

<b>BOAT</b> Name <b>Marina X</b> Sail Nr <b>ISR430</b>	<b>GPH</b> <b>582.9</b>	<b>HULL</b> Length Overall <b>12.500m</b> Maximum Beam <b>3.946m</b> Displacement <b>9,257kg</b> Draft <b>2.228m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0.219%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Cored</b> Carbon Rudder <b>No</b> Crew Arm Extension
<b>GENERAL</b> Class <b>X 4^3</b> Designer <b>Jepessen</b> Builder <b>X Yachts</b> Series <b>01/2016</b> Age <b>02/2018</b> Age Allowance <b>0.065%</b> Offset File <b>X4.off - 19/12/2016 11:57:46</b> Measurement by <b>Roni Raviv - 03/08/2018</b>		IMSL <b>11.701m</b> VCGD <b>-0.021m</b> Sink <b>26.35kg/mm</b> RL <b>9.731m</b> VCGM <b>-0.044m</b> WS <b>34.31m²</b> LSM0 <b>11.650m</b> Displacement/Length ratio <b>5.8545</b>



World Leader in Rating Technology

**2018**  
ORC International  
Certificate

**Rating Office**

Offshore  
Racing  
Congress



World Leader In Rating Technology

SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	<b>566.1</b>			<b>637.5</b>		
Time on Time	<b>1.0599</b>			<b>1.0589</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>671.7</b>	<b>514.5</b>	<b>461.1</b>	<b>870.6</b>	<b>639.7</b>	<b>559.5</b>
Time on Time	<b>1.0049</b>	<b>1.3120</b>	<b>1.4638</b>	<b>0.7753</b>	<b>1.0552</b>	<b>1.2064</b>

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1016.5</b>	<b>835.4</b>	<b>732.3</b>	<b>676.9</b>	<b>655.3</b>	<b>646.3</b>	<b>636.2</b>
52°	<b>662.0</b>	<b>553.1</b>	<b>492.2</b>	<b>466.9</b>	<b>456.5</b>	<b>452.3</b>	<b>449.3</b>
60°	<b>625.0</b>	<b>525.4</b>	<b>475.2</b>	<b>454.6</b>	<b>444.1</b>	<b>439.5</b>	<b>436.5</b>
75°	<b>597.4</b>	<b>505.1</b>	<b>463.9</b>	<b>444.7</b>	<b>431.9</b>	<b>422.3</b>	<b>413.1</b>
90°	<b>591.8</b>	<b>490.3</b>	<b>452.9</b>	<b>441.2</b>	<b>428.6</b>	<b>415.1</b>	<b>392.4</b>
110°	<b>581.7</b>	<b>481.0</b>	<b>443.7</b>	<b>422.8</b>	<b>407.0</b>	<b>395.9</b>	<b>377.3</b>
120°	<b>595.5</b>	<b>490.4</b>	<b>448.2</b>	<b>425.0</b>	<b>403.1</b>	<b>382.9</b>	<b>359.3</b>
135°	<b>663.5</b>	<b>535.9</b>	<b>469.2</b>	<b>440.5</b>	<b>419.0</b>	<b>396.6</b>	<b>354.0</b>
150°	<b>785.3</b>	<b>626.8</b>	<b>529.9</b>	<b>474.2</b>	<b>450.2</b>	<b>432.9</b>	<b>399.3</b>
Run VMG	<b>906.8</b>	<b>723.8</b>	<b>611.9</b>	<b>547.5</b>	<b>517.6</b>	<b>483.3</b>	<b>436.2</b>

**Certificate**

Number **030818**  
ORC Ref **ISR00000129**  
Issued On **18/08/2018**  
VPP Ver. **2018 1.00**  
Valid until **31/12/2018**

**Crew Weight**

Default **856kg**  
Maximum **856kg**  
Minimum\* **642kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr

**Special Scoring**

	ToD	ToT
Double H.GPH	<b>584.4</b>	<b>1.0267</b>
Double H.OSN	<b>568.9</b>	<b>1.0546</b>
Non Spin GPH	<b>623.4</b>	<b>0.9625</b>
Non Spin OSN	<b>603.9</b>	<b>0.9936</b>

