

|                                                                                                                                                                                                                                                       |              |                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BOAT</b>                                                                                                                                                                                                                                           | <b>GPH</b>   | <b>HULL</b>                                                                                                                                                                                                                                                                                                                      |
| Name <b>ZARAFFA</b><br>Sail Nr <b>USA 61016</b>                                                                                                                                                                                                       | <b>430.9</b> | Length Overall <b>20.278m</b><br>Maximum Beam <b>5.023m</b><br>Displacement <b>18,655kg</b><br>Draft <b>3.822m</b><br>IMS Reg. Division <b>Cruiser/Racer</b><br>Dynamic Allowance <b>0.001%</b><br>Fwd Accommodation <b>Yes</b><br>Hull Construction <b>Carbon</b><br>Carbon Rudder <b>Yes</b><br>Crew Arm Extension <b>0.00</b> |
| <b>GENERAL</b>                                                                                                                                                                                                                                        |              | IMSL <b>17.948m</b> VCGD <b>-0.983m</b> Sink <b>48.00kg/mm</b><br>RL <b>17.667m</b> VCGM <b>-0.945m</b> WS <b>64.60m<sup>2</sup></b><br>LSM0 <b>17.544m</b> Displacement/Length ratio <b>3.4547</b>                                                                                                                              |
| Class <b>R/P 66</b><br>Designer <b>REICHEL/PUGH</b><br>Builder <b>NEB</b><br>Series <b>04/2000</b><br>Age <b>04/2000</b><br>Age Allowance <b>0.487%</b><br>Offset File <b>US31013.OFF - 09/12/2003 10:55:42</b><br>Measurement by - <b>20/05/2019</b> |              |                                                                                                                                                                                                                                                                                                                                  |



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| <b>SCORING OPTIONS</b> |                                |               |               |                           |               |               |
|------------------------|--------------------------------|---------------|---------------|---------------------------|---------------|---------------|
|                        | <b>COASTAL / LONG DISTANCE</b> |               |               | <b>WINDWARD / LEEWARD</b> |               |               |
| Time on Distance       | <b>420.2</b>                   |               |               | <b>473.9</b>              |               |               |
| Time on Time           | <b>1.4279</b>                  |               |               | <b>1.4243</b>             |               |               |
| Triple Number          | Low                            | Medium        | High          | Low                       | Medium        | High          |
| Time on Distance       | <b>488.8</b>                   | <b>383.6</b>  | <b>338.0</b>  | <b>637.6</b>              | <b>476.7</b>  | <b>412.7</b>  |
| Time on Time           | <b>1.3810</b>                  | <b>1.7596</b> | <b>1.9971</b> | <b>1.0587</b>             | <b>1.4161</b> | <b>1.6354</b> |

