

<b>BOAT</b> Name <b>ASTRAPI</b> Sail Nr <b>GRE-01</b>	<b>GPH</b> <b>628.6</b>	<b>HULL</b> Length Overall <b>10.632m</b> Maximum Beam <b>3.494m</b> Displacement <b>4,110kg</b> Draft <b>1.999m</b> Plan Review IMS Reg. Division <b>Performance</b> Dynamic Allowance <b>0.000%</b> Hull Construction <b>Solid</b> Carbon Rudder <b>No</b> Crew Arm Extension IMSL <b>9.762m</b> VCGD <b>0.080m</b> Sink <b>17.45kg/mm</b> RL <b>8.512m</b> VCGM <b>0.141m</b> WS <b>22.98m<sup>2</sup></b> LSM0 <b>9.734m</b> Displacement/Length ratio <b>4.4562</b>
<b>GENERAL</b> Class <b>JEANNEAU OD</b> Designer <b>D.ANDRIEU</b> Builder <b>JEANNEAU</b> Series <b>03/1991</b> Age <b>03/1991</b> Age Allowance <b>0.487%</b> Offset File <b>H169.BOF - 04/01/1994 09:01:16</b> Measurement by - <b>26/08/2003</b>		



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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>610.2</b>			<b>683.7</b>		
Time on Time	<b>0.9832</b>			<b>0.9873</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>726.5</b>	<b>555.0</b>	<b>490.7</b>	<b>943.7</b>	<b>686.6</b>	<b>594.2</b>
Time on Time	<b>0.9291</b>	<b>1.2162</b>	<b>1.3755</b>	<b>0.7153</b>	<b>0.9831</b>	<b>1.1360</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1067.0</b>	<b>876.6</b>	<b>771.6</b>	<b>723.8</b>	<b>708.4</b>	<b>703.1</b>	<b>694.9</b>
52°	<b>693.9</b>	<b>583.4</b>	<b>527.3</b>	<b>505.8</b>	<b>498.4</b>	<b>495.0</b>	<b>489.5</b>
60°	<b>654.7</b>	<b>555.8</b>	<b>512.0</b>	<b>492.8</b>	<b>483.7</b>	<b>479.2</b>	<b>474.6</b>
75°	<b>628.0</b>	<b>536.7</b>	<b>500.9</b>	<b>480.2</b>	<b>464.0</b>	<b>452.7</b>	<b>443.7</b>
90°	<b>634.1</b>	<b>531.3</b>	<b>491.2</b>	<b>471.7</b>	<b>455.4</b>	<b>435.6</b>	<b>410.1</b>
110°	<b>638.7</b>	<b>528.2</b>	<b>486.3</b>	<b>457.4</b>	<b>430.0</b>	<b>411.2</b>	<b>386.4</b>
120°	<b>662.7</b>	<b>543.0</b>	<b>493.1</b>	<b>463.6</b>	<b>434.0</b>	<b>406.2</b>	<b>365.3</b>
135°	<b>742.6</b>	<b>599.8</b>	<b>521.9</b>	<b>486.1</b>	<b>458.4</b>	<b>429.3</b>	<b>372.2</b>
150°	<b>887.6</b>	<b>698.0</b>	<b>587.4</b>	<b>520.3</b>	<b>486.9</b>	<b>460.9</b>	<b>407.7</b>
Run VMG	<b>1024.9</b>	<b>806.0</b>	<b>677.6</b>	<b>593.4</b>	<b>535.0</b>	<b>496.5</b>	<b>445.5</b>

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**Crew Weight**  
Default **662kg**  
Maximum **620kg**  
Minimum\* **465kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Non Spin GPH	<b>658.2</b>	<b>0.9116</b>
Non Spin OSN	<b>637.6</b>	<b>0.9411</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>1046.0</b>	<b>841.3</b>	<b>724.6</b>	<b>658.6</b>	<b>621.7</b>	<b>599.8</b>	<b>570.2</b>
Circular Random	<b>871.5</b>	<b>701.1</b>	<b>609.4</b>	<b>556.0</b>	<b>522.9</b>	<b>500.7</b>	<b>470.8</b>
Coastal / Long Distance	<b>1043.9</b>	<b>789.4</b>	<b>652.5</b>	<b>574.8</b>	<b>534.5</b>	<b>501.8</b>	<b>446.8</b>
Non Spinnaker	<b>924.9</b>	<b>738.7</b>	<b>637.4</b>	<b>577.8</b>	<b>540.8</b>	<b>516.2</b>	<b>483.6</b>

