

<b>BOAT</b>
Name <b>MERION</b>
Sail Nr <b>EST 400</b>

<b>GPH</b>
<b>587,8</b>

<b>HULL</b>
Length Overall <b>11,990 m</b>
Maximum Beam <b>3,762 m</b>
Displacement <b>6 910 kg</b>
Draft <b>2,415 m</b>
IMS Reg. Division <b>Cruiser/Racer</b>
Dynamic Allowance <b>0,356%</b>
Fwd Accommodation <b>Yes</b>
Hull Construction <b>Solid</b>
Carbon Rudder <b>No</b>
Trim Tab <b>No</b>
IMS L <b>11,886</b> VCGD <b>-0,085</b> VCGM <b>-0,119</b>
Sink <b>24,40 kg/mm</b> Wetted Area <b>31,13 m<sup>2</sup></b>



**2009**  
ORC International  
Certificate

<b>GENERAL</b>
Class <b>A 40</b>
Designer <b>B.NIVELT</b>
Builder <b>ARCHAMBAULT</b>
Series <b>12.2003</b>
Age <b>08.2005</b>
Age Allowance <b>0,390%</b>
Offset File <b>F223.OFF - 14.03.2005 9:38:56</b>
Measurement by <b>TETSMANN/ROSME - 24.06.2006</b>

<b>SCORING OPTIONS</b>		
	<b>OFFSHORE</b>	<b>INSHORE</b>
	<b>COASTAL / LONG DISTANCE</b>	<b>WINDWARD / LEEWARD</b>
Time On Distance	<b>587,8</b>	<b>653,4</b>
Time On Time	<b>1,0207</b>	<b>1,0331</b>
Performance Line	PLT <b>0,860</b> PLD <b>81,5</b>	PLT <b>0,991</b> PLD <b>244,9</b>
Triple Number	Low <b>0,9849</b> Medium <b>1,3024</b> High <b>1,4895</b>	Low <b>0,7480</b> Medium <b>1,0374</b> High <b>1,2312</b>

<b>Rating Office</b>
<b>Estonian Yachting Union</b>
<b>Veiko Rosme</b>
<b>Regati 1, 11911, Tallinn</b>
<b>Estonia</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>997,6</b>	<b>816,7</b>	<b>717,5</b>	<b>671,4</b>	<b>644,3</b>	<b>627,4</b>	<b>611,2</b>
52°	<b>645,2</b>	<b>534,2</b>	<b>487,5</b>	<b>459,8</b>	<b>447,3</b>	<b>441,4</b>	<b>436,0</b>
60°	<b>603,9</b>	<b>510,2</b>	<b>464,6</b>	<b>442,5</b>	<b>435,3</b>	<b>430,5</b>	<b>424,7</b>
75°	<b>570,6</b>	<b>493,8</b>	<b>448,6</b>	<b>431,4</b>	<b>418,5</b>	<b>409,9</b>	<b>399,3</b>
90°	<b>569,3</b>	<b>483,8</b>	<b>439,4</b>	<b>425,0</b>	<b>416,2</b>	<b>399,6</b>	<b>379,1</b>
110°	<b>585,5</b>	<b>496,1</b>	<b>447,0</b>	<b>427,0</b>	<b>403,3</b>	<b>384,9</b>	<b>365,7</b>
120°	<b>625,1</b>	<b>516,4</b>	<b>464,0</b>	<b>434,8</b>	<b>414,2</b>	<b>389,1</b>	<b>349,6</b>
135°	<b>724,4</b>	<b>580,9</b>	<b>503,8</b>	<b>457,1</b>	<b>433,7</b>	<b>414,2</b>	<b>367,3</b>
150°	<b>870,6</b>	<b>684,3</b>	<b>573,6</b>	<b>506,3</b>	<b>463,5</b>	<b>437,0</b>	<b>397,4</b>
Run VMG	<b>1005,3</b>	<b>790,2</b>	<b>662,3</b>	<b>577,4</b>	<b>520,4</b>	<b>479,2</b>	<b>429,8</b>

<b>Certificate</b>
Number <b>EST400</b>
ORC Ref <b>EST00000155</b>
Issued On <b>16.05.2009</b>
VPP Ver. <b>1.11</b>
Valid until <b>31.12.2009</b>

