

APH ToD: **676.9** CDL: **6.442**

APH ToT: **0.8865** CertNo:

BOAT

Class **Spirit 28**
Designer **E G vd Stadt**
Builder **van Heygen**
Age date **01/1980**
Series date **08/1971**
Offset file **H036.bof**
Data file

HULL

Length Overall **8.470 m**
Maximum Beam **2.794 m**
Draft **1.585 m**
Displacement **3,185 kg**
DLR **8.7969**
IMS Division **Cruiser/Racer**
Dynamic Allowance **0.530%**
Age Allowance **0.487%**

PROPELLER

Installation **Shaft exposed**
Type **Folding 2 blades**
Diameter **0.360m**

CREW

Maximum weight **425 kg (default)**
Minimum weight **295 kg *when applied**
Non Manual Power **No**
Crew Arm Extension

SAIL AREAS (m²)

	Measured	Rated
Mainsail	13.91	14.08
Headsail Luffed	21.52	21.52
Headsail Flying		
Symmetric	48.30	48.30
Asymmetric		

STORM SAIL AREAS (m²)

Trysail **4.09**
Storm Jib **5.47**
Heavy Weather Jib **14.75**

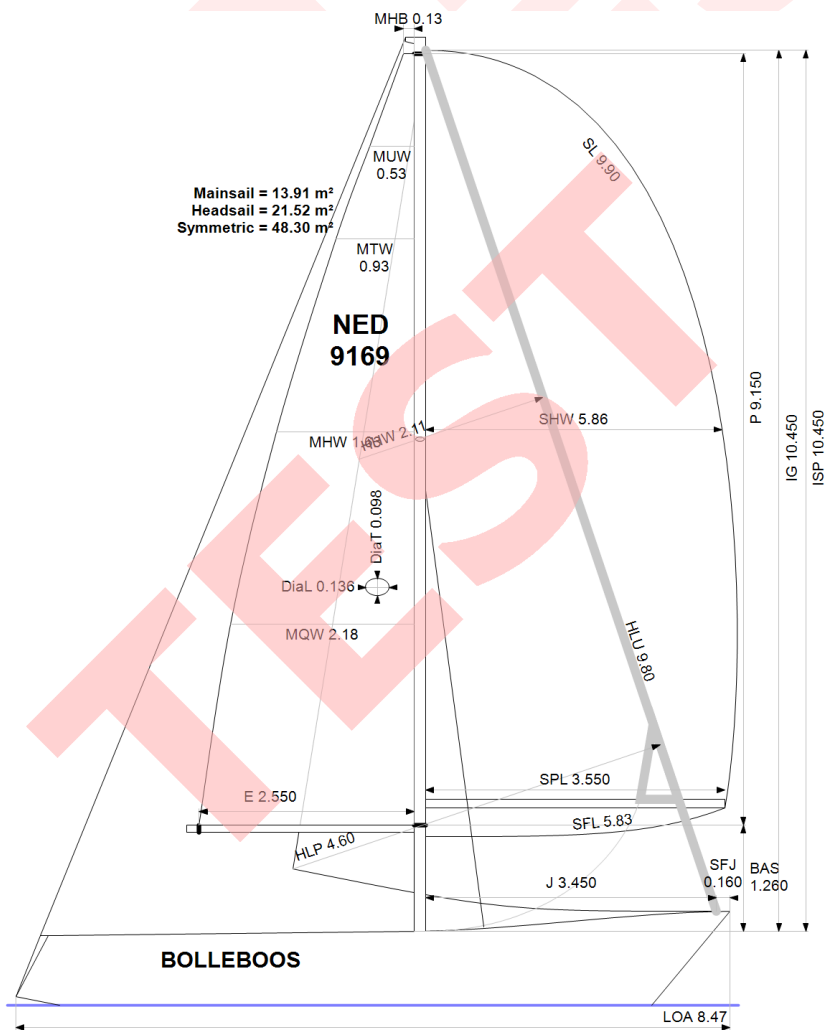
SAIL LIMITS

Headsails **1**
Spinnakers **4**

STABILITY

Righting Moment **N/A**
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	24 kt
Beat Angles	44.0°	42.2°	41.0°	39.9°	38.8°	38.4°	38.4°	39.7°
Beat VMG	2.71	3.31	3.74	4.06	4.27	4.38	4.41	4.29
52°	4.14	4.96	5.51	5.84	6.03	6.15	6.22	6.18
60°	4.37	5.18	5.70	6.00	6.18	6.31	6.41	6.40
75°	4.50	5.31	5.85	6.14	6.33	6.49	6.70	6.77
90°	4.51	5.45	6.01	6.30	6.46	6.56	6.84	7.05
110°	4.62	5.58	6.14	6.46	6.72	6.94	7.23	7.42
120°	4.49	5.45	6.06	6.42	6.69	6.96	7.43	7.79
135°	4.07	5.02	5.77	6.21	6.52	6.80	7.35	7.96
150°	3.49	4.45	5.24	5.85	6.24	6.52	7.04	7.58
Run VMG	3.02	3.86	4.56	5.18	5.71	6.11	6.65	7.13
Gybe Angles	146.9°	150.8°	153.8°	159.7°	173.6°	178.1°	179.0°	179.0°

