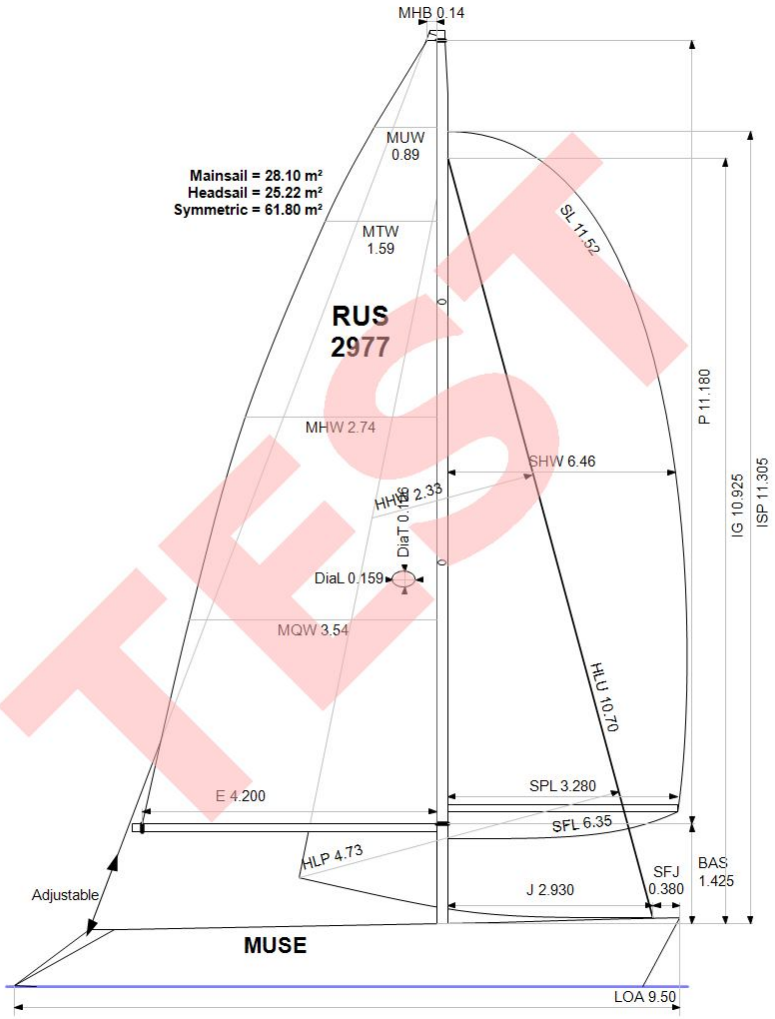
Club
Certificate
2022

Boat
MUSE
RUS 2977



TEST

APH: **578.8** CDL: **8.461**

GPH: **651.2** CertNo: **2977.2**

BOAT

Class	**SPRINT 98**
Designer	**JOUBERT/NIVELT**
Builder	**ARCHAMBAULT**
Age date	**01.1997**
Series date	**06.1992**
Offset file	**F077.OFF**
Data file	**RU2977_MUSE**

HULL

Length Overall	**9.496 m**
Maximum Beam	**2.916 m**
Draft	**1.918 m**
Displacement	**2 844 kg**
DLR	**4.1890**
IMS Division	**Cruiser/Racer**
Dynamic Allowance	**0.143%**
Age Allowance	**0.487%**

PROPELLER

Installation	**Strut**
Type	**Folding 2 blades**
Diameter	**0.400m**

CREW

Maximum weight	**573 kg**
Minimum weight	**429 kg** ** when applied*
Non Manual Power	**No**
Crew Arm Extension	

SAIL AREAS (m²)

	Measured	Rated
Mainsail	**28.10**	**28.77**
Headsail Luffed	**25.22**	**25.22**
Headsail Flying		
Symmetric	**61.80**	**61.80**
Asymmetric		

STORM SAIL AREAS (m²)

Trysail	**8.22**
Storm Jib	**6.04**
Heavy Weather Jib	**16.30**

SAIL LIMITS

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

STABILITY

Righting Moment	**63.7 kg·m**
Stability Index	**N/A**

COMMENTS

engine - YANMAR 2GM20

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	43.0°	41.4°	40.0°	38.1°	37.3°	36.9°	37.0°
Beat VMG	3.29	4.01	4.59	4.87	4.98	5.03	5.05
52°	5.04	6.02	6.57	6.80	6.89	6.94	6.97
60°	5.34	6.27	6.73	6.97	7.09	7.15	7.21
75°	5.55	6.45	6.86	7.15	7.41	7.56	7.71
90°	5.47	6.44	6.95	7.21	7.56	7.90	8.32
110°	5.40	6.51	7.05	7.51	7.97	8.29	8.83
120°	5.22	6.36	6.96	7.43	7.98	8.55	9.44
135°	4.69	5.80	6.64	7.10	7.58	8.14	9.55
150°	3.89	4.97	5.94	6.68	7.11	7.55	8.64
Run VMG	3.37	4.30	5.14	5.91	6.49	6.93	7.77
Gybe Angles	145.1°	149.6°	149.6°	158.2°	171.8°	178.1°	176.6°