<b>Crew Weight</b>
Declared <b>730 kg</b>
Default* <b>833 kg</b>

<b>Special Scoring</b>
ToD ToT
Double <b>590,5 1,0161</b>
Non Spinnaker <b>625,5 0,9593</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>1019,8</b>	<b>815,2</b>	<b>700,6</b>	<b>632,5</b>	<b>589,2</b>	<b>559,6</b>	<b>526,2</b>
Circular Random	<b>819,4</b>	<b>657,7</b>	<b>569,9</b>	<b>517,9</b>	<b>485,1</b>	<b>463,1</b>	<b>434,4</b>
Ocean for PCS	<b>875,7</b>	<b>688,0</b>	<b>582,6</b>	<b>517,7</b>	<b>474,6</b>	<b>443,7</b>	<b>399,5</b>
Non Spinnaker	<b>887,1</b>	<b>705,7</b>	<b>605,5</b>	<b>545,3</b>	<b>507,0</b>	<b>481,5</b>	<b>449,4</b>

<b>Sails Limitations</b>
Genoas <b>4</b> Jibs <b>3</b> Spinnakers <b>4</b>
Spinnaker configuration <b>Symmetric</b>

<b>Storm Sails Areas</b>
Heavy Weather Jib <b>36,81</b>
Storm Jib (JL=10,73) <b>13,63</b>
Storm Trysail <b>13,59</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>43,8°</b>	<b>43,1°</b>	<b>41,2°</b>	<b>38,7°</b>	<b>37,2°</b>	<b>36,3°</b>	<b>35,6°</b>
Beat VMG	<b>3,61</b>	<b>4,41</b>	<b>5,02</b>	<b>5,36</b>	<b>5,59</b>	<b>5,74</b>	<b>5,89</b>
52°	<b>5,58</b>	<b>6,74</b>	<b>7,39</b>	<b>7,83</b>	<b>8,05</b>	<b>8,16</b>	<b>8,26</b>
60°	<b>5,96</b>	<b>7,06</b>	<b>7,75</b>	<b>8,14</b>	<b>8,27</b>	<b>8,36</b>	<b>8,48</b>
75°	<b>6,31</b>	<b>7,29</b>	<b>8,03</b>	<b>8,34</b>	<b>8,60</b>	<b>8,78</b>	<b>9,02</b>
90°	<b>6,32</b>	<b>7,44</b>	<b>8,19</b>	<b>8,47</b>	<b>8,65</b>	<b>9,01</b>	<b>9,50</b>
110°	<b>6,15</b>	<b>7,26</b>	<b>8,05</b>	<b>8,43</b>	<b>8,93</b>	<b>9,35</b>	<b>9,85</b>
120°	<b>5,76</b>	<b>6,97</b>	<b>7,76</b>	<b>8,28</b>	<b>8,69</b>	<b>9,25</b>	<b>10,30</b>
135°	<b>4,97</b>	<b>6,20</b>	<b>7,15</b>	<b>7,88</b>	<b>8,30</b>	<b>8,69</b>	<b>9,80</b>
150°	<b>4,14</b>	<b>5,26</b>	<b>6,28</b>	<b>7,11</b>	<b>7,77</b>	<b>8,24</b>	<b>9,06</b>
Run VMG	<b>3,58</b>	<b>4,56</b>	<b>5,44</b>	<b>6,23</b>	<b>6,92</b>	<b>7,51</b>	<b>8,38</b>
Gybe Angles	<b>142,0°</b>	<b>146,7°</b>	<b>148,7°</b>	<b>158,2°</b>	<b>168,3°</b>	<b>165,2°</b>	<b>177,0°</b>

<b>Owner</b>
<b>MERION HALDUSE OÜ</b>
<b>Regati 1</b>
<b>Tallinn, Estonia</b>
<b>ESS KALEV JK</b>
I certify that I understand my responsibilities under ORC Rules and Regulations
Signature

<b>BOAT</b>	
Name <b>MERION</b>	Sail Nr <b>EST 400</b>
File <b>Est0400.dxt</b>	Data in <b>meters/kilograms</b>

