

GPH = **685.8** CDL = **7.064**

**BOAT**

Class **SURPRISE**  
Designer **JOUBERT-NIVELT**  
Builder **Archambault**  
Age Date  
Series Date **01/1977**  
Offset File **surprise.OD**

**HULL**

Length Overall **7.640 m**  
Maximum Beam **2.384 m**  
Draft **1.576 m**  
Displacement **1,286 kg**  
DLR **4.4406**  
IMS Division **Sportboat**  
Dynamic Allowance **0.022%**  
Age Allowance **0.487%**

**PROPELLER**

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

**CREW**

Maximum weight **400 kg**  
Minimum weight **300 kg \* when applied**  
Non Manual Power **No**  
Crew Arm Extension

**SAIL AREAS (m²)**

	Measured	Rated
Mainsail	<b>18.56</b>	<b>19.07</b>
Headsail Luffed	<b>17.05</b>	<b>17.05</b>
Headsail Flying		
Symmetric	<b>41.15</b>	<b>41.15</b>
Asymmetric		

**SAIL LIMITATIONS**

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

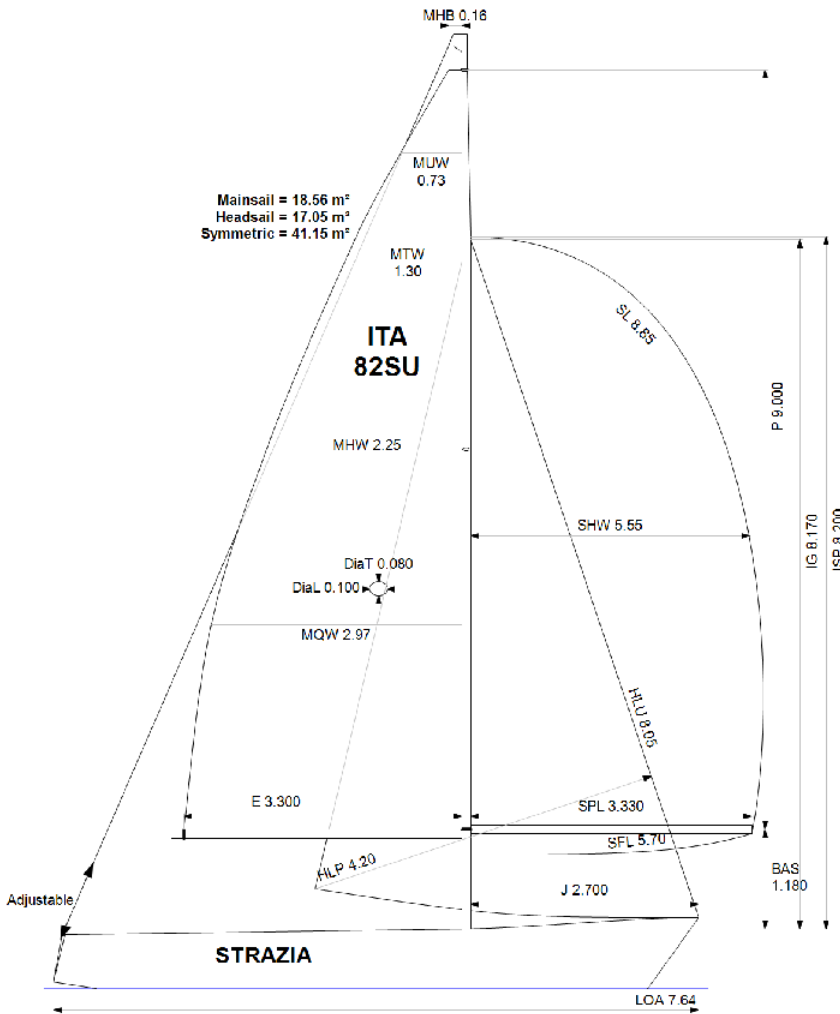
**STABILITY**

Righting Moment **29.5 kg·m**  
Stability Index **101.7**

**COMMENTS**

Intestatorio: Beretta Enea Manuel

**OWNER**



Rated boat velocities in knots

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	42.0°	40.5°	38.3°	36.8°	36.0°	36.0°	36.8°
Beat VMG	3.23	3.90	4.38	4.58	4.65	4.68	4.65
52°	4.89	5.71	6.10	6.29	6.37	6.41	6.44
60°	5.15	5.88	6.23	6.47	6.60	6.67	6.71
75°	5.34	6.00	6.35	6.70	7.00	7.15	7.28
90°	5.27	6.04	6.48	6.79	7.17	7.55	7.97
110°	5.21	6.08	6.59	7.15	7.69	8.06	8.75
120°	5.04	5.98	6.48	7.03	7.66	8.37	9.52
135°	4.51	5.50	6.18	6.64	7.17	7.80	9.54
150°	3.77	4.77	5.63	6.22	6.64	7.13	8.35
Run VMG	3.27	4.13	4.90	5.60	6.12	6.51	7.44
Gybe Angles	147.0°	151.0°	153.0°	171.0°	180.0°	180.0°	180.0°

The owner certifies that he/she understands his/her responsibilities under ORC Rule and Regulations.

Time Allowances in secs/NM							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1114.3	924.2	821.9	785.6	773.8	769.5	774.7
52°	735.7	630.6	590.1	572.3	565.0	561.2	559.3
60°	699.0	611.9	578.0	556.1	545.3	539.5	536.4
75°	674.2	599.7	567.0	537.0	514.6	503.7	494.4
90°	682.5	596.2	555.5	530.3	502.3	476.9	451.9
110°	690.6	591.8	546.6	503.4	468.4	446.6	411.2
120°	714.8	602.5	555.9	512.0	470.1	429.9	378.3
135°	798.4	655.0	582.7	542.4	501.9	461.6	377.3
150°	953.7	754.1	639.5	579.0	541.9	504.6	431.0
Run VMG	1101.2	870.9	734.5	643.0	588.2	553.0	484.1
Selected Courses							
Windward / Leeward	1107.7	897.6	778.2	714.3	681.0	661.3	629.4
All purpose	851.3	709.1	635.7	594.1	565.9	545.7	515.0

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	748.9	0.8012
All purpose	612.4	0.9798

### Custom scoring options for Italy

Single Number	Time On Distance	Time On Time
Coastal/Long Distance	665.2	0.9019
Triple Number Coastal/Long Distance Low	780.2	0.7690
Triple Number Coastal/Long Distance Medium	610.5	0.9828
Triple Number Coastal/Long Distance High	539.2	1.1127
Triple Number Windward/Leeward Low	1002.7	0.5984
Triple Number Windward/Leeward Medium	742.6	0.8080
Triple Number Windward/Leeward High	654.2	0.9171

Performance Curve	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Coastal/Long Distance	1107.1	846.3	708.7	632.2	588.8	550.3	488.0