

<b>BOAT</b> Name <b>MINNI</b> Sail Nr <b>EST 50</b>	<b>GPH</b> <b>616,1</b>	<b>HULL</b> Length Overall <b>10,600m</b> Maximum Beam <b>3,250m</b> Displacement <b>4 589kg</b> Draft <b>2,178m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0,027%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Cored</b> Carbon Rudder <b>No</b> Crew Arm Extension
<b>GENERAL</b> Class <b>X-35</b> Designer <b>JEPPESEN</b> Builder <b>X YACHTS</b> Series <b>09.2005</b> Age <b>01.2006</b> Age Allowance <b>0,390%</b> Offset File <b>X35.OFF - 17.12.2005 11:51:04</b> Measurement by <b>Tetsmann - 08.06.2017</b>		IMSL <b>9,486m</b> VCGD <b>0,071m</b> Sink <b>17,76kg/mm</b> RL <b>8,767m</b> VCGM <b>0,055m</b> WS <b>23,18m<sup>2</sup></b> LSMO <b>9,302m</b> Displacement/Length ratio <b>5,7015</b>



**2017**  
ORC International  
Certificate

**Rating Office**  
EYU  
Regati 1  
11911, Tallinn  
Estonia

	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	Low	Medium	High	Low	Medium	High
Time On Distance	<b>599,3</b>			<b>669,0</b>		
Time On Time	<b>1,0012</b>			<b>1,0090</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>705,3</b>	<b>546,2</b>	<b>485,8</b>	<b>912,9</b>	<b>671,4</b>	<b>582,5</b>
Time on Time	<b>0,9570</b>	<b>1,2359</b>	<b>1,3896</b>	<b>0,7394</b>	<b>1,0053</b>	<b>1,1587</b>

Wind Velocity	TIME ALLOWANCES						
	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1041,6</b>	<b>865,8</b>	<b>761,0</b>	<b>713,2</b>	<b>694,5</b>	<b>685,6</b>	<b>672,0</b>
52°	<b>680,3</b>	<b>572,0</b>	<b>519,0</b>	<b>499,7</b>	<b>492,9</b>	<b>489,5</b>	<b>482,4</b>
60°	<b>640,2</b>	<b>544,3</b>	<b>504,6</b>	<b>486,3</b>	<b>478,5</b>	<b>474,4</b>	<b>467,5</b>
75°	<b>607,8</b>	<b>525,5</b>	<b>494,0</b>	<b>472,9</b>	<b>456,6</b>	<b>448,2</b>	<b>441,6</b>
90°	<b>609,0</b>	<b>525,0</b>	<b>489,3</b>	<b>471,7</b>	<b>451,1</b>	<b>431,7</b>	<b>411,7</b>
110°	<b>625,2</b>	<b>521,3</b>	<b>483,1</b>	<b>454,7</b>	<b>436,8</b>	<b>423,4</b>	<b>401,4</b>
120°	<b>643,0</b>	<b>532,1</b>	<b>489,4</b>	<b>460,8</b>	<b>431,4</b>	<b>407,7</b>	<b>382,5</b>
135°	<b>710,5</b>	<b>576,5</b>	<b>510,7</b>	<b>480,1</b>	<b>453,1</b>	<b>425,8</b>	<b>370,5</b>
150°	<b>841,5</b>	<b>669,2</b>	<b>565,8</b>	<b>509,4</b>	<b>481,0</b>	<b>456,0</b>	<b>406,5</b>
Run VMG	<b>971,6</b>	<b>772,7</b>	<b>652,8</b>	<b>577,2</b>	<b>525,4</b>	<b>492,2</b>	<b>444,0</b>

**Certificate**  
Number **EST050**  
ORC Ref **EST00001414**  
Issued On **12.06.2017**  
VPP Ver. **2017 1.00**  
Valid until **31.12.2017**

**Crew Weight**  
Declared **740kg**  
Default\* **621kg**  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>621,8</b>	<b>0,9649</b>
Double H.OSN	<b>606,8</b>	<b>0,9888</b>
Non Spin GPH	<b>647,5</b>	<b>0,9266</b>
Non Spin OSN	<b>629,1</b>	<b>0,9537</b>

