

<b>BOAT</b> Name <b>ESPADA</b> Sail Nr <b>GER 25</b>	<b>GPH</b> <b>601.6</b>	<b>HULL</b> Length Overall <b>11.690m</b> Maximum Beam <b>4.006m</b> Displacement <b>6,383kg</b> Draft <b>2.345m</b> IMS Reg. Division <b>Performance</b> Dynamic Allowance <b>0.013%</b> Fwd Accommodation <b>No</b> Hull Construction <b>Solid</b> Carbon Rudder <b>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>IOR</b> Designer <b>JUDEL/VROLIJK</b> Builder <b>YACHTHAFENWERFT</b> Series <b>01/1980</b> Age <b>01/1981</b> Age Allowance <b>0.487%</b> Offset File <b>G25.OFF - 22/05/2017 14:32:54</b> Measurement by - <b>22/04/2017</b>		IMSL <b>9.722m</b> VCGD <b>0.022m</b> Sink <b>20.04kg/mm</b> RL <b>9.660m</b> VCGM <b>-0.037m</b> WS <b>28.42m<sup>2</sup></b> LSM0 <b>9.669m</b> Displacement/Length ratio <b>7.0612</b>



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	<b>583.8</b>			<b>647.2</b>		
Time on Time	<b>1.0277</b>			<b>1.0430</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>689.3</b>	<b>532.9</b>	<b>476.5</b>	<b>887.9</b>	<b>649.5</b>	<b>563.9</b>
Time on Time	<b>0.9793</b>	<b>1.2667</b>	<b>1.4167</b>	<b>0.7602</b>	<b>1.0392</b>	<b>1.1971</b>

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>986.9</b>	<b>822.1</b>	<b>723.8</b>	<b>679.4</b>	<b>660.3</b>	<b>650.6</b>	<b>647.4</b>
52°	<b>654.1</b>	<b>552.2</b>	<b>507.0</b>	<b>488.4</b>	<b>480.1</b>	<b>475.4</b>	<b>471.7</b>
60°	<b>621.3</b>	<b>531.8</b>	<b>496.0</b>	<b>478.5</b>	<b>468.2</b>	<b>462.6</b>	<b>457.7</b>
75°	<b>597.6</b>	<b>518.9</b>	<b>488.0</b>	<b>469.4</b>	<b>455.1</b>	<b>444.6</b>	<b>434.5</b>
90°	<b>606.3</b>	<b>520.3</b>	<b>486.7</b>	<b>467.0</b>	<b>450.5</b>	<b>436.0</b>	<b>415.0</b>
110°	<b>622.2</b>	<b>515.8</b>	<b>475.7</b>	<b>451.6</b>	<b>434.1</b>	<b>423.0</b>	<b>407.1</b>
120°	<b>636.8</b>	<b>523.3</b>	<b>479.1</b>	<b>452.3</b>	<b>429.1</b>	<b>410.1</b>	<b>388.6</b>
135°	<b>709.6</b>	<b>567.3</b>	<b>498.2</b>	<b>467.5</b>	<b>442.6</b>	<b>419.5</b>	<b>378.0</b>
150°	<b>839.7</b>	<b>669.6</b>	<b>558.0</b>	<b>497.6</b>	<b>469.4</b>	<b>446.4</b>	<b>404.8</b>
Run VMG	<b>969.6</b>	<b>773.2</b>	<b>644.3</b>	<b>566.6</b>	<b>519.0</b>	<b>484.1</b>	<b>439.0</b>

**Certificate**  
Number **47441**  
ORC Ref **GER20040902**  
Issued On **17/05/2019**  
VPP Ver. **2019 1.01**  
Valid until **01/01/2020**

**Crew Weight**  
Default **656kg**  
Maximum **720kg**  
Minimum\* **540kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**  
ToD ToT  
Double H.GPH **608.5 0.9860**  
Double H.OSN **592.0 1.0136**  
Non Spin GPH **634.7 0.9453**  
Non Spin OSN **616.0 0.9740**

