

<b>BOAT</b>
Name <b>Cloud</b> Sail Nr <b>ROU 560</b>

<b>GPH</b>
<b>607.0</b>

<b>HULL</b>
Length Overall <b>10.600m</b>
Maximum Beam <b>3.250m</b>
Displacement <b>4,487kg</b>
Draft <b>2.173m</b>
IMS Reg. Division <b>Cruiser/Racer</b>
Dynamic Allowance <b>0.000%</b>
Fwd Accommodation <b>Yes</b>
Hull Construction <b>Cored</b>
Carbon Rudder <b>No</b>
Crew Arm Extension
IMSL <b>9.449m</b> VCGD <b>0.053m</b> Sink <b>17.60kg/mm</b>
RL <b>8.885m</b> VCGM <b>0.043m</b> WS <b>22.90m<sup>2</sup></b>
LSMO <b>9.270m</b> Displacement/Length ratio <b>5.6327</b>

<b>GENERAL</b>
Class <b>X-35 OD</b>
Designer <b>JEPPESEN</b>
Builder <b>X-Yachts</b>
Series <b>09/2005</b>
Age <b>09/2005</b>
Age Allowance <b>0.390%</b>
Offset File <b>x35.OD - 13/03/2017 12:28:23</b>
Measurement by <b>One Design - 04/05/2006</b>



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<b>SCORING OPTIONS</b>	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time On Distance	<b>592.2</b>			<b>661.0</b>		
Time On Time	<b>1.0132</b>			<b>1.0212</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>687.9</b>	<b>540.1</b>	<b>483.9</b>	<b>890.4</b>	<b>663.0</b>	<b>580.3</b>
Time on Time	<b>0.9812</b>	<b>1.2498</b>	<b>1.3949</b>	<b>0.7581</b>	<b>1.0181</b>	<b>1.1631</b>

<b>TIME ALLOWANCES</b>	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1004.2</b>	<b>836.6</b>	<b>741.1</b>	<b>708.4</b>	<b>693.8</b>	<b>682.6</b>	<b>676.1</b>
52°	<b>657.6</b>	<b>554.2</b>	<b>511.4</b>	<b>499.2</b>	<b>493.6</b>	<b>490.5</b>	<b>482.8</b>
60°	<b>619.2</b>	<b>531.0</b>	<b>497.9</b>	<b>485.2</b>	<b>479.2</b>	<b>475.7</b>	<b>466.0</b>
75°	<b>588.0</b>	<b>516.0</b>	<b>487.1</b>	<b>467.3</b>	<b>455.7</b>	<b>449.4</b>	<b>443.4</b>
90°	<b>588.9</b>	<b>515.1</b>	<b>486.1</b>	<b>464.1</b>	<b>442.7</b>	<b>426.4</b>	<b>414.1</b>
110°	<b>609.8</b>	<b>514.1</b>	<b>478.1</b>	<b>450.6</b>	<b>435.2</b>	<b>420.9</b>	<b>400.4</b>
120°	<b>629.2</b>	<b>524.7</b>	<b>485.1</b>	<b>455.6</b>	<b>425.9</b>	<b>406.2</b>	<b>381.0</b>
135°	<b>698.4</b>	<b>568.1</b>	<b>507.0</b>	<b>477.0</b>	<b>449.1</b>	<b>421.3</b>	<b>363.3</b>
150°	<b>829.1</b>	<b>661.0</b>	<b>560.1</b>	<b>506.3</b>	<b>478.0</b>	<b>452.1</b>	<b>401.0</b>
Run VMG	<b>957.3</b>	<b>763.3</b>	<b>645.7</b>	<b>572.2</b>	<b>520.5</b>	<b>488.4</b>	<b>438.7</b>

<b>Selected Courses</b>	980.8	800.0	693.4	640.3	607.1	585.5	557.4
Windward / Leeward	980.8	800.0	693.4	640.3	607.1	585.5	557.4
Circular Random	<b>828.3</b>	<b>672.2</b>	<b>589.4</b>	<b>541.8</b>	<b>512.5</b>	<b>492.8</b>	<b>466.2</b>
Ocean for PCS	<b>1016.1</b>	<b>788.6</b>	<b>661.1</b>	<b>583.5</b>	<b>533.0</b>	<b>497.3</b>	<b>446.7</b>
Non Spinnaker	<b>877.4</b>	<b>707.0</b>	<b>615.4</b>	<b>562.1</b>	<b>529.1</b>	<b>507.2</b>	<b>478.7</b>