Selected Courses							
Windward / Leeward	<b>1006,6</b>	<b>819,2</b>	<b>706,9</b>	<b>645,2</b>	<b>610,0</b>	<b>588,9</b>	<b>558,0</b>
Circular Random	<b>847,0</b>	<b>684,8</b>	<b>597,9</b>	<b>547,4</b>	<b>516,2</b>	<b>495,2</b>	<b>466,9</b>
Ocean for PCS	<b>1037,5</b>	<b>802,7</b>	<b>670,4</b>	<b>589,5</b>	<b>536,9</b>	<b>499,9</b>	<b>447,6</b>
Non Spinnaker	<b>902,8</b>	<b>724,4</b>	<b>627,6</b>	<b>570,7</b>	<b>535,3</b>	<b>511,8</b>	<b>481,2</b>

**Sails Limitations**

Headsails	Spinnakers
<b>5</b>	<b>3</b>

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>43,1°</b>	<b>42,0°</b>	<b>41,4°</b>	<b>39,5°</b>	<b>38,7°</b>	<b>38,3°</b>	<b>38,1°</b>
Beat VMG	<b>3,46</b>	<b>4,16</b>	<b>4,73</b>	<b>5,05</b>	<b>5,18</b>	<b>5,25</b>	<b>5,36</b>
52°	<b>5,29</b>	<b>6,29</b>	<b>6,94</b>	<b>7,20</b>	<b>7,30</b>	<b>7,35</b>	<b>7,46</b>
60°	<b>5,62</b>	<b>6,61</b>	<b>7,13</b>	<b>7,40</b>	<b>7,52</b>	<b>7,59</b>	<b>7,70</b>
75°	<b>5,92</b>	<b>6,85</b>	<b>7,29</b>	<b>7,61</b>	<b>7,88</b>	<b>8,03</b>	<b>8,15</b>
90°	<b>5,91</b>	<b>6,86</b>	<b>7,36</b>	<b>7,63</b>	<b>7,98</b>	<b>8,34</b>	<b>8,74</b>
110°	<b>5,76</b>	<b>6,91</b>	<b>7,45</b>	<b>7,92</b>	<b>8,24</b>	<b>8,50</b>	<b>8,97</b>
120°	<b>5,60</b>	<b>6,77</b>	<b>7,36</b>	<b>7,81</b>	<b>8,34</b>	<b>8,83</b>	<b>9,41</b>
135°	<b>5,07</b>	<b>6,25</b>	<b>7,05</b>	<b>7,50</b>	<b>7,94</b>	<b>8,45</b>	<b>9,72</b>
150°	<b>4,28</b>	<b>5,38</b>	<b>6,36</b>	<b>7,07</b>	<b>7,48</b>	<b>7,89</b>	<b>8,86</b>
Run VMG	<b>3,71</b>	<b>4,66</b>	<b>5,51</b>	<b>6,24</b>	<b>6,85</b>	<b>7,31</b>	<b>8,11</b>
Gybe Angles	<b>145,0°</b>	<b>149,0°</b>	<b>150,9°</b>	<b>158,1°</b>	<b>180,0°</b>	<b>180,0°</b>	<b>180,0°</b>

**Class Division Length**  
CDL = **9,127**


**Storm Sails Areas**

Heavy Weather Jib	<b>28,66</b>
Storm Jib (JL=9,47)	<b>10,61</b>
Storm Trysail	<b>10,67</b>

<b>BOAT</b>	
Name <b>MINNI</b>	Sail Nr <b>EST 50</b>
File <b>Est0050</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Boom Inclining</b>			
Flotation date <b>26.06.2016</b>		SG <b>1,000</b>	
FFM <b>1,318</b>	FF <b>1,327</b>	SFFP <b>0,075</b>	
FAM <b>0,963</b>	FA <b>0,970</b>	SAFP <b>10,275</b>	
W1 <b>66,1</b>	PD1 <b>95,0</b>	WD <b>4,505</b>	
W2 <b>66,1</b>	PD2 <b>94,5</b>	GSA <b>12,6</b>	
W3 <b>66,1</b>	PD3 <b>95,0</b>	RSA <b>4298,7</b>	
W4 <b>66,1</b>	PD4 <b>94,0</b>	PLM <b>2005,0</b>	
LCF from stem on CL / on sheer		<b>6,000 / 6,194</b>	
Maximum beam station from stem		<b>7,300</b>	
RM Measured		<b>110,1kg·m</b>	
RM Default		<b>120,8kg·m</b>	
Limit of positive stability / Stab.Index		<b>115,3° / 116,3</b>	
Freeboard at mast at 4,185		<b>1,105</b>	

