

<b>BOAT</b> Name <b>KUNDALINI</b> Sail Nr <b>ITA-17415</b>	<b>GPH</b> <b>649.9</b>	<b>HULL</b> Length Overall <b>9.960m</b> Maximum Beam <b>3.346m</b> Displacement <b>4,766kg</b> Draft <b>2.047m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0.252%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Cored</b> Carbon Rudder <b>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>COBRA 33</b> Designer <b>ANDRZEJ SKRZAT</b> Builder <b>COBRA YACHTS</b> Series <b>01/2011</b> Age <b>01/2018</b> Age Allowance <b>0.260%</b> Offset File <b>COBRA33.OFF - 13/04/2018 19:42:48</b> Measurement by - <b>15/05/2019</b>		IMSL <b>9.699m</b> VCGD <b>0.131m</b> Sink <b>17.57kg/mm</b> RL <b>7.663m</b> VCGM <b>0.216m</b> WS <b>22.89m<sup>2</sup></b> LSM0 <b>9.803m</b> Displacement/Length ratio <b>5.0591</b>



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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>631.5</b>			<b>705.2</b>		
Time on Time	<b>0.9501</b>			<b>0.9571</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>745.1</b>	<b>574.8</b>	<b>516.8</b>	<b>963.5</b>	<b>707.6</b>	<b>617.8</b>
Time on Time	<b>0.9059</b>	<b>1.1743</b>	<b>1.3060</b>	<b>0.7006</b>	<b>0.9539</b>	<b>1.0925</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1117.0</b>	<b>926.1</b>	<b>818.0</b>	<b>762.8</b>	<b>745.8</b>	<b>741.2</b>	<b>731.4</b>
52°	<b>728.8</b>	<b>618.5</b>	<b>553.3</b>	<b>527.2</b>	<b>519.1</b>	<b>516.1</b>	<b>511.8</b>
60°	<b>689.0</b>	<b>588.2</b>	<b>534.8</b>	<b>513.0</b>	<b>504.1</b>	<b>500.8</b>	<b>498.1</b>
75°	<b>659.8</b>	<b>564.6</b>	<b>521.7</b>	<b>501.2</b>	<b>488.6</b>	<b>480.8</b>	<b>476.0</b>
90°	<b>657.5</b>	<b>550.9</b>	<b>508.3</b>	<b>494.1</b>	<b>483.2</b>	<b>469.7</b>	<b>450.1</b>
110°	<b>648.3</b>	<b>540.0</b>	<b>499.5</b>	<b>477.9</b>	<b>458.8</b>	<b>446.3</b>	<b>427.2</b>
120°	<b>664.8</b>	<b>549.5</b>	<b>503.2</b>	<b>478.2</b>	<b>455.2</b>	<b>435.7</b>	<b>406.4</b>
135°	<b>730.7</b>	<b>596.2</b>	<b>523.7</b>	<b>492.7</b>	<b>469.0</b>	<b>444.0</b>	<b>396.1</b>
150°	<b>873.6</b>	<b>694.3</b>	<b>585.3</b>	<b>522.1</b>	<b>493.7</b>	<b>471.6</b>	<b>425.1</b>
Run VMG	<b>1008.8</b>	<b>801.7</b>	<b>675.8</b>	<b>593.3</b>	<b>539.6</b>	<b>504.8</b>	<b>460.9</b>

**Certificate**  
Number **174151**  
ORC Ref **ITA00052471**  
Issued On **15/05/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**  
Default **669kg**  
Maximum **480kg**  
Minimum\* **360kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>662.0</b>	<b>0.9064</b>
Double H.OSN	<b>644.8</b>	<b>0.9305</b>
Non Spin GPH	<b>689.3</b>	<b>0.8704</b>
Non Spin OSN	<b>667.3</b>	<b>0.8991</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>1062.9</b>	<b>863.9</b>	<b>746.9</b>	<b>678.0</b>	<b>642.7</b>	<b>623.0</b>	<b>596.1</b>
Circular Random	<b>894.0</b>	<b>722.0</b>	<b>630.3</b>	<b>577.8</b>	<b>546.2</b>	<b>526.0</b>	<b>500.2</b>
Coastal / Long Distance	<b>1057.5</b>	<b>810.3</b>	<b>672.6</b>	<b>594.2</b>	<b>556.3</b>	<b>527.2</b>	<b>477.9</b>
Non Spinnaker	<b>965.6</b>	<b>772.4</b>	<b>667.4</b>	<b>606.2</b>	<b>569.0</b>	<b>545.4</b>	<b>517.0</b>