<b>Velocity Prediction in Knots for True Wind Speeds</b>	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>42.9°</b>	<b>42.0°</b>	<b>40.5°</b>	<b>39.1°</b>	<b>38.5°</b>	<b>37.9°</b>	<b>38.2°</b>
Beat VMG	<b>3.58</b>	<b>4.30</b>	<b>4.86</b>	<b>5.08</b>	<b>5.19</b>	<b>5.27</b>	<b>5.32</b>
52°	<b>5.47</b>	<b>6.50</b>	<b>7.04</b>	<b>7.21</b>	<b>7.29</b>	<b>7.34</b>	<b>7.46</b>
60°	<b>5.81</b>	<b>6.78</b>	<b>7.23</b>	<b>7.42</b>	<b>7.51</b>	<b>7.57</b>	<b>7.73</b>
75°	<b>6.12</b>	<b>6.98</b>	<b>7.39</b>	<b>7.70</b>	<b>7.90</b>	<b>8.01</b>	<b>8.12</b>
90°	<b>6.11</b>	<b>6.99</b>	<b>7.41</b>	<b>7.76</b>	<b>8.13</b>	<b>8.44</b>	<b>8.69</b>
110°	<b>5.90</b>	<b>7.00</b>	<b>7.53</b>	<b>7.99</b>	<b>8.27</b>	<b>8.55</b>	<b>8.99</b>
120°	<b>5.72</b>	<b>6.86</b>	<b>7.42</b>	<b>7.90</b>	<b>8.45</b>	<b>8.86</b>	<b>9.45</b>
135°	<b>5.15</b>	<b>6.34</b>	<b>7.10</b>	<b>7.55</b>	<b>8.02</b>	<b>8.55</b>	<b>9.91</b>
150°	<b>4.34</b>	<b>5.45</b>	<b>6.43</b>	<b>7.11</b>	<b>7.53</b>	<b>7.96</b>	<b>8.98</b>
Run VMG	<b>3.76</b>	<b>4.72</b>	<b>5.58</b>	<b>6.29</b>	<b>6.92</b>	<b>7.37</b>	<b>8.21</b>
Gybe Angles	<b>144.4°</b>	<b>148.7°</b>	<b>151.4°</b>	<b>159.1°</b>	<b>180.0°</b>	<b>180.0°</b>	<b>180.0°</b>

<b>Certificate</b>
Number <b>006/17</b>
ORC Ref <b>ROU00076010</b>
Issued On <b>16/05/2017</b>
VPP Ver. <b>2017 1.00</b>
Valid until <b>31/12/2017</b>

<b>Crew Weight</b>
Declared <b>640kg</b>
Default* <b>618kg</b>
Non Manual Pwr <b>No</b>

<b>Special Scoring</b>
ToD ToT
Double H.GPH <b>613.4 0.9782</b>
Double H.OSN <b>599.8 1.0004</b>
Non Spin GPH <b>634.5 0.9456</b>
Non Spin OSN <b>618.4 0.9702</b>

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

<b>Class Division Length</b>
<b>CDL = 9.168</b>

<b>Storm Sails Areas</b>
Heavy Weather Jib <b>28.66</b>
Storm Jib (JL=9.47) <b>10.61</b>
Storm Trysail <b>12.22</b>

<b>Owner</b>

<b>BOAT</b>	
Name <b>Cloud</b>	Sail Nr <b>ROU 560</b>
File <b>ROU560</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>					
Inclining Test <b>Current Inclining</b>					
Flotation date <b>04/05/2006</b>				SG <b>1.0250</b>	
FFM <b>1.321</b>	FF <b>1.323</b>	SFFP <b>0.075</b>			
FAM <b>0.980</b>	FA <b>0.983</b>	SAFP <b>10.275</b>			
W1 <b>70.0</b>	PD1 <b>554.0</b>	WD <b>11.240</b>			
W2 <b>70.0</b>	PD2 <b>558.9</b>	GSA <b>1.0</b>			
W3 <b>70.0</b>	PD3 <b>554.0</b>	RSA <b>1.0</b>			
W4 <b>70.0</b>	PD4 <b>552.5</b>	PLM <b>9000.0</b>			
LCF from stem on CL / on sheer				<b>5.956 / 6.160</b>	
Maximum beam station from stem				<b>7.300</b>	
RM Measured				<b>111.7kg·m</b>	
RM Default				<b>121.5kg·m</b>	
Limit of positive stability / Stab.Index				<b>116.3° / 117.0</b>	
Freeboard at mast at 4.185				<b>1.108</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>14.250</b>	E <b>4.900</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>0.122</b>	BD <b>0.220</b>		
BAS <b>1.745</b>	SPL <b>4.180</b>	MDL2 <b>0.140</b>	MWT <b>156.00</b>		
FSP <b>0.068</b>	TPS	TL <b>1.230</b>	MCG <b>4.600</b>		


<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	




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## 2017

### IMS Measurement Certificate

**Certificate**

Number **006/17**  
 ORC Ref **ROU00076010**  
 Issued On **16/05/2017**  
 VPP Ver. **2017 1.00**  
 Valid until **31/12/2017**



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<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.210	1.08	1.88	3.19	4.14	41.98	42.84	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	92.19		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)												
<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>
0.10	0.63	1.21	2.29	3.34	4.45	14.60	33.15	N	N	01/03/2007	Kevlar	One Design Rule

