

<b>BOAT</b>
Name <b>MAGIC TWELVE</b> Sail Nr <b>RUS 2785</b>

<b>GPH</b>
<b>522.3</b>

<b>HULL</b>
Length Overall <b>13.999m</b>
Maximum Beam <b>4.108m</b>
Displacement <b>9,571kg</b>
Draft <b>2.824m</b>
IMS Reg. Division <b>Performance</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>12.925m</b> VCGD <b>-0.530m</b> Sink <b>27.33kg/mm</b>
RL <b>11.949m</b> VCGM <b>-0.568m</b> WS <b>38.14m<sup>2</sup></b>
LSM0 <b>12.740m</b> Displacement/Length ratio <b>4.6286</b>



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2019**  
ORC International  
Certificate

<b>GENERAL</b>
Class <b>ONE-OFF 14.00m</b>
Designer <b>FARR</b>
Builder <b>VISMARA</b>
Series <b>03/2006</b>
Age <b>03/2006</b>
Age Allowance <b>0.422%</b>
Offset File <b>BELDONC.OFF - 03/07/2014 11:51:30</b>
Measurement by - <b>25/07/2016</b>

**Rating Office**

Offshore  
Racing  
Congress

<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>508.8</b>			<b>571.8</b>		
Time on Time	<b>1.1792</b>			<b>1.1805</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>588.0</b>	<b>465.5</b>	<b>418.7</b>	<b>758.3</b>	<b>572.3</b>	<b>507.7</b>
Time on Time	<b>1.1480</b>	<b>1.4499</b>	<b>1.6123</b>	<b>0.8902</b>	<b>1.1794</b>	<b>1.3295</b>



<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>866.1</b>	<b>713.2</b>	<b>639.8</b>	<b>610.9</b>	<b>597.4</b>	<b>588.4</b>	<b>575.3</b>
52°	<b>569.4</b>	<b>478.8</b>	<b>444.1</b>	<b>431.8</b>	<b>426.1</b>	<b>423.1</b>	<b>415.4</b>
60°	<b>538.7</b>	<b>460.5</b>	<b>432.7</b>	<b>420.3</b>	<b>414.1</b>	<b>410.4</b>	<b>403.5</b>
75°	<b>514.9</b>	<b>448.8</b>	<b>424.0</b>	<b>408.4</b>	<b>396.2</b>	<b>388.3</b>	<b>380.5</b>
90°	<b>519.0</b>	<b>449.5</b>	<b>423.1</b>	<b>405.4</b>	<b>388.4</b>	<b>373.2</b>	<b>352.9</b>
110°	<b>513.5</b>	<b>437.6</b>	<b>410.9</b>	<b>396.9</b>	<b>383.7</b>	<b>370.6</b>	<b>344.9</b>
120°	<b>526.7</b>	<b>441.5</b>	<b>410.5</b>	<b>386.1</b>	<b>369.5</b>	<b>356.0</b>	<b>329.2</b>
135°	<b>586.6</b>	<b>470.9</b>	<b>426.2</b>	<b>400.2</b>	<b>372.9</b>	<b>345.7</b>	<b>299.6</b>
150°	<b>699.5</b>	<b>559.4</b>	<b>474.5</b>	<b>428.6</b>	<b>408.4</b>	<b>388.0</b>	<b>335.5</b>
Run VMG	<b>807.7</b>	<b>645.9</b>	<b>547.9</b>	<b>494.7</b>	<b>470.5</b>	<b>444.8</b>	<b>387.4</b>

<b>Certificate</b>
Number <b>2785.2</b>
ORC Ref <b>RUS00002036</b>
Issued On <b>04/05/2019</b>
VPP Ver. <b>2019 1.01</b>
Valid until <b>31/12/2019</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>836.9</b>	<b>679.6</b>	<b>593.8</b>	<b>552.8</b>	<b>533.9</b>	<b>516.6</b>	<b>481.3</b>
Circular Random	<b>710.3</b>	<b>577.1</b>	<b>507.2</b>	<b>467.6</b>	<b>443.1</b>	<b>425.8</b>	<b>399.0</b>
Coastal / Long Distance	<b>834.0</b>	<b>639.2</b>	<b>538.1</b>	<b>483.3</b>	<b>455.1</b>	<b>429.6</b>	<b>383.5</b>
Non Spinnaker	<b>781.0</b>	<b>627.1</b>	<b>543.8</b>	<b>494.6</b>	<b>463.4</b>	<b>442.2</b>	<b>413.2</b>