| <b>TIME ALLOWANCES</b>  |              |              |              |              |              |              |              |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Wind Velocity           | 6 kt         | 8 kt         | 10 kt        | 12 kt        | 14 kt        | 16 kt        | 20 kt        |
| Beat VMG                | <b>696.9</b> | <b>577.3</b> | <b>527.2</b> | <b>502.4</b> | <b>487.4</b> | <b>478.3</b> | <b>464.3</b> |
| 52°                     | <b>452.2</b> | <b>384.0</b> | <b>364.2</b> | <b>355.0</b> | <b>349.2</b> | <b>345.2</b> | <b>335.8</b> |
| 60°                     | <b>422.8</b> | <b>369.0</b> | <b>352.8</b> | <b>343.6</b> | <b>337.1</b> | <b>332.1</b> | <b>321.9</b> |
| 75°                     | <b>400.1</b> | <b>358.5</b> | <b>340.0</b> | <b>326.3</b> | <b>317.3</b> | <b>310.9</b> | <b>302.8</b> |
| 90°                     | <b>403.4</b> | <b>359.5</b> | <b>338.1</b> | <b>318.7</b> | <b>303.8</b> | <b>294.1</b> | <b>281.4</b> |
| 110°                    | <b>446.7</b> | <b>369.9</b> | <b>345.3</b> | <b>328.0</b> | <b>312.5</b> | <b>295.9</b> | <b>262.3</b> |
| 120°                    | <b>461.0</b> | <b>375.6</b> | <b>342.9</b> | <b>321.1</b> | <b>306.1</b> | <b>291.7</b> | <b>260.6</b> |
| 135°                    | <b>517.1</b> | <b>404.1</b> | <b>358.2</b> | <b>331.5</b> | <b>304.6</b> | <b>279.6</b> | <b>244.8</b> |
| 150°                    | <b>622.0</b> | <b>483.2</b> | <b>405.1</b> | <b>361.6</b> | <b>336.6</b> | <b>315.4</b> | <b>266.8</b> |
| Run VMG                 | <b>718.3</b> | <b>557.9</b> | <b>467.8</b> | <b>419.9</b> | <b>391.1</b> | <b>364.9</b> | <b>308.1</b> |
| <b>Selected Courses</b> |              |              |              |              |              |              |              |
| Windward / Leeward      | <b>707.6</b> | <b>567.6</b> | <b>497.5</b> | <b>461.1</b> | <b>439.2</b> | <b>421.6</b> | <b>386.2</b> |
| Circular Random         | <b>590.5</b> | <b>478.1</b> | <b>418.4</b> | <b>383.6</b> | <b>361.2</b> | <b>344.7</b> | <b>318.9</b> |
| Coastal / Long Distance | <b>708.6</b> | <b>533.5</b> | <b>448.6</b> | <b>399.5</b> | <b>371.8</b> | <b>348.3</b> | <b>305.8</b> |
| Non Spinnaker           | <b>635.0</b> | <b>512.1</b> | <b>445.3</b> | <b>405.1</b> | <b>378.8</b> | <b>360.1</b> | <b>333.6</b> |

**Certificate**

Number **US6408**  
ORC Ref **USAX028JEDR**  
Issued On **30/05/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**

Default **1,535kg**  
Maximum **1,334kg**  
Minimum\* **1,001kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

|              |              |               |
|--------------|--------------|---------------|
|              | ToD          | ToT           |
| Non Spin GPH | <b>458.6</b> | <b>1.3083</b> |
| Non Spin OSN | <b>451.5</b> | <b>1.3288</b> |

**Sails Limitations**

|           |            |
|-----------|------------|
| Headsails | Spinnakers |
| <b>8</b>  | <b>6</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>43.4°</b>  | <b>41.8°</b>  | <b>39.8°</b>  | <b>38.5°</b>  | <b>37.2°</b>  | <b>36.6°</b>  | <b>35.8°</b>  |
| Beat VMG                                                 | <b>5.17</b>   | <b>6.24</b>   | <b>6.83</b>   | <b>7.17</b>   | <b>7.39</b>   | <b>7.53</b>   | <b>7.75</b>   |
| 52°                                                      | <b>7.96</b>   | <b>9.37</b>   | <b>9.88</b>   | <b>10.14</b>  | <b>10.31</b>  | <b>10.43</b>  | <b>10.72</b>  |
| 60°                                                      | <b>8.52</b>   | <b>9.76</b>   | <b>10.20</b>  | <b>10.48</b>  | <b>10.68</b>  | <b>10.84</b>  | <b>11.18</b>  |
| 75°                                                      | <b>9.00</b>   | <b>10.04</b>  | <b>10.59</b>  | <b>11.03</b>  | <b>11.35</b>  | <b>11.58</b>  | <b>11.89</b>  |
| 90°                                                      | <b>8.92</b>   | <b>10.01</b>  | <b>10.65</b>  | <b>11.30</b>  | <b>11.85</b>  | <b>12.24</b>  | <b>12.79</b>  |
| 110°                                                     | <b>8.06</b>   | <b>9.73</b>   | <b>10.43</b>  | <b>10.98</b>  | <b>11.52</b>  | <b>12.17</b>  | <b>13.72</b>  |
| 120°                                                     | <b>7.81</b>   | <b>9.58</b>   | <b>10.50</b>  | <b>11.21</b>  | <b>11.76</b>  | <b>12.34</b>  | <b>13.81</b>  |
| 135°                                                     | <b>6.96</b>   | <b>8.91</b>   | <b>10.05</b>  | <b>10.86</b>  | <b>11.82</b>  | <b>12.88</b>  | <b>14.70</b>  |
| 150°                                                     | <b>5.79</b>   | <b>7.45</b>   | <b>8.89</b>   | <b>9.95</b>   | <b>10.69</b>  | <b>11.41</b>  | <b>13.49</b>  |
| Run VMG                                                  | <b>5.01</b>   | <b>6.45</b>   | <b>7.70</b>   | <b>8.57</b>   | <b>9.20</b>   | <b>9.86</b>   | <b>11.68</b>  |
| Gybe Angles                                              | <b>141.2°</b> | <b>139.0°</b> | <b>145.3°</b> | <b>152.2°</b> | <b>153.0°</b> | <b>150.0°</b> | <b>145.0°</b> |