**Sails Limitations**

Headsails	Spinnakers
<b>5</b>	<b>4</b>

<b>Velocity Prediction in Knots for True Wind Speeds</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>43.1°</b>	<b>41.6°</b>	<b>40.5°</b>	<b>39.4°</b>	<b>38.8°</b>	<b>38.6°</b>	<b>39.0°</b>
Beat VMG	<b>3.37</b>	<b>4.11</b>	<b>4.67</b>	<b>4.97</b>	<b>5.08</b>	<b>5.12</b>	<b>5.18</b>
52°	<b>5.19</b>	<b>6.17</b>	<b>6.83</b>	<b>7.12</b>	<b>7.22</b>	<b>7.27</b>	<b>7.35</b>
60°	<b>5.50</b>	<b>6.48</b>	<b>7.03</b>	<b>7.31</b>	<b>7.44</b>	<b>7.51</b>	<b>7.58</b>
75°	<b>5.73</b>	<b>6.71</b>	<b>7.19</b>	<b>7.50</b>	<b>7.76</b>	<b>7.95</b>	<b>8.11</b>
90°	<b>5.68</b>	<b>6.78</b>	<b>7.33</b>	<b>7.63</b>	<b>7.90</b>	<b>8.26</b>	<b>8.78</b>
110°	<b>5.64</b>	<b>6.82</b>	<b>7.40</b>	<b>7.87</b>	<b>8.37</b>	<b>8.75</b>	<b>9.32</b>
120°	<b>5.43</b>	<b>6.63</b>	<b>7.30</b>	<b>7.76</b>	<b>8.30</b>	<b>8.86</b>	<b>9.86</b>
135°	<b>4.85</b>	<b>6.00</b>	<b>6.90</b>	<b>7.41</b>	<b>7.85</b>	<b>8.39</b>	<b>9.67</b>
150°	<b>4.06</b>	<b>5.16</b>	<b>6.13</b>	<b>6.92</b>	<b>7.39</b>	<b>7.81</b>	<b>8.83</b>
Run VMG	<b>3.51</b>	<b>4.47</b>	<b>5.31</b>	<b>6.07</b>	<b>6.73</b>	<b>7.25</b>	<b>8.08</b>
Gybe Angles	<b>144.0°</b>	<b>149.0°</b>	<b>152.0°</b>	<b>157.0°</b>	<b>179.5°</b>	<b>180.0°</b>	<b>180.0°</b>

**Class Division Length**  
CDL = **9.134**

**Storm Sails Areas**

Heavy Weather Jib	<b>19.63</b>
Storm Jib (JL=7.84)	<b>7.27</b>
Storm Trysail	<b>11.79</b>

**Owner**

<b>BOAT</b>	
Name <b>ASTRAPI</b>	Sail Nr <b>GRE-01</b>
File <b>GR01</b>	Data in <b>meters/kilograms</b>

<b>RIG</b>	
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>
Inner Stay <b>None Fitted</b>	Runners/Checkstays <b>0</b>
Carbon Mast <b>No</b>	Jib Furler <b>No</b>
Fiber Rigging <b>No</b>	Main Furler <b>No</b>
Non-Circular Rigging <b>No</b>	
Articulated Bowsprit <b>No</b>	
P <b>12.900</b>	E <b>5.220</b> MDT1 <b>0.098</b> MW <b>0.160</b>
IG <b>12.010</b>	J <b>3.280</b> MDL1 <b>0.160</b> GO <b>0.173</b>
ISP <b>12.850</b>	SFJ <b>0.225</b> MDT2 <b>0.098</b> BD <b>0.150</b>
BAS <b>1.500</b>	SPL <b>3.575</b> MDL2 <b>0.137</b> MWT <b>130.80</b>
FSD <b>0.032</b>	TPS TL <b>0.600</b> MCG <b>4.350</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>15/03/2017</b>		SG <b>1.0290</b>	
FFM <b>1.059</b>	FF <b>1.058</b>	SFFP <b>0.335</b>	
FAM <b>0.922</b>	FA <b>0.921</b>	SAFP <b>9.488</b>	
W1 <b>74.9</b>	PD1 <b>256.0</b>	WD <b>8.460</b>	
W2 <b>74.9</b>	PD2 <b>256.0</b>	GSA <b>28.3</b>	
W3 <b>74.9</b>	PD3 <b>256.0</b>	RSA <b>5024.0</b>	
W4 <b>74.9</b>	PD4 <b>256.0</b>	PLM <b>2053.0</b>	
LCF from stem on CL / on sheer		<b>5.869 / 6.099</b>	
Maximum beam station from stem		<b>7.310</b>	
RM Measured		<b>88.4kg-m</b>	
RM Default		<b>95.5kg-m</b>	
Limit of positive stability / Stab.Index		<b>105.8° / 102.5</b>	
Freeboard at mast at 3.505		<b>0.996</b>	