<b>Crew Weight</b>
Default <b>972kg</b>
Maximum <b>922kg</b>
Minimum* <b>692kg</b>
*when applied by the NoR and SI
Non Manual Pwr <b>No</b>

<b>Special Scoring</b>		
	ToD	ToT
Double H.GPH	<b>530.0</b>	<b>1.1320</b>
Double H.OSN	<b>517.8</b>	<b>1.1588</b>
Non Spin GPH	<b>560.8</b>	<b>1.0699</b>
Non Spin OSN	<b>547.5</b>	<b>1.0959</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>42.5°</b>	<b>40.8°</b>	<b>39.6°</b>	<b>38.2°</b>	<b>37.6°</b>	<b>37.3°</b>	<b>37.2°</b>
Beat VMG	<b>4.16</b>	<b>5.05</b>	<b>5.63</b>	<b>5.89</b>	<b>6.03</b>	<b>6.12</b>	<b>6.26</b>
52°	<b>6.32</b>	<b>7.52</b>	<b>8.11</b>	<b>8.34</b>	<b>8.45</b>	<b>8.51</b>	<b>8.67</b>
60°	<b>6.68</b>	<b>7.82</b>	<b>8.32</b>	<b>8.56</b>	<b>8.69</b>	<b>8.77</b>	<b>8.92</b>
75°	<b>6.99</b>	<b>8.02</b>	<b>8.49</b>	<b>8.81</b>	<b>9.09</b>	<b>9.27</b>	<b>9.46</b>
90°	<b>6.94</b>	<b>8.01</b>	<b>8.51</b>	<b>8.88</b>	<b>9.27</b>	<b>9.65</b>	<b>10.20</b>
110°	<b>7.01</b>	<b>8.23</b>	<b>8.76</b>	<b>9.07</b>	<b>9.38</b>	<b>9.71</b>	<b>10.44</b>
120°	<b>6.83</b>	<b>8.15</b>	<b>8.77</b>	<b>9.32</b>	<b>9.74</b>	<b>10.11</b>	<b>10.94</b>
135°	<b>6.14</b>	<b>7.64</b>	<b>8.45</b>	<b>9.00</b>	<b>9.65</b>	<b>10.42</b>	<b>12.02</b>
150°	<b>5.15</b>	<b>6.44</b>	<b>7.59</b>	<b>8.40</b>	<b>8.82</b>	<b>9.28</b>	<b>10.73</b>
Run VMG	<b>4.46</b>	<b>5.57</b>	<b>6.57</b>	<b>7.28</b>	<b>7.65</b>	<b>8.09</b>	<b>9.29</b>
Gybe Angles	<b>142.8°</b>	<b>144.8°</b>	<b>148.0°</b>	<b>152.2°</b>	<b>151.9°</b>	<b>175.6°</b>	<b>143.9°</b>

<b>Sails Limitations</b>	
Headsails <b>7</b>	Spinnakers <b>5</b>

<b>Class Division Length</b>
<b>CDL = 12.438</b>

<b>Storm Sails Areas</b>	
Heavy Weather Jib	<b>49.20</b>
Storm Jib (JL=12.41)	<b>18.23</b>
Storm Trysail	<b>21.39</b>

**Owner**

<b>BOAT</b>	
Name <b>MAGIC TWELVE</b>	Sail Nr <b>RUS 2785</b>
File <b>RU2785</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>18/07/2016</b>		SG <b>1.0290</b>	
FFM <b>1.560</b>	FF <b>1.558</b>	SFFP <b>0.453</b>	
FAM <b>1.173</b>	FA <b>1.174</b>	SAFP <b>13.838</b>	
W1 <b>121.0</b>	PD1 <b>447.6</b>	WD <b>13.870</b>	
W2 <b>121.0</b>	PD2 <b>447.4</b>	GSA <b>1.0</b>	
W3 <b>121.0</b>	PD3 <b>447.4</b>	RSA <b>1.0</b>	
W4 <b>121.0</b>	PD4 <b>447.5</b>	PLM <b>9000.0</b>	
LCF from stem on CL / on sheer		<b>7.641 / 7.896</b>	
Maximum beam station from stem		<b>9.100</b>	
RM Measured		<b>295.4kg-m</b>	
RM Default		<b>268.3kg-m</b>	
Limit of positive stability / Stab.Index		<b>144.5° / 149.1</b>	
Freeboard at mast at 5.590		<b>1.411</b>	



