

APH: **634.9** CDL: **6.727**

GPH: **712.8** CertNo: **none**

BOAT

Class **Marathon 28**
Designer **v.d.Stadt/Bood JB**
Builder **Bood Jachtb.**
Age date **04/1993**
Series date **04/1993**
Offset file **H211.BOF**
Data file

HULL

Length Overall **8.803 m**
Maximum Beam **2.770 m**
Draft **1.386 m**
Displacement **2,381 kg**
DLR **7.5788**
IMS Division **Cruiser/Racer**
Dynamic Allowance **0.175%**
Age Allowance **0.487%**

PROPELLER

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

CREW

Maximum weight **397 kg**
Minimum weight **298 kg** * when applied
Non Manual Power **No**
Crew Arm Extension

SAIL AREAS (m²)

	Measured	Rated
Mainsail	23.80	24.66
Headsail Luffed	15.82	15.82
Headsail Flying		
Symmetric	48.79	48.79
Asymmetric		

STORM SAIL AREAS (m²)

Trysail **6.07**
Storm Jib **3.95**
Heavy Weather Jib **10.65**

SAIL LIMITS

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

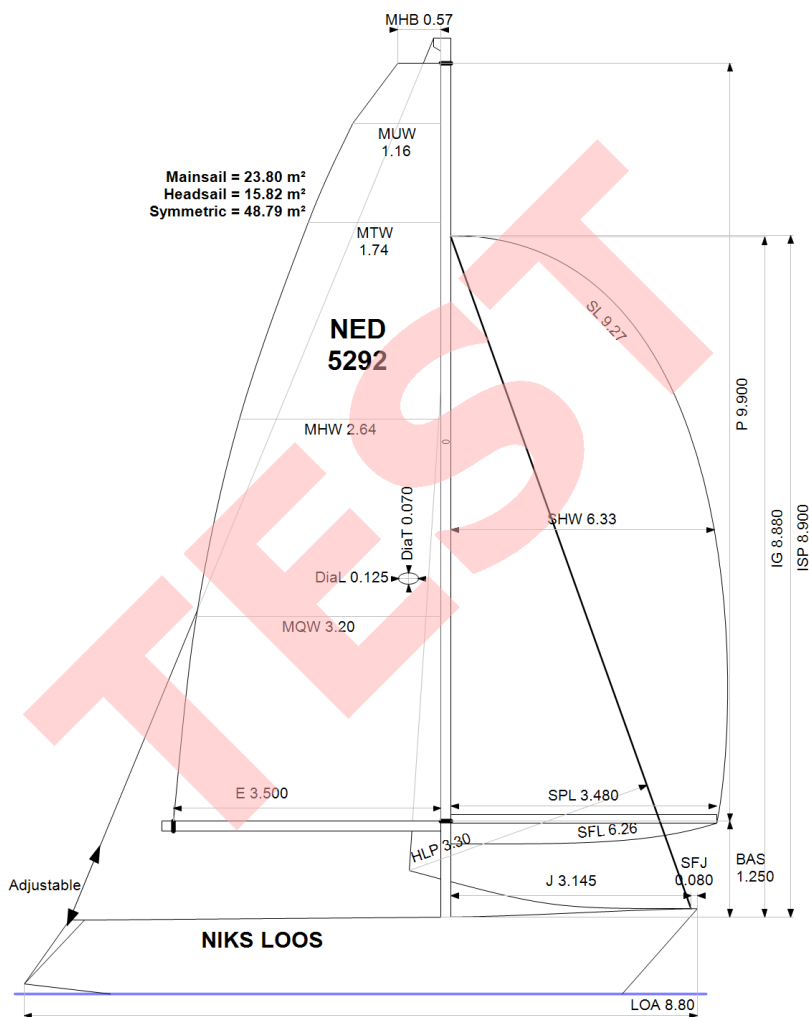
STABILITY

Righting Moment **49.4 kg·m**
Stability Index **N/A**

COMMENTS

old hull hc13201.off

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	44.2°	43.0°	42.6°	41.1°	40.6°	40.9°	41.7°
Beat VMG	2.91	3.51	3.98	4.29	4.38	4.41	4.40
52°	4.51	5.36	5.93	6.20	6.31	6.35	6.38
60°	4.81	5.67	6.12	6.36	6.51	6.57	6.59
75°	5.04	5.88	6.28	6.53	6.74	6.91	7.04
90°	5.10	6.03	6.46	6.73	6.88	7.11	7.49
110°	5.13	6.09	6.54	6.93	7.30	7.60	7.95
120°	4.95	5.97	6.47	6.85	7.26	7.66	8.37
135°	4.42	5.45	6.21	6.60	6.99	7.39	8.27
150°	3.75	4.74	5.65	6.27	6.63	6.99	7.75
Run VMG	3.25	4.11	4.90	5.61	6.15	6.52	7.20
Gybe Angles	147.1°	152.0°	152.0°	161.3°	177.2°	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
Beat VMG	1235.2	1027.0	905.0	840.0	821.1	816.1	818.2
52°	798.3	671.3	607.4	580.6	570.6	566.7	564.2
60°	748.1	635.3	588.0	565.6	553.4	548.3	546.3
75°	714.0	612.2	573.7	551.7	534.0	520.9	511.4
90°	706.3	597.5	557.3	534.8	523.2	506.6	480.9
110°	701.3	590.8	550.3	519.7	492.9	473.5	453.0
120°	727.0	602.8	556.7	525.3	495.7	469.8	430.3
135°	815.1	660.9	579.6	545.5	515.4	487.2	435.6
150°	959.2	759.4	637.7	574.2	543.1	514.8	464.2
Run VMG	1107.6	875.7	735.4	641.3	585.1	552.4	499.8
Selected Courses							