<b>RIG</b>	
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>
Inner Forestay <b>None Fitted</b>	Runners <b>0</b>
Carbon Mast <b>Yes</b>	Jumpers <b>None</b>
Taper Hollows <b>No</b>	w/o Backstay <b>No</b>
P <b>14,945</b>	E <b>5,195</b> MDT1 <b>0,130</b> TL <b>0,000</b>
IG <b>16,385</b>	J <b>4,530</b> MDL1 <b>0,235</b> MWT <b>195,50</b>
ISP <b>16,600</b>	SFJ <b>0,125</b> MDT2 <b>0,130</b> MCG <b>5,430</b>
SPS	SPL <b>4,460</b> MDL2 <b>0,235</b> CPW <b>2,250</b>
BAS <b>1,820</b>	TPS MW <b>0,235</b> BD <b>0,210</b>
BAL	FSP <b>0,064</b> GO <b>0,270</b> BWT

<b>HEAVY ITEMS</b>	
Bow Thruster <b>No</b>	Generator <b>No</b> Air Condition <b>No</b>
Windlass <b>No</b>	Jib Furler <b>No</b> Desalinator <b>No</b>
Heavy Deck <b>No</b>	Main Furler <b>No</b>
Headliners <b>No</b>	Water Heater <b>No</b>
Anchor Weight	Heavy Items Adjustment <b>0,0000</b>
Anchor LCG	Total Gyradius Adjustment <b>0,0332</b>

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

<b>COMMENTS</b>	

<b>INCLINING TEST AND FREEBOARDS</b>		
Inclining Test <b>Current Inclining</b>		
Flotation date <b>31.08.2005</b>		SG <b>1,0020</b>
FFM <b>1,170</b>	FF <b>1,179</b>	SFFP <b>0,142</b>
FAM <b>0,980</b>	FA <b>0,985</b>	SAFP <b>11,381</b>
W1 <b>95,100</b>	PD1 <b>204,0</b>	WD <b>11,900</b>
W2 <b>95,100</b>	PD2 <b>205,0</b>	GSA <b>12,6</b>
W3 <b>95,100</b>	PD3 <b>204,0</b>	RSA <b>4298,7</b>
W4 <b>95,100</b>	PD4 <b>205,0</b>	PLM <b>2005,</b>
Maximum beam station from stem		<b>8,224</b>
RM Measured / Default		<b>193,6 / 171,7</b>
Limit of positive stability		<b>119,4°</b>
Stability Index		<b>122,0</b>
Freeboard at mast at 4,655		<b>1,055</b>

<b>PROPELLER</b>		
Installation <b>Strut Drive</b>	PRD <b>0,410</b>	
Type <b>Folding</b>	PBW <b>0,111</b>	
Twin Screw <b>No</b>	PIPA <b>0,0040</b>	
ST1 <b>0,064</b>	ST3 <b>0,180</b> ST5 <b>0,290</b>	
ST2 <b>0,178</b>	ST4 <b>0,110</b> EDL <b>2,210</b>	