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<b>MIZZEN RIG AND SAILS</b>	
N/A	

<b>PROPELLER</b>			
Installation <b>Shaft exposed</b>	PRD <b>0.410</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.113</b>		
Twin Screw <b>No</b>	PIPA <b>0.0054</b>		
PSA <b>23.000</b>	PHL <b>0.113</b>	ST3 <b>0.078</b>	ESL <b>0.912</b>
PSD <b>0.025</b>	ST1 <b>0.022</b>	ST4 <b>0.052</b>	
PHD <b>0.068</b>	ST2 <b>0.090</b>	ST5 <b>0.176</b>	

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<b>COMMENTS</b>	

<b>MOVABLE BALLAST</b>	
N/A	

<b>CENTERBOARD</b>	
N/A	

<b>SAILS (Maximum Areas)</b>									
<b>Mainsail</b>	<b>MHB</b>	<b>MUW</b>	<b>MTW</b>	<b>MHW</b>	<b>MQW</b>	<b>Area</b>	<b>Area (r)</b>	<b>Formula</b>	
	0.17	1.09	1.95	3.35	4.36	39.89	40.95	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
<b>Symmetric</b>	<b>SLU</b>	<b>SLE</b>	<b>SL</b>	<b>SHW</b>	<b>SFL</b>				
	11.82	11.82	11.82	6.57	5.95	63.49		SL · (SFL + 4·SHW) / 6	
<b>Asymmetric</b>									
Not Available									

<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
<b>HHB</b>	<b>HUW</b>	<b>HTW</b>	<b>HHW</b>	<b>HQW</b>	<b>HLP</b>	<b>HLU</b>	<b>Area</b>	<b>Btn</b>	<b>Flying</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.09	0.52	0.98	1.86	2.72	3.55	11.97	21.99	No	04/05/2013	Unknow		
0.00	0.44	0.83	1.66	2.55	3.55	12.00	20.62	No	05/03/2008	Kevlar		

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>GRE-143</b>				
Date <b>15/03/2017</b>				
Comment				
<b>Internal Ballast total = 35.0</b>				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
1	Engine	yanmar	20Hp	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