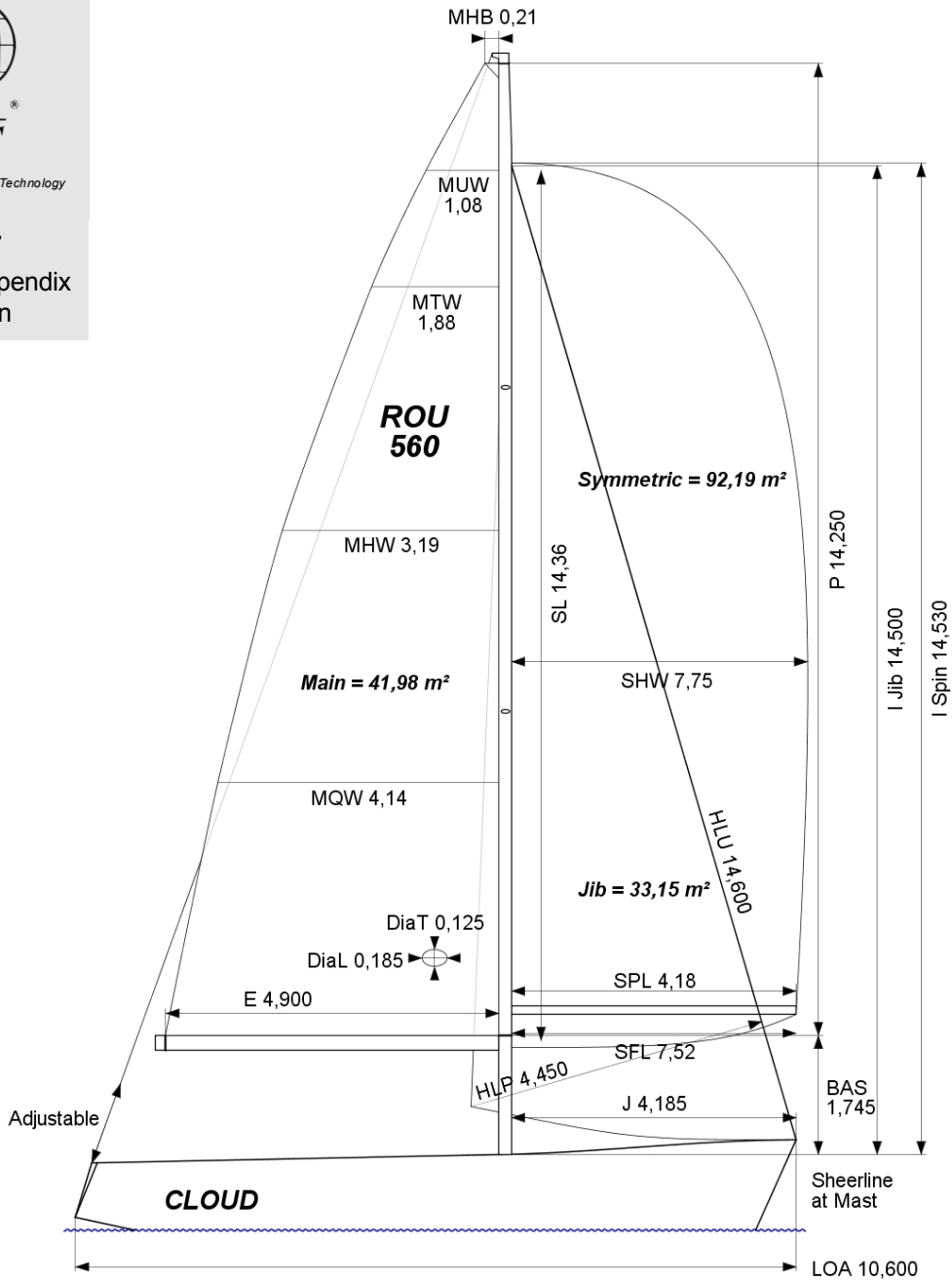
<b>MEASUREMENT INVENTORY</b>				
Measurer <b>Gerd Kall kall</b>				
Date <b>04/05/2006</b>				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
+	Anchor	10.0	6.70	0.00 Anchor 1
+	Chain	8.0	5.50	0.00 Warp
+	Tools	13.0	7.50	0.00
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
1	Engine	Yanmar	3YM20C	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Description</i>	
+	Deck Gear	9.2 0		

<b>MEASUREMENT INVENTORY</b>							
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn Description</i>
1	Tank fuel		st.stl	60.0	5.95	0.00	0-0 fuel
2	Tank H2O		pvc	120.0	5.35	0.00	0-0 Water
3	Tank gas		steel	2.0	9.45	0.00	0-0 LPG gas
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>			
Ballast							
1	Battery	46.8	4.65	0.00 120 Ah gel - services			
2	Battery	18.4	5.00	0.00 55 Ah - engine			
1	Misc	20.0	5.00	0.00 Table			
2	Misc	8.0	5.00	0.00 Safety Equipment			



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Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL (1)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	0.210	1.08	1.88	3.19	4.14	41.98				Unknown	* Copied from legacy

**HEADSAILS (1)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.10	0.63	1.21	2.29	3.34	4.45	14.60	106%	33.15	N	N	X-35	01/03/2007	Any	Kevlar	One Design Rule

**SYMMETRIC SPINNAKERS (1)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	14.36	14.36	14.36	7.75	7.52	92.19				Unknown	* Copied from legacy *

**ASYMMETRIC SPINNAKERS (0)**

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