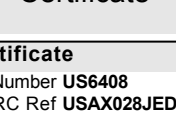
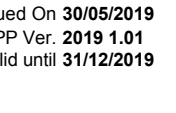
**Class Division Length**

**CDL = 17.809**

**Storm Sails Areas**

Heavy Weather Jib **86.68**  
Storm Jib (JL=16.48) **32.11**  
Storm Trysail **43.43**

**Owner**

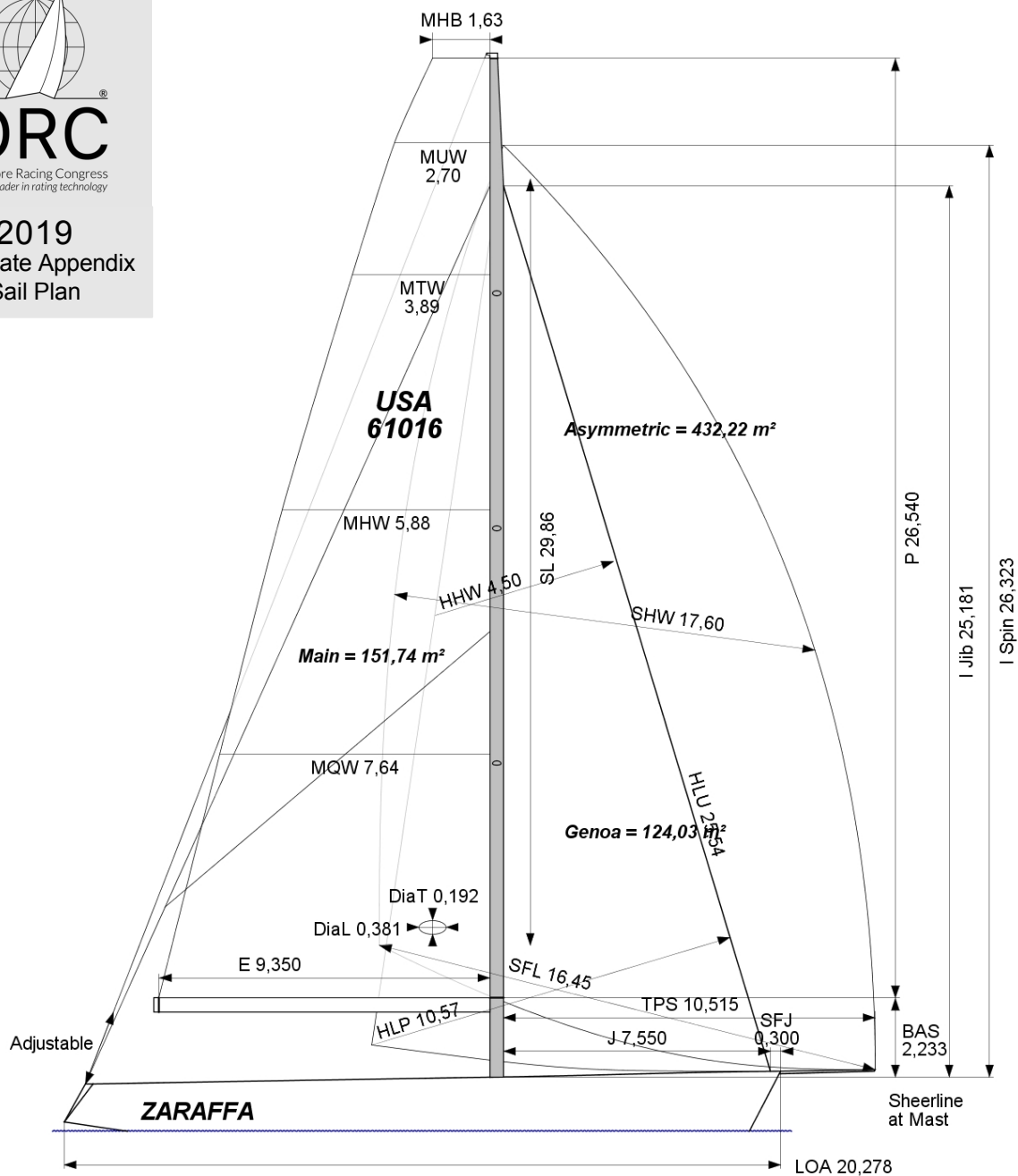
| BOAT                                                                      |       |     |       |      |                                 |  |  |  |  | INCLINING TEST AND FREEBOARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
|---------------------------------------------------------------------------|-------|-----|-------|------|---------------------------------|--|--|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|-------------------|--|--|--|--|------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------|-------|------|-------|-----|-------|----|-------|------|--------|----|-------|-----|-------|----|-------|----|-------|-----|-------|-----|-----|----|-------|-----|-------|-----|-----|----|-------|-----|-------|-----|--------|
| Name <b>ZARAFFA</b>                                                       |       |     |       |      | Sail Nr <b>USA 61016</b>        |  |  |  |  | Inclining Test <b>Boom Inclining</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  | LCFD              |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| File <b>US6408</b>                                                        |       |     |       |      | Data in <b>meters/kilograms</b> |  |  |  |  | Flotation date <b>20/05/2019</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  | SG <b>1.0040</b>  |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| <b>RIG</b>                                                                |       |     |       |      |                                 |  |  |  |  | <table border="1"> <tr> <td>FFM</td><td>1.650</td> <td>FF</td><td>1.660</td> <td>SFFP</td><td>1.276</td> </tr> <tr> <td>FAM</td><td>1.316</td> <td>FA</td><td>1.323</td> <td>SAFP</td><td>19.460</td> </tr> <tr> <td>W1</td><td>304.9</td> <td>PD1</td><td>250.3</td> <td>WD</td><td>9.450</td> </tr> <tr> <td>W2</td><td>304.9</td> <td>PD2</td><td>249.5</td> <td>GSA</td><td>1.0</td> </tr> <tr> <td>W3</td><td>304.9</td> <td>PD3</td><td>245.3</td> <td>RSA</td><td>1.0</td> </tr> <tr> <td>W4</td><td>304.9</td> <td>PD4</td><td>249.1</td> <td>PLM</td><td>9000.0</td> </tr> </table> |  |  |  |  |                   |  |  |  |  | FFM                                                                                                                                      | 1.650 | FF               | 1.660 | SFFP | 1.276 | FAM | 1.316 | FA | 1.323 | SAFP | 19.460 | W1 | 304.9 | PD1 | 250.3 | WD | 9.450 | W2 | 304.9 | PD2 | 249.5 | GSA | 1.0 | W3 | 304.9 | PD3 | 245.3 | RSA | 1.0 | W4 | 304.9 | PD4 | 249.1 | PLM | 9000.0 |
| FFM                                                                       | 1.650 | FF  | 1.660 | SFFP | 1.276                           |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| FAM                                                                       | 1.316 | FA  | 1.323 | SAFP | 19.460                          |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| W1                                                                        | 304.9 | PD1 | 250.3 | WD   | 9.450                           |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| W2                                                                        | 304.9 | PD2 | 249.5 | GSA  | 1.0                             |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| W3                                                                        | 304.9 | PD3 | 245.3 | RSA  | 1.0                             |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| W4                                                                        | 304.9 | PD4 | 249.1 | PLM  | 9000.0                          |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Forestay Tension <b>Aft</b>                                               |       |     |       |      | Spreaders <b>3</b>              |  |  |  |  | LCF from stem on CL / on sheer <b>11.263 / 11.510</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Inner Stay <b>None Fitted</b>                                             |       |     |       |      | Runners <b>2</b>                |  |  |  |  | Maximum beam station from stem <b>13.259</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Carbon Mast <b>Yes</b>                                                    |       |     |       |      | Jumper Struts <b>None</b>       |  |  |  |  | RM Measured <b>913.0kg-m</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Taper Hollows <b>No</b>                                                   |       |     |       |      | Jib Furler <b>No</b>            |  |  |  |  | RM Default <b>876.2kg-m</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Fiber Rigging <b>No</b>                                                   |       |     |       |      | Main Furler <b>No</b>           |  |  |  |  | Limit of positive stability / Stab.Index <b>143.7° / 