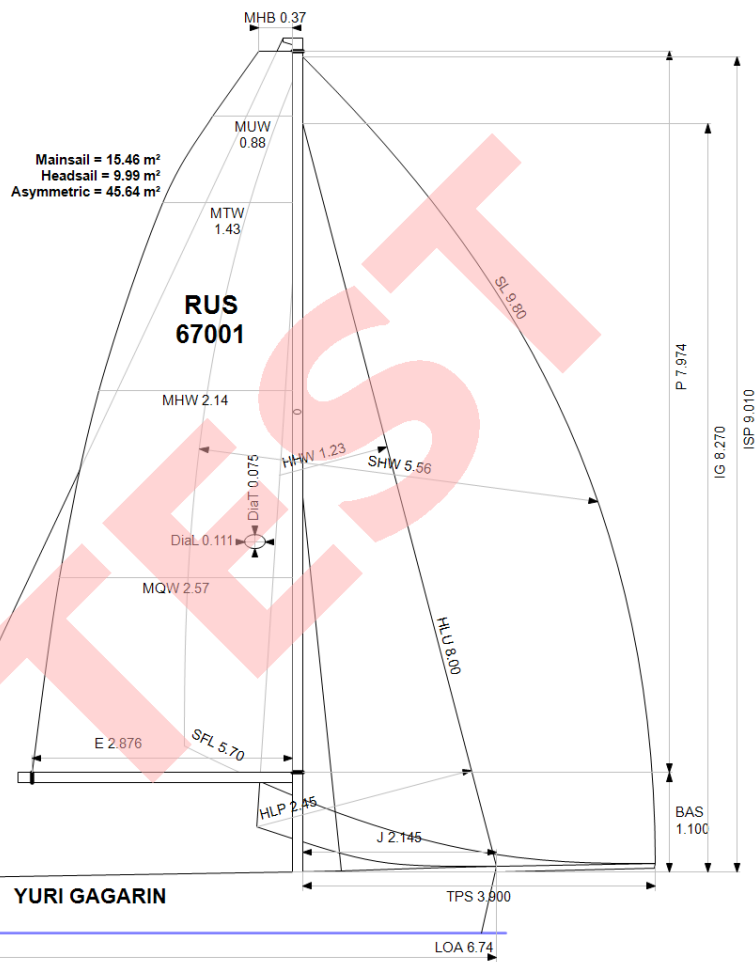
STABILITY

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

COMMENTS

+7 903 729 03 68

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°	39.0°	38.2°	38.4°	38.8°	39.0°
Beat VMG	3.17	3.87	4.34	4.47	4.48	4.48	4.52
52°	4.86	5.72	6.14	6.35	6.43	6.46	6.62
60°	5.15	5.90	6.34	6.70	6.82	6.88	7.10
75°	5.37	6.04	6.54	7.15	7.52	7.69	7.91
90°	5.56	6.32	6.72	7.16	7.99	8.61	9.12
110°	5.64	6.47	7.33	7.89	8.40	8.91	10.34
120°	5.50	6.36	7.23	8.28	8.98	9.63	10.91
135°	4.95	5.98	6.72	7.62	8.78	10.33	12.75
150°	4.19	5.32	6.04	6.69	7.50	8.57	12.08
Run VMG	3.63	4.60	5.24	5.80	6.49	7.42	10.46
Gybe Angles	143.9°	148.3°	151.0°	147.8°	144.8°	142.1°	142.2°

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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	931.3	830.5	806.0	803.5	804.2	796.1
52°	740.9	629.3	586.3	566.7	560.0	557.3	543.8
60°	698.5	610.1	568.0	537.6	527.7	523.0	507.0
75°	670.7	596.3	550.8	503.8	479.0	468.2	455.1
90°	647.3	569.8	535.5	502.8	450.6	418.0	394.6
110°	638.9	556.4	491.0	456.2	428.4	403.9	348.1
120°	654.5	566.4	498.3	434.8	400.9	373.7	329.9
135°	727.5	602.2	535.5	472.3	409.9	348.4	282.3
150°	858.9	677.2	595.6	537.9	480.1	420.1	298.0
Run VMG	991.8	782.0	686.9	621.1	554.4	485.1	344.1
Selected Courses							
Windward / Leeward	1064.5	856.6	758.7	713.5	678.9	644.7	570.1
All purpose	817.4	680.4	611.5	570.7	538.8	511.7	463.5

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	733.4	0.8181
All purpose	584.5	1.0265

Custom scoring options for Russia

Single Number	Time On Distance	Time On Time
Predominantly Upwind	652.5	0.9196
Predominantly Downwind	576.8	1.0402

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Data in **meters/kilograms (Metric)**

HULL AND APPENDAGES (Lightship Trim)

Class	RAKETA 670	LOA	6.700	VCGD	-0.155
Measurement	10.05.2022	Max. Beam	2.234	VCGM	-0.313
HIN	RU-RY67001 A 919	Draft	1.641	RM Measured (kg·m)	17.1
Plan review		Displacement	621	RM Default (kg·m)	17.1
Hull construction	Solid	Wetted area	8.02	Limit of positive stability(°)	N/A
Aramid Hull Core	No	IMS L	6.235	Stability Index	N/A
Carbon Rudder	No	LSM0	5.538		
Light stanchions	No	Acc. length	6.735		
Trim tab	No	Sink (kg/mm)	6.43		

PROPELLER

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

RIG

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

FLOTATION AND STABILITY

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

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MAINSAIL

<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

<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

<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	