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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	1092.7	896.7	785.0	739.9	723.3	715.6	713.5
52°	713.6	598.4	547.7	529.3	522.4	518.6	516.3
60°	674.3	573.8	534.8	516.5	508.0	503.2	499.5
75°	648.2	557.9	524.8	503.3	486.1	476.1	467.0
90°	658.3	559.1	518.3	499.4	476.3	455.8	432.5
110°	667.1	552.8	510.8	479.2	451.6	434.4	407.9
120°	689.5	566.1	517.4	484.7	451.4	421.1	381.6
135°	768.1	620.5	542.1	507.1	474.8	442.0	376.9
150°	924.7	724.6	606.2	538.7	506.6	476.7	416.5
Run VMG	1067.8	836.7	700.0	609.6	554.8	519.1	463.3
Selected Courses							
Windward / Leeward	1080.3	866.7	742.5	674.8	639.1	617.4	588.4
All purpose	826.4	676.1	598.7	558.2	533.4	515.6	489.2

Single Number Scoring Options		
Course	**Time On Distance**	**Time On Time**
Windward / Leeward	710.6	0.8444
All purpose	578.8	1.0366

Custom scoring options for Russia

Single Number	Time On Distance	Time On Time
Predominantly Upwind	626.9	0.9570
Predominantly Downwind	590.4	1.0163

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

HULL AND APPENDAGES (Lightship Trim)

Class	**SPRINT 98**	LOA	**9.496**	VCGD	**0.050**
Measurement	**13.10.2020**	Max. Beam	**2.916**	VCGM	**0.012**
HIN	**953**	Draft	**1.918**	RM Measured (kg·m)	**63.7**
Plan review		Displacement	**2 844**	RM Default (kg·m)	**63.7**
Hull construction	**Solid**	Wetted area	**18.62**	Limit of positive stability(°)	**N/A**
Aramid Hull Core	**No**	IMS L	**8.776**	Stability Index	**N/A**
Carbon Rudder	**No**	LSM0	**8.789**		
Light stanchions	**No**	Acc. length	**9.477**		
Trim tab	**No**	Sink (kg/mm)	**14.15**		

PROPELLER

Propeller Type	**Folding 2 blades**						
Installation	**Strut**	PRD	**0.400**	EDL	**2.350**	ST3	**0.180**
Twin screw	**No**	PBW	**0.110**	ST1	**0.040**	ST4	**0.102**
Hydro generator	**No**	PIPA	**0.0033**	ST2	**0.240**	ST5	**0.320**

RIG

Forestay tension	**Aft**	P	**11.180**	E	**4.200**
Inner stay	**None Fitted**	IG	**10.925**	J	**2.930**
Carbon mast	**No**	ISP	**11.305**	BAS	**1.425**
Headsail furler	**No**	MDT1	**0.106**	FSD	**0.040**
Mainsail furler	**No**	MDL1	**0.159**	SFJ	**0.380**
Articulated bowsprit	**No**	MDT2	**0.076**	SPL	**3.280**
Non-circular rigging	**No**	MDL2	**0.123**	WPL	
Fiber rigging	**No**	TL	**0.760**	TPS	
Runners/Checkstays	**0**	MW	**0.158**	BD	**0.118**
Spreaders	**2**	GO	**0.174**	MWT	
				MCG	

FLOTATION AND STABILITY

Calculation method	**VCG estimated**	SFFP	**0.755**	SAFP	**8.070**
Flotation Date	**15.10.2020**	FFM		FAM	
Measurer	**RUS 92**	FF	**0.967**	FA	**0.799**
Comment		LCFcl	**5.457**	LCFsh	**5.647**
		SG	**1.0250**	HBI	**0.898**

INVENTORY

TANKS	*Id*	*Description*	*Sp.Wght*	*Capacity*	*Condition*	*LCG*	*VCG*
	2	FUEL PLASTIK	0.9000	20	~~8~~	7.85	0.80
	1	WATER PLASTIK	0.9000	50	~~15~~	6.60	
				Total deductible	**21**	**7.03**	**0.28**

OTHER ITEMS	*Id*	*Kind*	*Description*	*Weight*	*LCG*	*VCG*
	1	Miscellaneous	REFRIGERATOR	15	6.10	0.00
	2	Battery	45 AH	10	6.70	
	1	Battery	85 AH	15	6.30	
	1	Engine	YANMAR 2GM20 16 H.P.			
			Total deductible	**0**		

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MAINSAIL

Id	*MHB*	*MUW*	*MTW*	*MHW*	*MQW*	*Area*	*Meas.Date*	*Maker*	*Material*	*Comment*
0	0.14	0.89	1.59	2.74	3.54	28.10	25.05.2022	QUANTUM	Polyester	

HEADSAIL

Id	*HHB*	*HUW*	*HTW*	*HHW*	*HQW*	*HLP*	*HLU*	*Btn*	*Flying*	*FT*	*Area*	*Meas.Date*	*Maker*	*Material*	*Comment*
G2	0.08	0.61	1.18	2.33	3.52	4.73	10.70	No	No		25.22	14.10.2020	NORTS SAILS	Dacron	
G1	0.08	0.38	0.70	1.36	2.03	2.69	10.75	Yes	No		14.68	14.10.2020	LIDGARD SAILS	Pentex	

SYMMETRIC SPINNAKER

Id	*SLU*	*SLE*	*SL*	*SHW*	*SFL*	*Area*	*Meas.Date*	*Maker*	*Material*	*Comment*
S2	11.52	11.52	11.52	6.46	6.35	61.80	14.10.2020	SODSTAD	Nylon	COLOR - DIFFERENT
S1	11.00	11.00	11.00	5.73	5.65	52.38	14.10.2020	SHORE SAILS	Nylon	COLOR - WHITE