



Club  
Certificate  
2023

Boat  
**FLOWER POWER<sup>2</sup>**  
FRA-1070

Centre de Calcul FFVoile  
52 rue Sénac de Meilhan  
17000 - La Rochelle  
France



APH: **523.8**

CDL: **9.706**

GPH: **586.0**

CertNo: **23024a**

#### BOAT

Class **MAT 1070**  
Designer **NIVELY-MURATET**  
Builder **M.A.T.**  
Age date **06/2020**  
Series date **01/2018**  
Offset file **mat 35\_KIL4 .off**  
Data file **F1070\_23024a**

#### HULL

Length Overall **10.680 m**  
Maximum Beam **3.756 m**  
Draft **2.181 m**  
Displacement **4 611 kg**  
DLR **5.4914**  
IMS Division **Cruiser/Racer**  
Dynamic Allowance **0.070%**  
Age Allowance **0.163%**

#### PROPELLER

Installation **Strut**  
Type **Folding 2 blades**  
Diameter **0.418m**

#### CREW

Maximum weight **633 kg**  
Minimum weight **475 kg** \* when applied  
Non Manual Power  
Crew Arm Extension

#### SAIL AREAS (m<sup>2</sup>)

	Measured	Rated
Mainsail	<b>40.42</b>	<b>41.11</b>
Headsail Luffed	<b>29.82</b>	<b>29.82</b>
Headsail Flying		
Symmetric	<b>114.27</b>	<b>114.27</b>
Asymmetric	<b>75.41</b>	<b>87.50</b>

(1 asymmetric(s) with SHW/SFL < 85%)

#### STORM SAIL AREAS (m<sup>2</sup>)

Trysail **12.06**  
Storm Jib **11.51**  
Heavy Weather Jib **31.06**

#### SAIL LIMITS

Headsails **5**  
Spinnakers **4** \* Asymmetric may be tacked on the pole

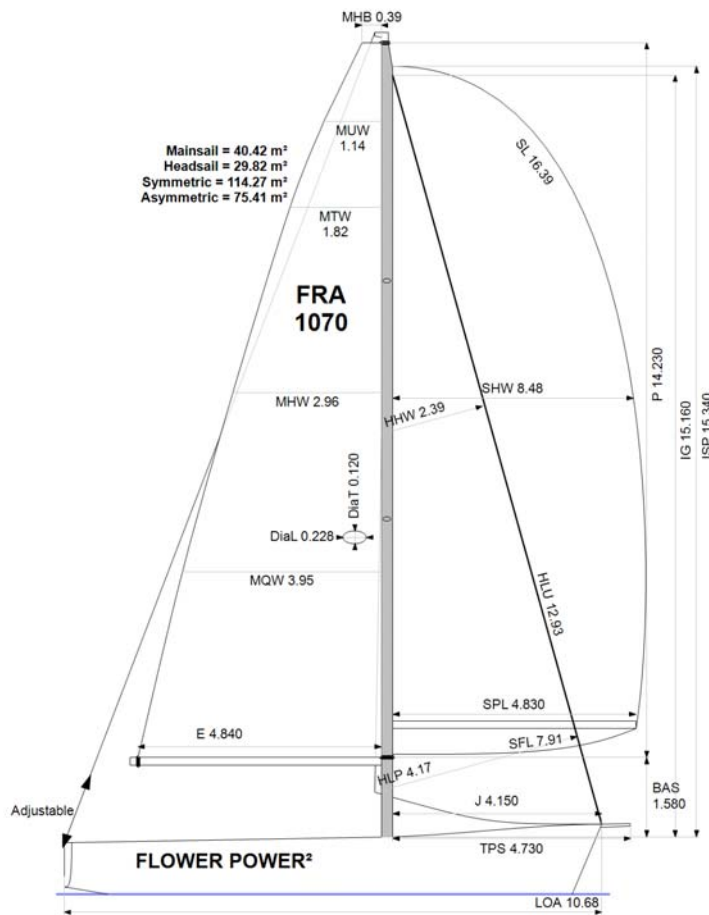
#### STABILITY

Righting Moment **N/A**  
Stability Index **N/A**

#### COMMENTS

2023 New Spi Asy FROM:MAT1070.dxt

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	42.3°	40.2°	38.4°	37.6°	37.2°	37.2°	37.6°
Beat VMG	3.70	4.49	5.04	5.29	5.41	5.47	5.48
52°	5.60	6.58	7.15	7.43	7.55	7.62	7.68
60°	5.88	6.80	7.32	7.62	7.79	7.88	7.97
75°	6.22	7.12	7.53	7.79	8.09	8.30	8.51
90°	6.41	7.29	7.79	8.15	8.38	8.58	9.04
110°	6.20	7.17	7.76	8.24	8.72	9.21	10.00
120°	5.93	7.06	7.69	8.24	8.78	9.31	10.35
135°	5.37	6.59	7.37	7.91	8.44	9.02	10.61
150°	4.53	5.68	6.68	7.38	7.88	8.38	9.54
Run VMG	3.92	4.92	5.79	6.52	7.10	7.60	8.53
Gybe Angles	141.2°	147.8°	151.4°	157.4°	169.1°	175.4°	174.8°