<b>RIG</b>			
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>		
Inner Stay <b>None Fitted</b>	Runners <b>0</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>13,250</b>	E <b>4,600</b>	MDT1 <b>0,125</b>	MW <b>0,184</b>
IG <b>14,500</b>	J <b>4,185</b>	MDL1 <b>0,185</b>	GO <b>0,204</b>
ISP <b>14,530</b>	SFJ	MDT2 <b>0,125</b>	BD <b>0,220</b>
BAS <b>1,745</b>	SPL <b>4,180</b>	MDL2 <b>0,177</b>	MWT <b>156,00</b>
FSP <b>0,068</b>	TPS	TL <b>0,230</b>	MCG <b>4,600</b>



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### IMS Measurement Certificate

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0,420</b>		
Type <b>Folding 2 blades</b>	PBW <b>0,128</b>		
Twin Screw <b>No</b>	PIPA <b>0,0033</b>		
ST1 <b>0,042</b>	ST3 <b>0,182</b>	ST5 <b>0,255</b>	
ST2 <b>0,178</b>	ST4 <b>0,112</b>	EDL <b>2,390</b>	

<b>COMMENTS</b>	

<b>MOVEABLE BALLAST</b>	
N/A	

<b>CENTERBOARD</b>	
N/A	

<b>SAILS (Maximum Areas)</b>						
Mainsail	MHB	MUW	MTW	MHW	MQW	Area Area (r) Formula
	0,360	1,09	1,80	2,98	3,86	36,85 37,63 P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)
Symmetric	SLU	SLE	SL	SHW	SFL	Area Formula
	14,43	14,43	14,43	7,92	7,85	95,07 SL · (SFL + 4·SHW) / 6
Asymmetric Not Available						

<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0,14	0,68	1,25	2,33	3,36	4,41	14,50	33,24			06.06.2016	Unknow	Medium 2016
0,13	0,67	1,23	2,31	3,33	4,43	14,50	33,05				Unknow	Light 2016
0,14	0,59	1,11	2,16	3,28	4,44	13,42	29,62			01.06.2017	Unknow	