Selected Courses							
Windward / Leeward	<b>978.3</b>	<b>797.6</b>	<b>684.0</b>	<b>623.0</b>	<b>589.7</b>	<b>567.4</b>	<b>543.2</b>
Circular Random	<b>827.2</b>	<b>668.5</b>	<b>583.6</b>	<b>534.6</b>	<b>504.7</b>	<b>485.4</b>	<b>461.7</b>
Coastal / Long Distance	<b>977.4</b>	<b>750.4</b>	<b>620.3</b>	<b>549.8</b>	<b>513.7</b>	<b>485.4</b>	<b>443.7</b>
Non Spinnaker	<b>884.3</b>	<b>709.9</b>	<b>615.2</b>	<b>559.5</b>	<b>524.9</b>	<b>502.2</b>	<b>474.1</b>

**Sails Limitations**  
Headsails **5** Spinnakers **3**

Velocity Prediction in Knots for True Wind Speeds							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>41.8°</b>	<b>40.8°</b>	<b>39.8°</b>	<b>38.0°</b>	<b>36.9°</b>	<b>36.4°</b>	<b>36.3°</b>
Beat VMG	<b>3.65</b>	<b>4.38</b>	<b>4.97</b>	<b>5.30</b>	<b>5.45</b>	<b>5.53</b>	<b>5.56</b>
52°	<b>5.50</b>	<b>6.52</b>	<b>7.10</b>	<b>7.37</b>	<b>7.50</b>	<b>7.57</b>	<b>7.63</b>
60°	<b>5.79</b>	<b>6.77</b>	<b>7.26</b>	<b>7.52</b>	<b>7.69</b>	<b>7.78</b>	<b>7.87</b>
75°	<b>6.02</b>	<b>6.94</b>	<b>7.38</b>	<b>7.67</b>	<b>7.91</b>	<b>8.10</b>	<b>8.29</b>
90°	<b>5.94</b>	<b>6.92</b>	<b>7.40</b>	<b>7.71</b>	<b>7.99</b>	<b>8.26</b>	<b>8.67</b>
110°	<b>5.79</b>	<b>6.98</b>	<b>7.57</b>	<b>7.97</b>	<b>8.29</b>	<b>8.51</b>	<b>8.84</b>
120°	<b>5.65</b>	<b>6.88</b>	<b>7.51</b>	<b>7.96</b>	<b>8.39</b>	<b>8.78</b>	<b>9.26</b>
135°	<b>5.07</b>	<b>6.35</b>	<b>7.23</b>	<b>7.70</b>	<b>8.13</b>	<b>8.58</b>	<b>9.52</b>
150°	<b>4.29</b>	<b>5.38</b>	<b>6.45</b>	<b>7.23</b>	<b>7.67</b>	<b>8.07</b>	<b>8.89</b>
Run VMG	<b>3.71</b>	<b>4.66</b>	<b>5.59</b>	<b>6.35</b>	<b>6.94</b>	<b>7.44</b>	<b>8.20</b>
Gybe Angles	<b>145.4°</b>	<b>149.3°</b>	<b>147.8°</b>	<b>156.4°</b>	<b>172.6°</b>	<b>180.0°</b>	<b>180.0°</b>

**Class Division Length**  
CDL = **9.692**

**Storm Sails Areas**  
Heavy Weather Jib **33.26**  
Storm Jib (JL=10.21) **12.32**  
Storm Triesail **10.40**

**Owner**

<b>BOAT</b>	
Name <b>ESPADA</b>	Sail Nr <b>GER 25</b>
File <b>GER25</b>	Data in <b>meters/kilograms</b>

<b>RIG</b>	
Forestay Tension <b>Aft</b>	Spreaders <b>3</b>
Inner Stay <b>Adjustable</b>	Runners <b>2</b>
Carbon Mast <b>No</b>	Jumper Struts <b>None</b>
Taper Hollows <b>No</b>	Jib Furler <b>No</b>
Fiber Rigging <b>No</b>	Main Furler <b>No</b>
Lenticular Rigging <b>No</b>	Without Backstay <b>No</b>
Articulated Bowsprit <b>No</b>	
P <b>13.645</b>	E <b>4.355</b> MDT1 <b>0.126</b> MW <b>0.143</b>
IG <b>15.695</b>	J <b>4.725</b> MDL1 <b>0.185</b> GO <b>0.143</b>
ISP <b>15.685</b>	SFJ <b>0.000</b> MDT2 <b>0.122</b> BD <b>0.261</b>
BAS <b>1.635</b>	SPL <b>4.720</b> MDL2 <b>0.147</b> MWT
FSP <b>0.072</b>	TPS TL <b>2.180</b> MCG