Time Allowances in secs/NM								
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	24 kt
Beat VMG	1329.9	1089.0	963.0	887.7	843.0	822.0	817.2	838.4
52°	868.7	726.2	653.3	616.8	596.6	585.1	578.7	582.3
60°	824.5	695.6	631.3	600.4	582.4	570.9	561.9	562.7
75°	800.5	677.5	615.5	586.5	568.5	554.9	537.6	532.1
90°	799.0	660.3	599.1	571.7	556.9	548.7	526.0	510.6
110°	779.9	645.6	586.7	557.4	535.9	518.8	497.6	485.0
120°	802.7	660.6	593.6	560.8	537.7	517.5	484.7	462.4
135°	885.2	716.9	624.4	579.8	552.4	529.5	489.5	452.1
150°	1031.9	809.0	686.6	614.9	577.2	552.3	511.5	475.1
Run VMG	1191.5	933.6	789.4	695.3	630.7	589.4	541.7	504.9
Selected Courses								
Windward / Leeward	1260.7	1011.3	876.2	791.5	736.9	705.7	679.4	671.6
All purpose	976.4	796.2	703.1	650.7	618.9	599.4	577.3	566.9

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	828.8	0.7240
All purpose	676.9	0.8865

Custom scoring options for Netherlands

Scoring Option	Time On Time
Triple Number Coastal/Long Distance Low	0.6770
Triple Number Coastal/Long Distance Medium	0.8924
Triple Number Coastal/Long Distance High	1.0067
Triple Number Windward/Leeward Low	0.5282
Triple Number Windward/Leeward Medium	0.7278
Triple Number Windward/Leeward High	0.8527
Coastal/Long Distance	0.8150
Predominantly Upwind	0.8143
Predominantly Downwind	0.8789

For information

General Purpose Handicap (GPH)	763.1
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Data in meters/kilograms (Metric)

HULL AND APPENDAGES (Lightship Trim)

Class	Spirit 28	LOA	8.470	VCGD	-0.028
Measurement	14/04/2021	Max. Beam	2.794	VCGM	0.012
HIN		Draft	1.585	RM Rated (kg·m)	40.2
Plan review		Displacement	3,185	Limit of positive stability(°)	N/A
Hull construction	Solid	Wetted area	15.83	Stability Index	N/A
Carbon Rudder	No	IMS L	7.224	Default crew weight	425
Light stanchions	No	LSM0	7.127	Declared crew weight	N/A
Trim tab	No	Acc. length	8.470		
		Sink (kg/mm)	11.04		

PROPELLER

Propeller Type	Folding 2 blades						
Installation	Shaft exposed	PRD	0.360	PSD	0.000	PSA	0.0°
Twin screw	No	PBW	0.000	PHD	0.000	ESL	0.000
Hydro generator	No	PIPA	0.0012	PHL	0.000	ST1	0.000
						ST4	0.000
						ST2	0.000
						ST5	0.000
						ST3	0.000

RIG

Forestay tension	Fixed	P	9.150	E	2.550
Inner stay	Fixed	IG	10.450	J	3.450
Mast material	Aluminum	ISP	10.450	BAS	1.260
Single headsail furler	Yes	MDT1	0.098	FSD	No Foil
Mainsail furler	No	MDL1	0.136	SFJ	0.160
Articulated bowsprit	No	MDT2	0.000	SPL	3.550
Non-circular rigging	No	MDL2	0.000	WPL	
Fiber rigging	No	TL	No Taper	TPS	
Adjustable mast foot	No	MW	0.000	BD	0.000
Runners/Checkstays	0	GO	0.000	MWT	
Spreaders	1			MCG	
Rotating mast	No				

FLOTATION AND STABILITY

Calculation method	RM estimated	SFFP	0.538	SAFP	8.088
Flotation Date	14/04/2021	FFM	1.085	FAM	0.814
Measurer	65	FF	1.095	FA	0.823
		LCFcl	4.712	LCFsh	4.924
		SG	1.0000	HBI	0.879

INVENTORY

OTHER ITEMS	Id	Kind	Description	Weight	LCG	VCG
	SaS		Deductible Sailor Services	22	4.58	0.00
			<i>Total deductible</i>	22	4.58	0.00



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>Comment</i>
2022	0.13	0.53	0.93	1.63	2.18	13.91		

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 FT</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
2022	0.06	0.53	1.01	2.11	3.29	4.60	9.80	No	No	21.52		

SYMMETRIC SPINNAKER

<i>Id</i>	<i>SLU</i>	<i>SLE</i>	<i>SL</i>	<i>SHW</i>	<i>SFL</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
2	9.90	9.90	9.90	5.86	5.83	48.30		

CRUISER/RACER REQUIREMENTS*

Accommodation length	8.5 m	Table area	0.33 m²	Headroom	1.40 m
Minimum number of berths	3	Personal gear stowage	0.12 m³	Fresh water capacity	38 l
Minimum number of seats in cockpit	3	Food stowage	0.18 m³	Fuel capacity	20 l

* This list refers to the calculated requirements. See IMS Appendix 1 for the complete list of requirements.