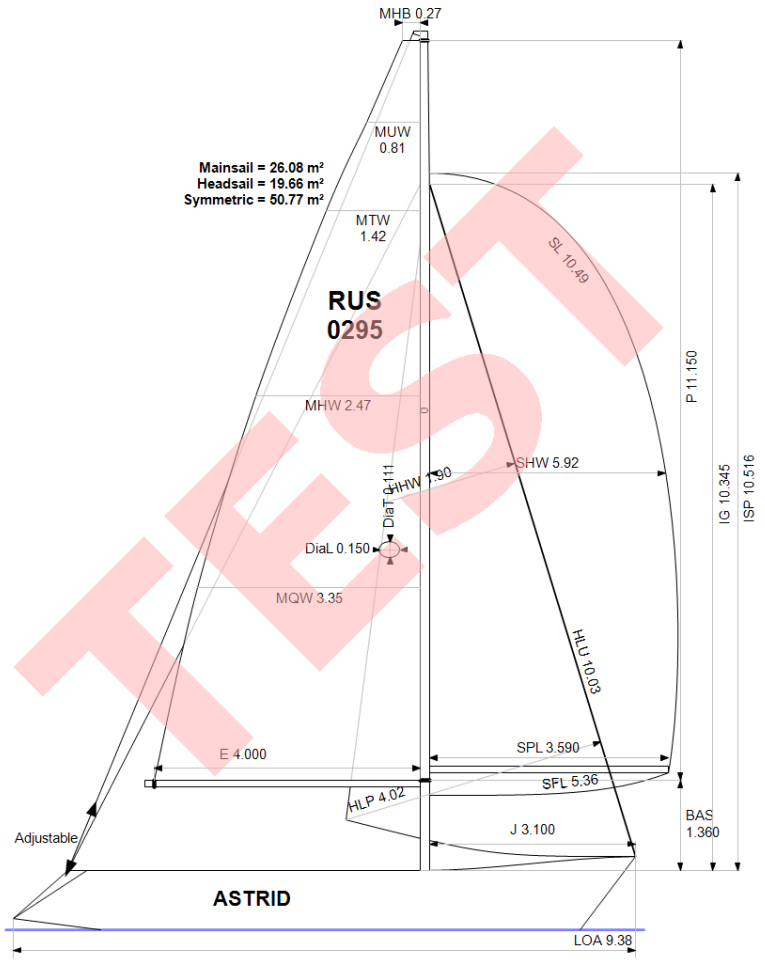
Club
Certificate
2022

Boat
Astrid
RUS 0295

Novokolomiazhskii av 11-70
St-Petersburg
Russia



TEST

Rated boat velocities in knots							
Wind Velocity	**6 kt**	**8 kt**	**10 kt**	**12 kt**	**14 kt**	**16 kt**	**20 kt**
Beat Angles	43.3°	42.1°	41.4°	40.0°	39.3°	38.8°	39.2°
Beat VMG	2.98	3.58	4.05	4.41	4.59	4.66	4.68
52°	4.56	5.40	5.99	6.31	6.47	6.55	6.60
60°	4.80	5.68	6.19	6.46	6.63	6.74	6.84
75°	4.98	5.88	6.34	6.59	6.80	6.98	7.24
90°	5.03	6.03	6.53	6.82	7.00	7.13	7.51
110°	5.02	6.06	6.57	6.91	7.25	7.56	7.91
120°	4.85	5.90	6.48	6.83	7.16	7.51	8.12
135°	4.36	5.33	6.16	6.58	6.91	7.25	7.94
150°	3.70	4.69	5.55	6.23	6.61	6.92	7.57
Run VMG	3.21	4.06	4.82	5.52	6.11	6.51	7.11
Gybe Angles	146.9°	152.0°	152.9°	160.1°	175.4°	179.0°	179.0°

APH: **629.2** CDL: **7.133**

GPH: **708.0** CertNo: **0295.4**

BOAT

Class	**FinnFlyer 31**
Designer	**Eivind Still**
Builder	**Polar Yacht**
Age date	**01.1982**
Series date	**01.1982**
Offset file	**FF31-2020.off**
Data file	**RU0295_Astrid**

HULL

Length Overall	**9.380 m**
Maximum Beam	**3.240 m**
Draft	**1.798 m**
Displacement	**3 508 kg**
DLR	**8.0867**
IMS Division	**Performance**
Dynamic Allowance	**0.345%**
Age Allowance	**0.487%**

PROPELLER

Installation	**Strut**
Type	**Folding 2 blades**
Diameter	**0.388m**

CREW

Maximum weight	**480 kg**
Minimum weight	**360 kg** ** when applied*
Non Manual Power	**No**
Crew Arm Extension	

SAIL AREAS (m²)

	Measured	Rated
Mainsail	**26.08**	**26.55**
Headsail Luffed	**19.66**	**19.66**
Headsail Flying		
Symmetric	**50.77**	**50.77**
Asymmetric		

STORM SAIL AREAS (m²)

Trysail	**7.81**
Storm Jib	**5.43**
Heavy Weather Jib	**14.64**

SAIL LIMITS

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

STABILITY

Righting Moment	**56.5 kg·m**
Stability Index	**N/A**

COMMENTS

FFM=1,110; FAM=0,885 A.Tychkova 19.05.2019 DSPM=3508 28.09.2019

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.