**Sails Limitations**

Headsails	Spinnakers
<b>5</b>	<b>3</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>43.1°</b>	<b>41.1°</b>	<b>40.7°</b>	<b>40.3°</b>	<b>39.8°</b>	<b>39.8°</b>	<b>39.9°</b>
Beat VMG	<b>3.22</b>	<b>3.89</b>	<b>4.40</b>	<b>4.72</b>	<b>4.83</b>	<b>4.86</b>	<b>4.92</b>
52°	<b>4.94</b>	<b>5.82</b>	<b>6.51</b>	<b>6.83</b>	<b>6.94</b>	<b>6.98</b>	<b>7.03</b>
60°	<b>5.23</b>	<b>6.12</b>	<b>6.73</b>	<b>7.02</b>	<b>7.14</b>	<b>7.19</b>	<b>7.23</b>
75°	<b>5.46</b>	<b>6.38</b>	<b>6.90</b>	<b>7.18</b>	<b>7.37</b>	<b>7.49</b>	<b>7.56</b>
90°	<b>5.48</b>	<b>6.54</b>	<b>7.08</b>	<b>7.29</b>	<b>7.45</b>	<b>7.66</b>	<b>8.00</b>
110°	<b>5.55</b>	<b>6.67</b>	<b>7.21</b>	<b>7.53</b>	<b>7.85</b>	<b>8.07</b>	<b>8.43</b>
120°	<b>5.42</b>	<b>6.55</b>	<b>7.15</b>	<b>7.53</b>	<b>7.91</b>	<b>8.26</b>	<b>8.86</b>
135°	<b>4.93</b>	<b>6.04</b>	<b>6.87</b>	<b>7.31</b>	<b>7.68</b>	<b>8.11</b>	<b>9.09</b>
150°	<b>4.12</b>	<b>5.18</b>	<b>6.15</b>	<b>6.90</b>	<b>7.29</b>	<b>7.63</b>	<b>8.47</b>
Run VMG	<b>3.57</b>	<b>4.49</b>	<b>5.33</b>	<b>6.07</b>	<b>6.67</b>	<b>7.13</b>	<b>7.81</b>
Gybe Angles	<b>145.1°</b>	<b>149.9°</b>	<b>149.4°</b>	<b>157.4°</b>	<b>175.3°</b>	<b>180.0°</b>	<b>180.0°</b>

**Class Division Length**  
CDL = **8.682**

**Storm Sails Areas**  
Heavy Weather Jib **21.84**  
Storm Jib (JL=8.27) **8.09**  
Storm Trysail **9.26**

**Owner**

<b>BOAT</b>	
Name <b>KUNDALINI</b>	Sail Nr <b>ITA-17415</b>
File <b>I17415</b>	Data in <b>meters/kilograms</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>12.350</b>	E <b>4.280</b> MDT1 <b>0.120</b> MW <b>0.180</b>
IG <b>12.590</b>	J <b>3.800</b> MDL1 <b>0.180</b> GO <b>0.218</b>
ISP <b>13.260</b>	SFJ <b>0.000</b> MDT2 <b>0.120</b> BD <b>0.180</b>
BAS <b>1.400</b>	SPL <b>4.050</b> MDL2 <b>0.180</b> MWT <b>127.00</b>
FSP <b>0.066</b>	TPS <b>4.500</b> TL <b>0.000</b> MCG <b>5.480</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>19/02/2019</b>		SG <b>1.0250</b>	
FFM <b>1.233</b>	FF <b>1.232</b>	SFFP <b>0.024</b>	
FAM <b>0.986</b>	FA <b>0.987</b>	SAFP <b>9.417</b>	
W1 <b>59.8</b>	PD1 <b>608.1</b>	WD <b>11.000</b>	
W2 <b>59.8</b>	PD2 <b>604.8</b>	GSA <b>1.0</b>	
W3 <b>59.8</b>	PD3 <b>592.3</b>	RSA <b>1.0</b>	
W4 <b>59.8</b>	PD4 <b>595.4</b>	PLM <b>9000.0</b>	
LCF from stem on CL / on sheer		<b>5.809 / 6.035</b>	
Maximum beam station from stem		<b>6.900</b>	
RM Measured		<b>86.3kg-m</b>	
RM Default		<b>103.9kg-m</b>	
Limit of positive stability / Stab.Index		<b>105.9° / 107.0</b>	
Freeboard at mast at 3.800		<b>1.102</b>	



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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>Feathering 3 blades</b>	PBW <b>0.104</b>		
Twin Screw <b>No</b>	PIPA <b>0.0035</b>		
ST1 <b>0.042</b>	ST3 <b>0.180</b>	ST5 <b>0.270</b>	
ST2 <b>0.180</b>	ST4 <b>0.112</b>	EDL <b>2.230</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>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.180	0.86	1.53	2.67	3.54	30.79	31.32	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	85.89		SL · (SFL + 4·SHW) / 6	
	13.75	13.75	13.75	7.50	7.48				
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL	74.70		AS · (SFL + 4·SHW) / 6	
	13.98	12.40	13.19	6.74	7.02				

<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>
0.11	0.65	1.21	2.21	3.16	4.00	12.51	26.80	Y	N	19/02/2019	Technor	

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>35</b>				
Date <b>19/02/2019</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	YANMAR	21 HP	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