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>22/04/2017</b>		SG <b>1.0290</b>	
FFM <b>1.156</b>	FF <b>1.154</b>	SFFP <b>0.635</b>	
FAM <b>1.074</b>	FA <b>1.073</b>	SAFP <b>9.741</b>	
W1 <b>92.8</b>	PD1 <b>463.0</b>	WD <b>10.890</b>	
W2 <b>92.8</b>	PD2 <b>462.5</b>	GSA <b>1.0</b>	
W3 <b>92.8</b>	PD3 <b>462.6</b>	RSA <b>1.0</b>	
W4 <b>92.8</b>	PD4 <b>462.4</b>	PLM <b>9000.0</b>	
LCF from stem on CL / on sheer		<b>6.144 / 6.441</b>	
Maximum beam station from stem		<b>7.400</b>	
RM Measured		<b>172.0kg-m</b>	
RM Default		<b>162.5kg-m</b>	
Limit of positive stability / Stab.Index		<b>117.2° / 115.3</b>	
Freeboard at mast at 4.725		<b>1.141</b>	



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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.364</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.110</b>		
Twin Screw <b>No</b>	PIPA <b>0.0033</b>		
ST1 <b>0.041</b>	ST3 <b>0.196</b>	ST5 <b>0.263</b>	
ST2 <b>0.196</b>	ST4 <b>0.109</b>	EDL <b>1.537</b>	

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<b>COMMENTS</b>	

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

<b>CENTERBOARD</b>	
N/A	



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<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>	
	0.250	1.00	1.74	2.88	3.75	36.42	37.12	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>				
	15.20	15.20	15.20	10.75	9.79	133.73	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>Fly</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.06	0.82	1.61	3.23	4.89	6.78	15.91	52.45			16/05/2019	Carbon	
0.07	0.76	1.51	3.20	4.94	6.75	15.30	50.08			19/05/2017	Kevlar	G1
0.08	0.81	1.56	3.14	4.80	6.45	15.05	48.07			20/01/2017	Kevlar	G2
0.05	0.58	1.11	2.24	3.41	4.63	15.08	34.37	Y		19/05/2017	Kevlar	G3

<b>MEASUREMENT INVENTORY</b>				
Measurer				
Date <b>22/04/2017</b>				
Comment				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
1	Engine	VETUS	M206	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