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2019**  
**IMS Measurement**  
**Certificate**

<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>Yes</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>19.400</b>	E <b>6.300</b>	MDT1 <b>0.150</b>	MW <b>0.300</b>
IG <b>18.984</b>	J <b>5.425</b>	MDL1 <b>0.304</b>	GO <b>0.330</b>
ISP <b>21.472</b>	SFJ <b>0.165</b>	MDT2 <b>0.115</b>	BD <b>0.304</b>
BAS <b>1.792</b>	SPL	MDL2 <b>0.223</b>	MWT
FSP <b>0.087</b>	TPS <b>6.980</b>	TL <b>2.180</b>	MCG

<b>Certificate</b>	
Number <b>2785.2</b>	
ORC Ref <b>RUS00002036</b>	
Issued On <b>04/05/2019</b>	
VPP Ver. <b>2019 1.01</b>	
Valid until <b>31/12/2019</b>	

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.460</b>		
Type <b>Folding 2 blades</b>	PBW		
Twin Screw <b>No</b>	PIPA <b>0.0035</b>		
ST1 <b>0.065</b>	ST3 <b>0.180</b>	ST5 <b>0.305</b>	
ST2 <b>0.180</b>	ST4 <b>0.098</b>	EDL <b>1.740</b>	

<b>COMMENTS</b>	
Ex I900 "Bella Donna" VOLVO /130S	

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



<b>CENTERBOARD</b>	
<b>N/A</b>	

<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.300	1.40	2.45	4.16	5.39	74.27	75.69	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL	Area	Formula		
	24.08	19.33	21.70	12.32	12.78	224.50	AS · (SFL + 4·SHW) / 6		

<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>
0.09	0.78	1.48	2.89	4.25	5.48	18.43	52.34	Y	N	25/07/2016	Carbon	
0.13	0.75	1.39	2.74	4.13	5.50	18.40	50.89	Y	N	25/07/2016	Carbon	

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>FIV 120</b>				
Date <b>18/07/2016</b>				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
A	Engine	VOLVO	D2-55	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