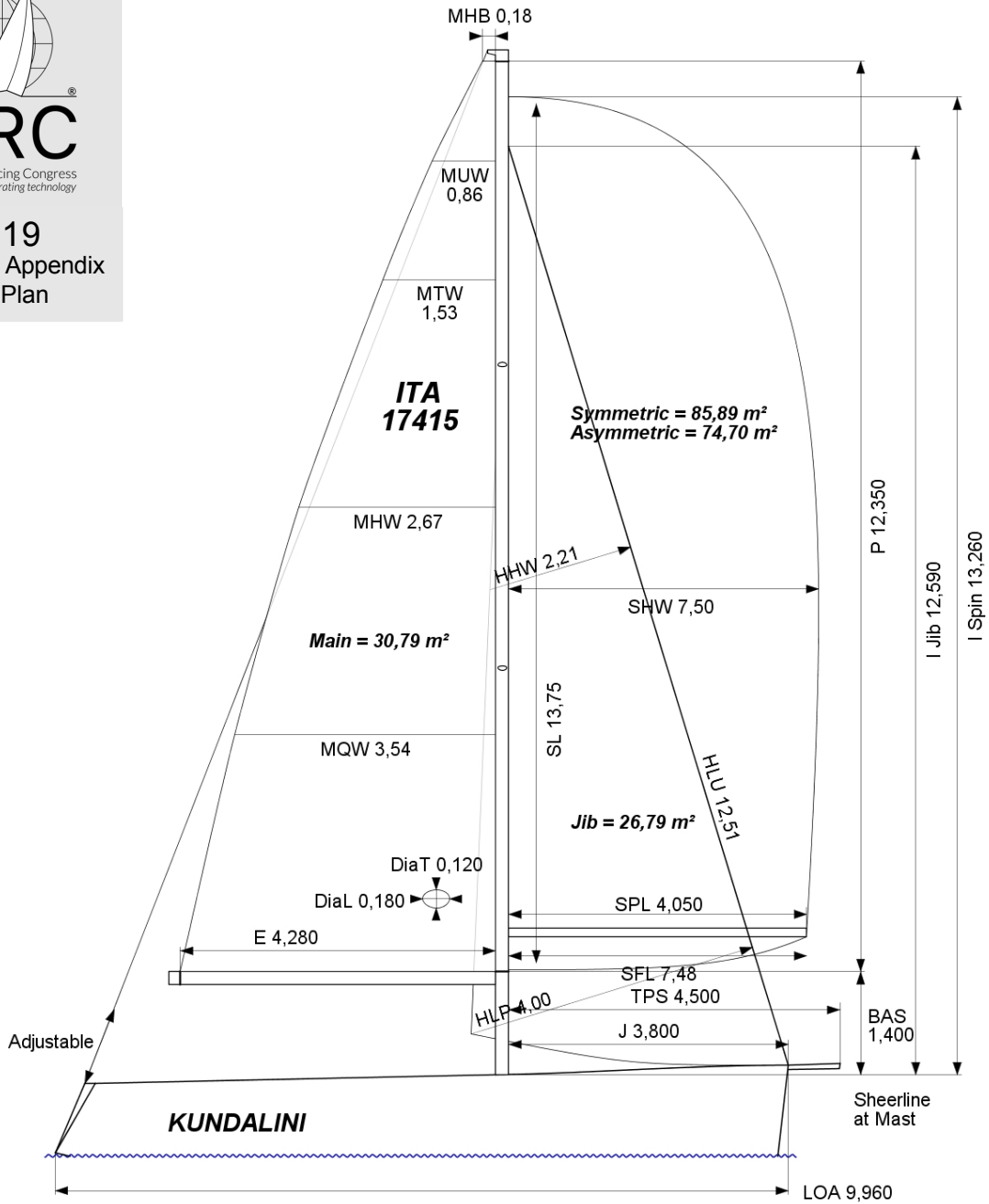
<b>MEASUREMENT INVENTORY</b>							
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn Description</i>
A	Tank	ACQUA	PVC	130.0	2.00	0.00	0-0 VUOTO
B	Tank	GASOLIO	PEHD	45.0	8.00	0.00	10-0 L
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>			
A	Battery	0.0	7.80	0.00 N° 1 MOTORE			
B	Battery	0.0	4.80	0.00 N° 2 SERVIZI DX e SX			
A	Misc	0.0	7.00	0.00 BOILER DX			
B	Misc	5.0	7.50	0.00 BOMB. GAS SX			



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Sail Plan



**SAILS INVENTORY**

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
A	0.18	0.86	1.53	2.67	3.54	30.80		30/03/2018	DOYLE	Technora						
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
A	0.11	0.65	1.21	2.21	3.16	4.00	12.51	105%	26.80	Y	N		19/02/2019	DOYLE	Technor	
SYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
A	13.75	13.75	13.75	7.50	7.48	85.90		15/05/2019		Unknown						
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
A	13.98	12.40	13.19	6.74	7.02	74.70	asym		30/03/2018	DOYLE	Nylon					