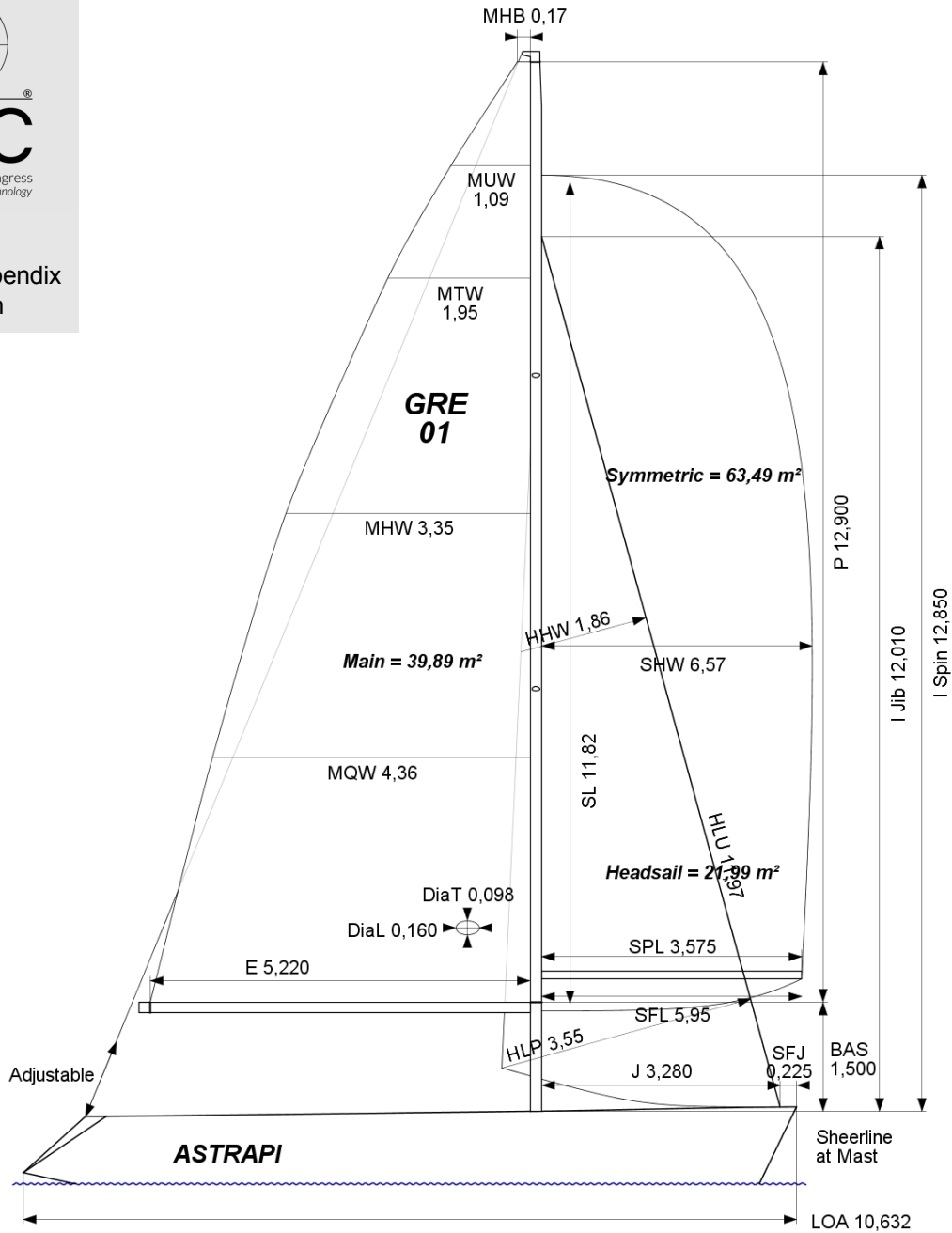
<b>MEASUREMENT INVENTORY</b>								
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG</b>	<b>Condtn</b>	<b>Description</b>
2	Tank	FUEL	PVC	50.0	4.70	0.00	0-0	
1	Tank	water	PVC	50.0	4.70	0.00	0-0	
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>				
1	Ballast	35.0	3.05	0.00 1 LEAD PIG (covered with polyester)				
1	Battery	18.0	5.90	0.00 75 Ah				



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Sail Plan



**SAILS INVENTORY**

**MAINSAIL (1)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
M1	0.17	1.09	1.95	3.35	4.36	39.90		21/05/2014		Kevlar	

**HEADSAILS (2)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.09	0.52	0.98	1.86	2.72	3.55	11.97	108%	21.99		No		04/05/2013		Nylon	Unknow
G5	0.00	0.44	0.83	1.66	2.55	3.55	12.00	108%	20.62		No		05/03/2008		Kevlar	

**SYMMETRIC SPINNAKERS (6)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	11.82	11.82	11.82	6.57	5.95	63.50		21/05/2014		Nylon	
S6	12.58	12.57	12.58	6.07	5.99	63.45		16/05/2016	AP SAILS	Nylon	
S3	11.75	11.75	11.75	5.98	5.72	58.05		11/03/2008	KAKITSIS	Nylon	
S1	11.75	11.75	11.75	5.90	5.80	57.58		11/03/2008	KAKITSIS	Nylon	
S2	11.63	11.63	11.63	5.71	5.75	55.42		11/03/2008	KAKITSIS	Nylon	

**ASYMMETRIC SPINNAKERS (0)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
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