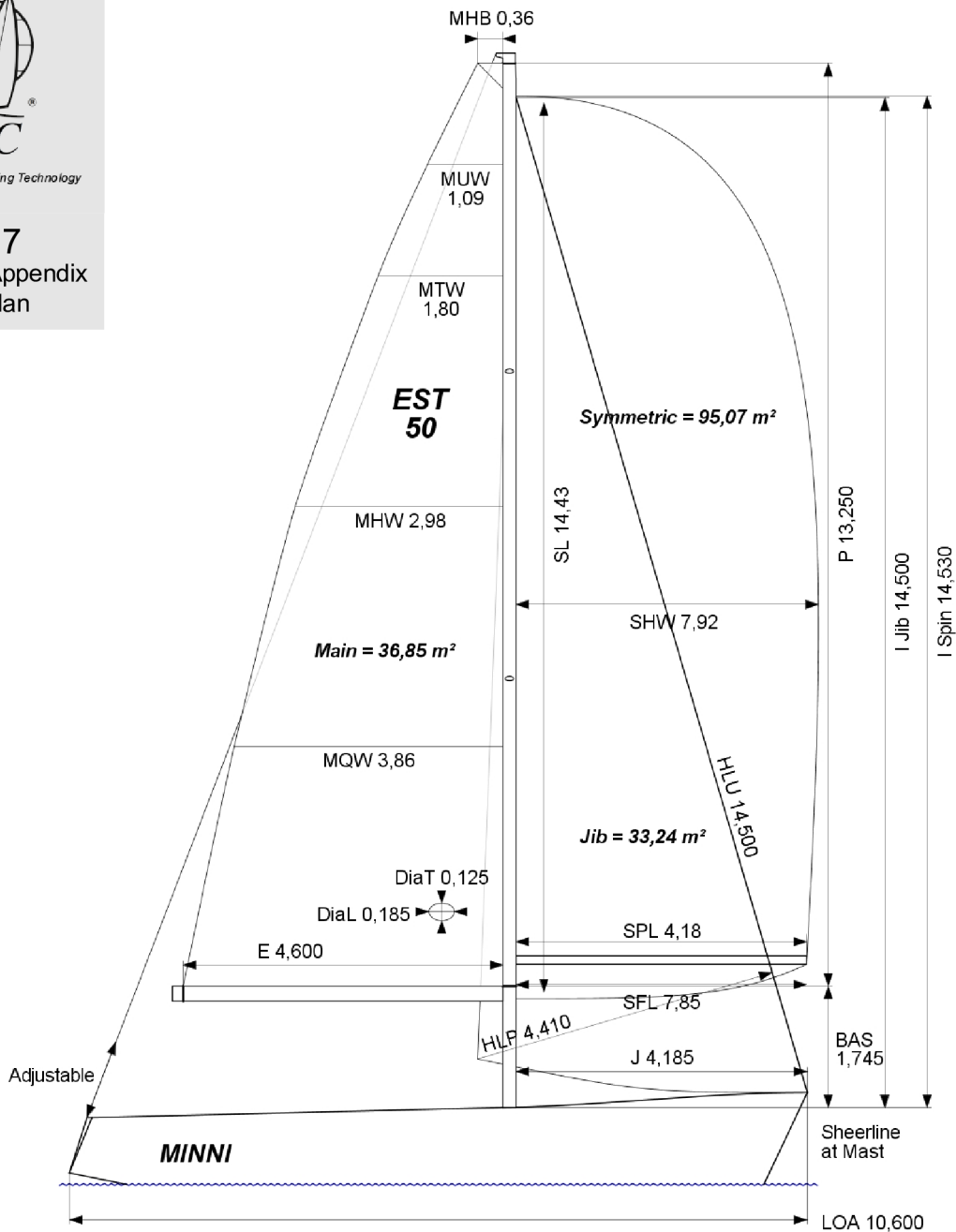
<b>MEASUREMENT INVENTORY</b>				
Measurer <b>A Tetsmann EST 1</b>				
Date <b>26.06.2016</b>				
Comment				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
1	Engine	Yanmar	3YM20C	
Id	Item	Weight Description		

<b>MEASUREMENT INVENTORY</b>						
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG Condtn Description
1	Tank fuel		st.stl	60,0	6,15	20,0 fuel
2	Tank H2O		pvc	120,0	5,52	0,0 Water
Id	Item	Weight	Distance	VCG Description		
1	Battery	44,3	4,85	170 Ah gel - services		
2	Battery	17,4	5,18	55 Ah - engine		
1	Misc	20,0	5,52	Table		
2	Misc	15,0	7,60	Boiler		
3	Misc	7,0	9,60	Autopilot		



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Certificate Appendix  
Sail Plan



SAILS INVENTORY																
<b>MANSAL (1)</b>																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measur	Meas.Date	Manufacture	Material	Comment					
3	0,360	1,09	1,80	2,98	3,86	36,85	EST 1	06.06.2016	OneSails	Unknown						
<b>HEADSALS (3)</b>																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measur	Meas.Date	Manufacture	Material	Comment
6	0,14	0,68	1,25	2,33	3,36	4,41	14,50	105%	33,24			EST 1	06.06.2016	OneSails	Unknow	Medium 2016
7	0,13	0,67	1,23	2,31	3,33	4,43	14,50	106%	33,05					OneSails	Unknow	Light 2016
8	0,14	0,59	1,11	2,16	3,28	4,44	13,42	106%	29,62			SLO 03	01.06.2017	OneSails	Unknow	
<b>SYMMETRIC SPINNAKERS (3)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Measur	Meas.Date	Manufacture	Material	Comment					
6	14,43	14,43	14,43	7,92	7,85	95,07	SLO 03	01.06.2017		Unknown						
7	14,22	14,22	14,22	8,03	7,51	93,92	SLO 03	08.06.2017		Unknown						
8	14,07	14,07	14,07	6,54	6,78	77,24	SLO 03	01.06.2017		Unknown						
<b>ASYMMETRIC SPINNAKERS (0)</b>																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measur	Meas.Date	Manufacture	Material	Comment				