<b>WATER BALLAST</b>	
N/A	

<b>CENTERBOARD</b>	
N/A	



**2009**  
IMS Measurement  
Certificate

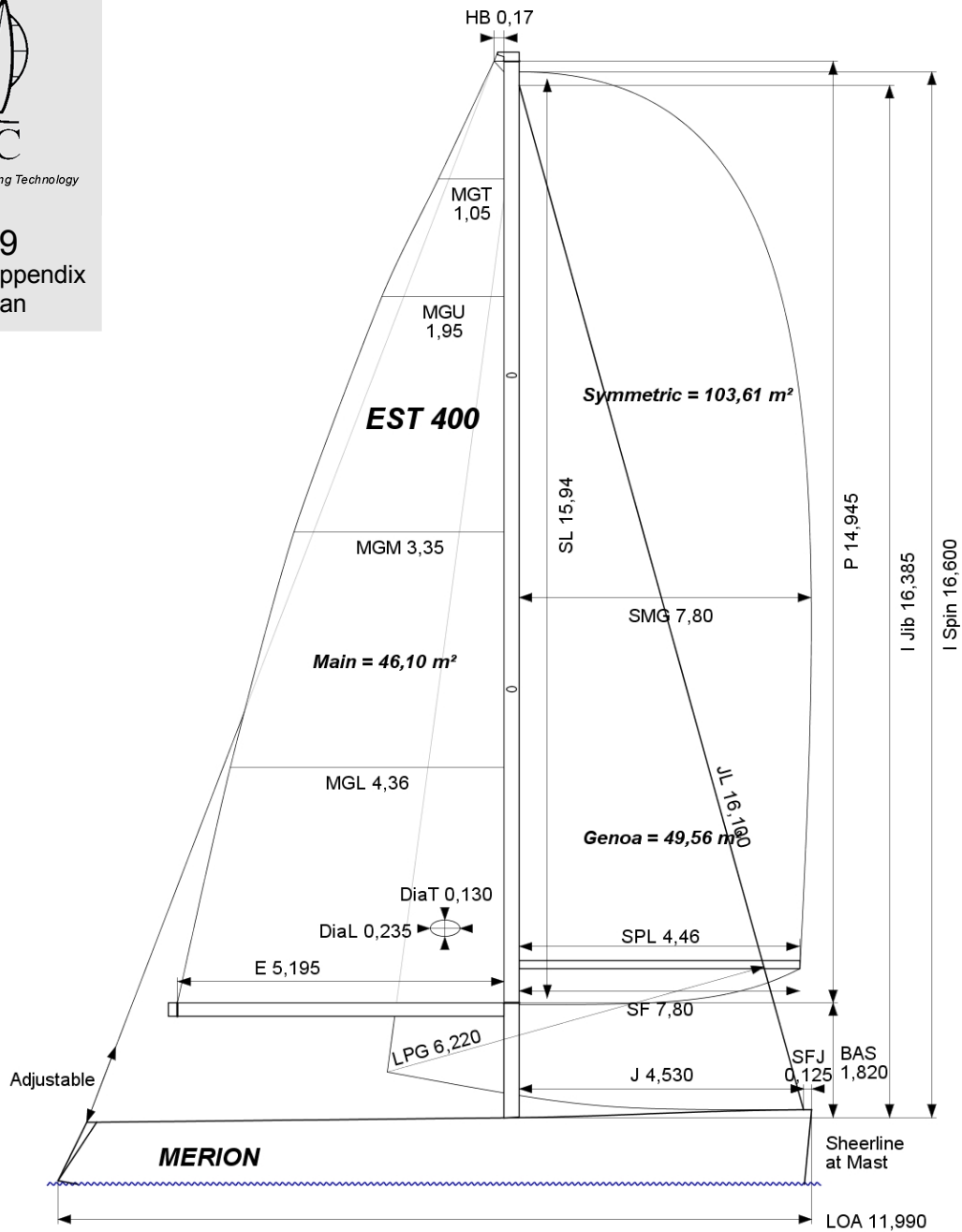
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<b>SAILS (Maximum Areas)</b>									
Mainsail	HB	MGT	MGU	MGM	MGL	MSW	Area	Formula	
	0,170	1,05	1,95	3,35	4,36	20,00	46,10	P/8 · (E + 2·MGL+ 2·MGM + 1.5·MGU + MGT + 0.5·HB)	
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG	Formula	
	0,09	0,79	1,51	3,05	4,59	16,10	6,22	0.1125·JL·(1.445·LPG+2·JGL+2·JGM+1.5·JGU+JGT+0.5·JH)	
Symmetric	SL	SMG	SF				Area	Formula	
	15,94	7,80	7,80				103,61	SL · (SF + 4·SMG) / 6	



World Leader in Rating Technology

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Sail Plan



**SAILS INVENTORY**

**MAINSAIL**

Id	HB	MGT	MGU	MGM	MGL	MSW	Area	Measurer	Meas.Dat	Manufacturer	Material	Comment
1	0,170	1,05	1,95	3,35	4,36	20,00	46,10				Unknown	

**JIBS / GENOAS**

Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Ovrlp	Area	Measure	Meas.Dat	Manufacturer	Material	Comment
1	0,09	0,79	1,51	3,05	4,59	6,22	16,10	137%	49,57	Tetsmann			Unknown	

**SYMMETRIC SPINNAKERS**

Id	SL	SMG	SF	Area	Measurer	Meas.Dat	Manufacturer	Material	Comment
1	15,94	7,80	7,80	103,61				Unknown	
2	15,82	7,78	7,60	102,09				Unknown	

**ASYMMETRIC SPINNAKERS**

Id	SLU	SLE	ASL	AMG	ASF	Area	Kind	Measurer	Meas.Dat	Manufacturer	Material	Comment
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