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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	972.5	801.0	714.7	680.2	665.7	658.7	657.1
52°	642.6	547.3	503.3	484.4	476.7	472.2	468.6
60°	612.4	529.6	492.1	472.5	462.4	456.9	451.7
75°	578.8	505.8	477.9	462.2	445.2	434.0	423.2
90°	561.2	493.9	462.4	441.9	429.6	419.8	398.4
110°	581.0	501.9	464.1	436.8	412.6	391.0	360.0
120°	607.4	509.8	467.8	437.1	410.2	386.5	347.8
135°	670.0	546.1	488.7	455.4	426.5	399.0	339.3
150°	795.2	634.2	539.0	487.6	456.8	429.5	377.5
Run VMG	918.3	732.4	621.7	552.4	506.9	473.4	422.0
Selected Courses							
Windward / Leeward	945.4	766.7	668.2	616.3	586.3	566.1	539.5
All purpose	725.4	603.2	541.4	507.6	486.5	470.5	445.5

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	643.3	0.9327
All purpose	523.8	1.1455

### Custom scoring options for France

Scoring Option	Time On Distance	Time On Time
Triple Number Coastal/Long Distance Low	664.3	0.9032
Triple Number Coastal/Long Distance Medium	521.6	1.1503
Triple Number Coastal/Long Distance High	465.2	1.2899
Triple Number Windward/Leeward Low	856.0	0.7009
Triple Number Windward/Leeward Medium	638.6	0.9395
Triple Number Windward/Leeward High	561.2	1.0692



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Data in meters/kilograms (Metric)

#### HULL AND APPENDAGES (Lightship Trim)

Class	<b>MAT 1070</b>	LOA	<b>10.680</b>	VCGD	<b>-0.093</b>
Measurement	<b>01/01/2020</b>	Max. Beam	<b>3.756</b>	VCGM	<b>-0.084</b>
HIN	<b>2053</b>	Draft	<b>2.181</b>	RM Rated (kg·m)	<b>123.0</b>
Plan review		Displacement	<b>4 611</b>	Limit of positive stability(°)	<b>N/A</b>
Hull construction	<b>Cored</b>	Wetted area	<b>23.44</b>	Stability Index	<b>N/A</b>
Carbon Rudder	<b>No</b>	IMS L	<b>9.774</b>		
Light stanchions	<b>No</b>	LSM0	<b>9.434</b>		
Trim tab	<b>No</b>	Acc. length	<b>10.680</b>		
		Sink (kg/mm)	<b>18.30</b>		

#### PROPELLER

Propeller Type	<b>Folding 2 blades</b>				
Installation	<b>Strut</b>	PRD	<b>0.418</b>	EDL	<b>1.723</b>
Twin screw	<b>No</b>	PBW	<b>0.103</b>	ST1	<b>0.065</b>
Hydro generator	<b>No</b>	PIPA	<b>0.0033</b>	ST2	<b>0.196</b>
				ST3	<b>0.196</b>
				ST4	<b>0.095</b>
				ST5	<b>0.300</b>

#### RIG

Forestay tension	<b>Aft</b>	P	<b>14.230</b>	E	<b>4.840</b>
Inner stay	<b>None Fitted</b>	IG	<b>15.160</b>	J	<b>4.150</b>
Carbon mast	<b>Yes</b>	ISP	<b>15.340</b>	BAS	<b>1.580</b>
Headsail furler	<b>No</b>	MDT1	<b>0.120</b>	FSD	<b>0.037</b>
Mainsail furler	<b>No</b>	MDL1	<b>0.228</b>	SFJ	
Articulated bowsprit	<b>No</b>	MDT2	<b>0.100</b>	SPL	<b>4.830</b>
Non-circular rigging	<b>No</b>	MDL2	<b>0.134</b>	WPL	
Fiber rigging	<b>No</b>	TL	<b>0.530</b>	TPS	<b>4.730</b>
Runners/Checkstays	<b>0</b>	MW	<b>0.228</b>	BD	<b>0.160</b>
Spreaders	<b>2</b>	GO	<b>0.230</b>	MWT	<b>103.20</b>
Rotating mast	<b>No</b>			MCG	<b>4.280</b>

#### FLOTATION AND STABILITY

Calculation method	<b>VCG entered directly</b>	SFFP	<b>0.100</b>	SAFP	<b>10.620</b>
VCG entered	<b>-0.093</b>	FFM		FAM	
Flotation Date	<b>23/10/2018</b>	FF	<b>1.387</b>	FA	<b>0.976</b>
Measurer		LCFcl	<b>5.998</b>	LCFsh	<b>6.246</b>
Comment		SG	<b>1.0254</b>	HBI	<b>1.141</b>



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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>Comment</i>
M1	0.39	1.14	1.82	2.96	3.95	40.42	24/04/2022	Course

#### 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>
G2	0.15	0.87	1.45	2.39	3.29	4.17	12.93	Yes	No	29.82	24/04/2022	Léger
G3	0.15	0.88	1.46	2.36	3.26	4.19	12.77	Yes	No	29.36	24/04/2022	Médium

#### 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>
S1	16.40	16.38	16.39	8.48	7.91	114.27	24/04/2022	Médium
S2	15.71	15.69	15.70	8.10	7.72	104.98	24/04/2022	Lourd

#### 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>Comment</i>
A1	16.04	14.50	15.27	5.56	7.39	75%	75.41	16/02/2023	Lourd