153.3</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Lenticular Rigging <b>No</b>                                              |       |     |       |      | Without Backstay <b>No</b>      |  |  |  |  | Freeboard at mast at 7.850 <b>1.526</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Articulated Bowsprit <b>No</b>                                            |       |     |       |      |                                 |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| P <b>26.540</b>                                                           |       |     |       |      | E <b>9.350</b>                  |  |  |  |  | MDT1 <b>0.192</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |  | MW <b>0.381</b>   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| IG <b>25.181</b>                                                          |       |     |       |      | J <b>7.550</b>                  |  |  |  |  | MDL1 <b>0.381</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |  | GO <b>0.428</b>   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| ISP <b>26.323</b>                                                         |       |     |       |      | SFJ <b>0.300</b>                |  |  |  |  | MDT2 <b>0.134</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |  | BD <b>0.400</b>   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| BAS <b>2.233</b>                                                          |       |     |       |      | SPL <b>0.000</b>                |  |  |  |  | MDL2 <b>0.216</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |  | MWT <b>765.00</b> |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| FSP <b>0.100</b>                                                          |       |     |       |      | TPS <b>10.515</b>               |  |  |  |  | TL <b>3.592</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  | MCG <b>9.190</b>  |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| <b>MIZZEN RIG AND SAILS</b>                                               |       |     |       |      |                                 |  |  |  |  | <b>PROPELLER</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| N/A                                                                       |       |     |       |      |                                 |  |  |  |  | Installation <b>Strut</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                   |  |  |  |  | PRD <b>0.672</b>                                                                                                                         |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
|                                                                           |       |     |       |      |                                 |  |  |  |  | Type <b>Folding 2 blades</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |                   |  |  |  |  | PBW <b>0.196</b>                                                                                                                         |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
|                                                                           |       |     |       |      |                                 |  |  |  |  | Twin Screw <b>No</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |                   |  |  |  |  | PIPA <b>0.0076</b>                                                                                                                       |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
|                                                                           |       |     |       |      |                                 |  |  |  |  | ST1 <b>0.078</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |                   |  |  |  |  | ST3 <b>0.443</b>                                                                                                                         |       | ST5 <b>0.441</b> |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
|                                                                           |       |     |       |      |                                 |  |  |  |  | ST2 <b>0.424</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |                   |  |  |  |  | ST4 <b>0.195</b>                                                                                                                         |       | EDL <b>1.615</b> |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| <b>COMMENTS</b>                                                           |       |     |       |      |                                 |  |  |  |  | <b>MOVABLE BALLAST</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |  |                   |  |  |  |  | <br><b>2019</b><br><b>IMS Measurement Certificate</b> |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
|                                                                           |       |     |       |      |                                 |  |  |  |  | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