Windward / Leeward	1171.4	951.3	820.2	740.7	703.1	684.3	659.0
All purpose	895.6	739.0	656.8	610.5	586.5	570.2	547.6

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	781.9	0.7673
All purpose	634.9	0.9451

Custom scoring options for Netherlands

Single Number	Time On Time
Triple Number Coastal/Long Distance Low	0.7341
Triple Number Coastal/Long Distance Medium	0.9515
Triple Number Coastal/Long Distance High	1.0605
Triple Number Windward/Leeward Low	0.5653
Triple Number Windward/Leeward Medium	0.7739
Triple Number Windward/Leeward High	0.8830
Coastal/Long Distance	0.8667
Predominantly Upwind	0.8640
Predominantly Downwind	0.9427



Data in meters/kilograms (Metric)

HULL AND APPENDAGES (Lightship Trim)

Class	Marathon 28	LOA	8.803	VCGD	-0.043
Measurement	22/06/1994	Max. Beam	2.770	VCGM	0.007
HIN		Draft	1.386	RM Measured (kg·m)	49.4
Plan review		Displacement	2,381	RM Default (kg·m)	49.4
Hull construction	Cored	Wetted area	14.35	Limit of positive stability(°)	N/A
Aramid Hull Core	No	IMS L	7.134	Stability Index	N/A
Carbon Rudder	No	LSM0	6.797		
Light stanchions	No	Acc. length	8.803		
Trim tab	No	Sink (kg/mm)	10.79		

PROPELLER

Propeller Type	No Propeller
Hydro generator	No PIPA 0.0000

RIG

Forestay tension	Aft	P	9.900	E	3.500
Inner stay	None Fitted	IG	8.880	J	3.145
Carbon mast	No	ISP	8.900	BAS	1.250
Headsail furler	No	MDT1	0.070	FSD	Foil
Mainsail furler	No	MDL1	0.125	SFJ	0.080
Articulated bowsprit	No	MDT2		SPL	3.480
Non-circular rigging	No	MDL2		WPL	
Fiber rigging	No	TL	No Taper	TPS	
Runners/Checkstays	0	MW		BD	
Spreaders	1	GO		MWT	
				MCG	

FLOTATION AND STABILITY

Calculation method	VCG estimated	SFFP	0.873	SAFP	8.008
Flotation Date	22/06/1994	FFM		FAM	
Measurer		FF	1.098	FA	0.966
Comment		LCFcl	4.718	LCFsh	4.922
		SG	1.0000	HBI	1.004



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>
04	0.57	1.16	1.74	2.64	3.20	23.80			Polyester	

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>
02	0.00	0.00	0.00	0.00	0.00	3.30	0.00	Yes	No		15.82			Polyester	

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>Maker</i>	<i>Material</i>	<i>Comment</i>
01	9.27	9.27	9.27	6.33	6.26	48.79			Nylon	