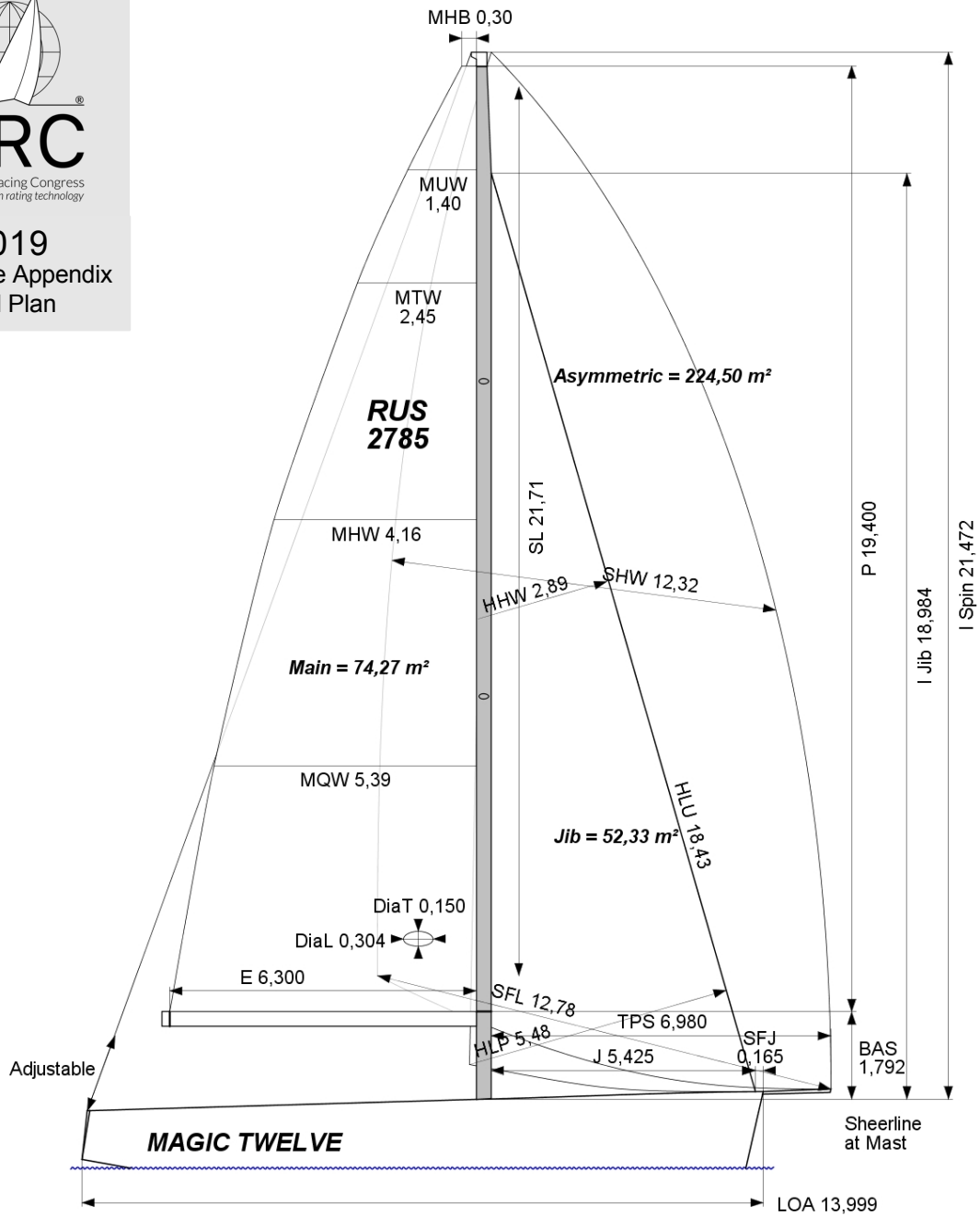
<b>MEASUREMENT INVENTORY</b>								
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn</i>	<i>Description</i>
A	Tank	FUEL	SOLID	100.0	9.60	0.00	<del>20.0</del>	LT
B	Tank	WATER	SOLID	100.0	9.90	0.00	<del>0.0</del>	VUOTO
C	Tank	WATER	SOLID	100.0	9.90	0.00	<del>0.0</del>	VUOTO
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>				
A	Battery	16.0	7.80	0.00				
B	Battery	16.0	7.80	0.00				



**ORC**

Offshore Racing Congress  
World leader in rating technology

**2019**  
Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL (2)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
M2	0.30	1.40	2.45	4.16	5.39	74.27		24/04/2019		Carbon	
A	0.26	1.37	2.43	4.14	5.36	73.83		25/07/2016	ELVSTROM	Carbon	

**HEADSAILS (2)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
A	0.09	0.78	1.48	2.89	4.25	5.48	18.43	101%	52.34	Y	N		25/07/2016	ELVSTROM	Carbon	
B	0.13	0.75	1.39	2.74	4.13	5.50	18.40	101%	50.89	Y	N		25/07/2016	ELVSTROM	Carbon	

**SYMMETRIC SPINNAKERS (0)**

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

**ASYMMETRIC SPINNAKERS (4)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
A	24.08	19.33	21.70	12.32	12.78	224.51	asym		26/07/2016	ELVSTROM	Nylon	
B	23.15	21.05	22.10	12.27	11.67	223.77	asym		18/07/2016	NORTH	Nylon	
C	23.26	20.50	21.88	11.63	11.46	211.44	asym		01/07/2014	NORTH	Nylon	
D	21.69	20.27	20.98	8.21	10.91	152.98	asym		01/07/2014	NORTH	Nylon	