|                                                                           |       |     |       |      |                                 |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| <b>BILGEBOARD</b>                                                         |       |     |       |      |                                 |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  | <br><b>2019</b><br><b>IMS Measurement Certificate</b> |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| BS                                                                        |       |     |       |      |                                 |  |  |  |  | BT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       | BA               |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| BF                                                                        |       |     |       |      |                                 |  |  |  |  | BX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| BC                                                                        |       |     |       |      |                                 |  |  |  |  | BY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| <b>SAILS (Maximum Areas)</b>                                              |       |     |       |      |                                 |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  | <br><b>2019</b><br><b>IMS Measurement Certificate</b> |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Mainsail                                                                  |       |     |       |      |                                 |  |  |  |  | Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       | Formula          |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| MHB MUW MTW MHW MQW                                                       |       |     |       |      |                                 |  |  |  |  | Area (r)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| 1.630 2.70 3.89 5.88 7.64                                                 |       |     |       |      |                                 |  |  |  |  | 151.74 154.87                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |  |                   |  |  |  |  | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |                   |  |  |  |  | AS · (SFL + 4·SHW) / 6                                                                                                                   |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| 31.65 28.07 29.86 17.60 16.45                                             |       |     |       |      |                                 |  |  |  |  | 432.22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| <b>HEADSAILS</b>                                                          |       |     |       |      |                                 |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  | <br><b>2019</b><br><b>IMS Measurement Certificate</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       |       |     |       |      |                                 |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| 0.20 1.09 2.14 4.50 7.25 10.57 25.54 124.04                               |       |     |       |      |                                 |  |  |  |  | 2019 genoa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| <b>MEASUREMENT INVENTORY</b>                                              |       |     |       |      |                                 |  |  |  |  | <b>MEASUREMENT INVENTORY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |                   |  |  |  |  | <br><b>2019</b><br><b>IMS Measurement Certificate</b> |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Measurer                                                                  |       |     |       |      |                                 |  |  |  |  | Id Item Tank Use Tank Type Capcty Dist. VCG Condtn Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Date                                                                      |       |     |       |      |                                 |  |  |  |  | Tank                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Comment                                                                   |       |     |       |      |                                 |  |  |  |  | Id Item Weight Distance VCG Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| a Anchor 0-0 0-00                                                         |       |     |       |      |                                 |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |
| Id Item Weight Description                                                |       |     |       |      |                                 |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |                   |  |  |  |  |                                                                                                                                          |       |                  |       |      |       |     |       |    |       |      |        |    |       |     |       |    |       |    |       |     |       |     |     |    |       |     |       |     |     |    |       |     |       |     |        |