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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	1206.9	1004.7	888.4	816.4	785.0	772.7	769.8
52°	790.3	666.4	600.8	570.9	556.3	549.5	545.2
60°	749.5	633.3	581.6	557.5	543.1	533.7	526.7
75°	723.3	612.4	568.0	546.0	529.5	515.6	497.5
90°	716.3	597.2	551.5	528.2	514.0	505.1	479.4
110°	716.6	593.7	547.7	520.9	496.5	476.2	454.9
120°	742.4	610.5	555.1	527.2	502.5	479.6	443.3
135°	825.4	674.9	584.8	546.7	521.1	496.3	453.3
150°	972.4	768.3	648.9	577.9	544.6	520.4	475.5
Run VMG	1122.8	886.0	747.3	652.2	589.7	552.8	506.3
Selected Courses							
Windward / Leeward	1164.9	945.4	817.9	734.3	687.3	662.7	638.0
All purpose	896.7	737.5	653.7	604.9	577.4	560.2	537.5

Single Number Scoring Options		
Course	**Time On Distance**	**Time On Time**
Windward / Leeward	772.3	0.7769
All purpose	629.2	0.9536

Custom scoring options for Russia

Single Number	Time On Distance	Time On Time
Predominantly Upwind	683.2	0.8782
Predominantly Downwind	638.0	0.9404

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

HULL AND APPENDAGES (Lightship Trim)

Class	**FinnFlyer 31**	LOA	**9.380**	VCGD	**0.175**
Measurement	**08.04.2019**	Max. Beam	**3.240**	VCGM	**0.117**
HIN		Draft	**1.798**	RM Measured (kg·m)	**56.5**
Plan review		Displacement	**3 508**	RM Default (kg·m)	**60.6**
Hull construction	**Solid**	Wetted area	**17.67**	Limit of positive stability(°)	**N/A**
Aramid Hull Core	**No**	IMS L	**7.574**	Stability Index	**N/A**
Carbon Rudder	**No**	LSM0	**7.569**		
Light stanchions	**No**	Acc. length	**9.380**		
Trim tab	**No**	Sink (kg/mm)	**12.69**		

PROPELLER

Propeller Type	**Folding 2 blades**						
Installation	**Strut**	PRD	**0.388**	EDL	**1.805**	ST3	**0.174**
Twin screw	**No**	PBW	**0.100**	ST1	**0.044**	ST4	**0.098**
Hydro generator	**No**	PIPA	**0.0030**	ST2	**0.167**	ST5	**0.260**

RIG

Forestay tension	**Aft**	P	**11.150**	E	**4.000**
Inner stay	**None Fitted**	IG	**10.345**	J	**3.100**
Carbon mast	**No**	ISP	**10.516**	BAS	**1.360**
Headsail furler	**No**	MDT1	**0.111**	FSD	**0.025**
Mainsail furler	**No**	MDL1	**0.150**	SFJ	**0.000**
Articulated bowsprit	**No**	MDT2	**0.098**	SPL	**3.590**
Non-circular rigging	**No**	MDL2	**0.116**	WPL	
Fiber rigging	**No**	TL	**2.455**	TPS	
Runners/Checkstays	**1**	MW	**0.147**	BD	**0.100**
Spreaders	**1**	GO	**0.167**	MWT	**78.40**
				MCG	**4.770**

FLOTATION AND STABILITY

Calculation method	**Poles inclining**	SFFP	**0.616**	SAFP	**8.279**	W1	**45.2**	PD1	**186.4**	WD	**8.900**
Flotation Date	**19.05.2019**	FFM		FAM		W2	**45.2**	PD2	**186.4**	PLM	**1500.00**
Measurer	**RUS 220**	FF	**1.093**	FA	**0.898**	W3	**45.2**	PD3	**186.4**	GSA	**0.7**
Comment		LCFcl	**4.990**	LCFsh	**5.240**	W4	**45.2**	PD4	**186.4**	RSA	**240.0**
		SG	**1.0000**	HBI	**0.893**						

INVENTORY

TANKS

Id	*Description*	*Sp.Wght*	*Capacity*	*Condition*	*LCG*	*VCG*
F	Fuel Rigid		70	0	4.59	0.00
W	Water Rigid		75	0	4.67	0.00
G	Gaz Portable		12	0	8.00	0.50
			Total deductible			

OTHER ITEMS

Id	*Kind*	*Description*	*Weight*	*LCG*	*VCG*
B1	Battery	TUDOR NAUTICA 2x76 AH		6.34	0.00
E	Engine	Volvo Penta 2002 - 18 hp			
			Total deductible		

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MAINSAIL

Id	*MHB*	*MUW*	*MTW*	*MHW*	*MQW*	*Area*	*Meas.Date*	*Maker*	*Material*	*Comment*
M1	0.27	0.81	1.42	2.47	3.35	26.08	14.05.2021	Severnoie Siyanie	Polyester	

HEADSAIL

Id	*HHB*	*HUW*	*HTW*	*HHW*	*HQW*	*HLP*	*HLU*	*Btn*	*Flying*	*FT*	*Area*	*Meas.Date*	*Maker*	*Material*	*Comment*
H0	0.06	0.47	0.93	1.90	2.96	4.02	10.03	No	No		19.66	14.05.2021	Severnoie Siyanie	Polyester	
H2	0.06	0.41	0.81	1.68	2.66	3.68	9.74	No	No		17.15	08.05.2020	Sev.Siyanie	Polyester	

SYMMETRIC SPINNAKER

Id	*SLU*	*SLE*	*SL*	*SHW*	*SFL*	*Area*	*Meas.Date*	*Maker*	*Material*	*Comment*
1	10.50	10.48	10.49	5.92	5.36	50.77	08.05.2020	Sev.Siyanie	Nylon	
S2	10.09	10.09	10.09	6.04	5.70	50.21	13.11.2021	Sev.Siyanie	Nylon	
2	10.90	10.90	10.90	4.21	5.42	40.44	25.05.2019	Sev.Siyanie	Nylon	
0	10.57	10.57	10.57	4.23	5.55	39.58	14.05.2022	SEV.Sijanie	Nylon	