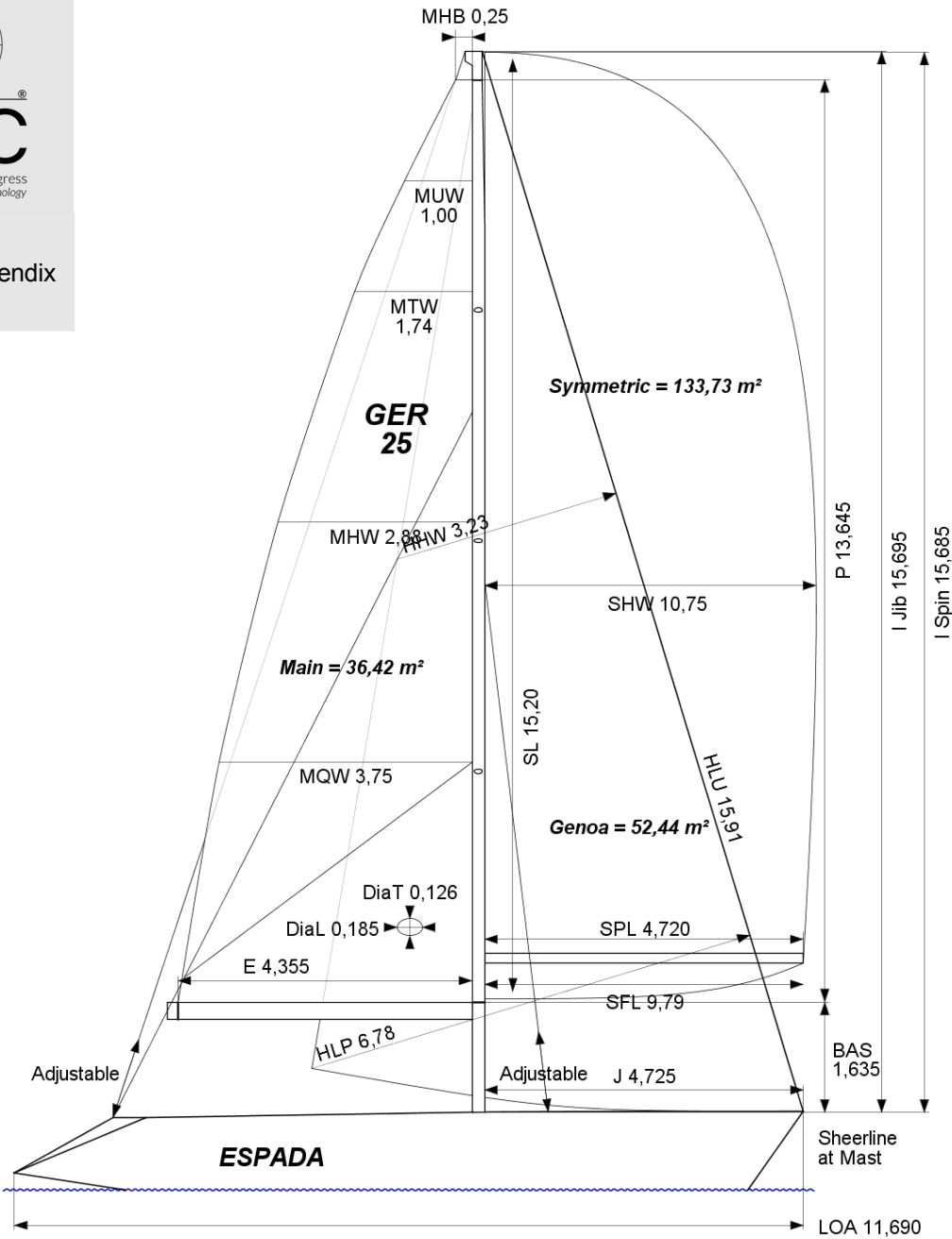
<b>MEASUREMENT INVENTORY</b>							
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG</b>	<b>Condtn Description</b>
1	Tank	Fuel		60.0	8.50		0-0
2	Tank	Water		125.0	8.90		0-0 port
3	Tank	Water		125.0	8.90		0-0 starboard
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>			
1	Battery		7.20	ENGINE 60AH			
2	Battery		8.00	SERVICE 150AH			
1	Misc	11.5	7.25	Gas Bottle in Cockpit			
2	Misc	22.0	6.85	Cooling Box at Companionway			



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Sail Plan



**SAILS INVENTORY**

**MAINSAIL (2)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
2	0.25	1.00	1.74	2.88	3.75	36.42		16/05/2019	Olimpic Sails	Twaron	
1	0.18	0.78	1.42	2.62	3.52	33.49		19/05/2017	Stravs Sails	Kevlar	

**HEADSAILS (4)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
2	0.06	0.82	1.61	3.23	4.89	6.78	15.91	143%	52.45				16/05/2019	Stravs Sails	Carbon	
1	0.07	0.76	1.51	3.20	4.94	6.75	15.30	143%	50.08				19/05/2017	FRITZ	Kevlar	G1
156788	0.08	0.81	1.56	3.14	4.80	6.45	15.05	137%	48.07				20/01/2017	NORTH	Kevlar	G2
3	0.05	0.58	1.11	2.24	3.41	4.63	15.08	98%	34.37	Y			19/05/2017	STRAUSS	Kevlar	G3

**SYMMETRIC SPINNAKERS (3)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
3	15.20	15.20	15.20	10.75	9.79	133.74		19/05/2017	Fritz	Nylon	
2	15.44	15.44	15.44	8.38	8.46	108.03		19/05/2017	Hood Sails	Nylon	
1	15.26	15.26	15.26	8.22	8.25	104.61		19/05/2017		Polyester	

**ASYMMETRIC SPINNAKERS (0)**

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