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**2019**  
**Certificate Appendix**  
**Sail Plan**



**SAILS INVENTORY**

**MAINSAIL (1)**

| Id      | MHB  | MUW  | MTW  | MHW  | MQW  | Area   | Measurer | Meas.Date | Manufacture | Material | Comment   |
|---------|------|------|------|------|------|--------|----------|-----------|-------------|----------|-----------|
| 2487082 | 1.63 | 2.70 | 3.89 | 5.88 | 7.64 | 151.75 |          |           | Jeff Todd-  |          | 2019 main |

**HEADSAILS (1)**

| Id      | HHB  | HUW  | HTW  | HHW  | HQW  | HLP   | HLU   | Ovrlp | Area   | Btn | Fly | Measurer | Meas.Date | Manufacture | Material | Comment    |
|---------|------|------|------|------|------|-------|-------|-------|--------|-----|-----|----------|-----------|-------------|----------|------------|
| 2487067 | 0.20 | 1.09 | 2.14 | 4.50 | 7.25 | 10.57 | 25.54 | 140%  | 124.04 |     |     |          |           | Jeff Todd-  |          | 2019 genoa |

**SYMMETRIC SPINNAKERS (0)**

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

**ASYMMETRIC SPINNAKERS (1)**

| Id      | SLU   | SLE   | SL    | SHW   | SFL   | Area   | Kind | Measurer | Meas.Date | Manufacture | Material | Comment       |
|---------|-------|-------|-------|-------|-------|--------|------|----------|-----------|-------------|----------|---------------|
| 2487052 | 31.65 | 28.07 | 29.86 | 17.60 | 16.45 | 432.23 | asym |          |           | Jeff Todd-  |          | 2019-A2 spinn |