Selected Courses							
Windward / Leeward	<b>961.7</b>	<b>779.6</b>	<b>672.1</b>	<b>612.2</b>	<b>586.5</b>	<b>564.8</b>	<b>536.2</b>
Circular Random	<b>805.5</b>	<b>648.7</b>	<b>565.0</b>	<b>517.0</b>	<b>488.1</b>	<b>469.5</b>	<b>445.4</b>
Coastal / Long Distance	<b>956.2</b>	<b>730.3</b>	<b>603.9</b>	<b>532.4</b>	<b>497.9</b>	<b>469.3</b>	<b>424.6</b>
Non Spinnaker	<b>881.4</b>	<b>701.9</b>	<b>603.4</b>	<b>545.0</b>	<b>508.8</b>	<b>485.4</b>	<b>457.2</b>

**Sails Limitations**

Headsails	Spinnakers
<b>6</b>	<b>4</b>

Velocity Prediction in Knots for True Wind Speeds							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>43.5°</b>	<b>41.9°</b>	<b>41.3°</b>	<b>40.6°</b>	<b>39.7°</b>	<b>39.4°</b>	<b>39.4°</b>
Beat VMG	<b>3.54</b>	<b>4.31</b>	<b>4.92</b>	<b>5.32</b>	<b>5.49</b>	<b>5.57</b>	<b>5.66</b>
52°	<b>5.44</b>	<b>6.51</b>	<b>7.31</b>	<b>7.71</b>	<b>7.89</b>	<b>7.96</b>	<b>8.01</b>
60°	<b>5.76</b>	<b>6.85</b>	<b>7.58</b>	<b>7.92</b>	<b>8.11</b>	<b>8.19</b>	<b>8.25</b>
75°	<b>6.03</b>	<b>7.13</b>	<b>7.76</b>	<b>8.09</b>	<b>8.33</b>	<b>8.53</b>	<b>8.71</b>
90°	<b>6.08</b>	<b>7.34</b>	<b>7.95</b>	<b>8.16</b>	<b>8.40</b>	<b>8.67</b>	<b>9.17</b>
110°	<b>6.19</b>	<b>7.48</b>	<b>8.11</b>	<b>8.51</b>	<b>8.84</b>	<b>9.09</b>	<b>9.54</b>
120°	<b>6.05</b>	<b>7.34</b>	<b>8.03</b>	<b>8.47</b>	<b>8.93</b>	<b>9.40</b>	<b>10.02</b>
135°	<b>5.43</b>	<b>6.72</b>	<b>7.67</b>	<b>8.17</b>	<b>8.59</b>	<b>9.08</b>	<b>10.17</b>
150°	<b>4.58</b>	<b>5.74</b>	<b>6.79</b>	<b>7.59</b>	<b>8.00</b>	<b>8.32</b>	<b>9.01</b>
Run VMG	<b>3.97</b>	<b>4.97</b>	<b>5.88</b>	<b>6.58</b>	<b>6.95</b>	<b>7.45</b>	<b>8.25</b>
Gybe Angles	<b>143.7°</b>	<b>147.7°</b>	<b>147.7°</b>	<b>150.0°</b>	<b>151.7°</b>	<b>175.2°</b>	<b>177.8°</b>

**Class Division Length**

CDL = **10.717**

**Storm Sails Areas**

Heavy Weather Jib **41.12**  
Storm Jib (JL=11.34) **15.23**  
Storm Trysail **16.62**

**Owner**

<b>BOAT</b>	
Name <b>Marina X</b>	Sail Nr <b>ISR430</b>
File <b>ISR430</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>		
Inclining Test <b>Boom Inclining</b>		
Flotation date <b>03/08/2018</b>	SG <b>1.0290</b>	
FFM <b>1.536</b>	FF <b>1.545</b>	SFFP <b>0.569</b>
FAM <b>1.242</b>	FA <b>1.242</b>	SAFP <b>12.280</b>
W1 <b>85.0</b>	PD1 <b>140.2</b>	WD <b>5.050</b>
W2 <b>85.0</b>	PD2 <b>140.4</b>	GSA <b>1.0</b>
W3 <b>85.0</b>	PD3 <b>142.6</b>	RSA <b>1.0</b>
W4 <b>85.0</b>	PD4 <b>144.4</b>	PLM <b>9000.0</b>
LCF from stem on CL / on sheer		<b>6.984 / 7.225</b>
Maximum beam station from stem		<b>8.439</b>
RM Measured		<b>238.3kg·m</b>
RM Default		<b>231.9kg·m</b>
Limit of positive stability / Stab.Index		<b>123.8° / 129.1</b>
Freeboard at mast at 5.060		<b>1.354</b>



World Leader in Rating Technology

**2018**

**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>No</b>	Jumper Struts <b>None</b>			
Taper Hollows <b>No</b>	Jib Furler <b>Yes</b>			
Fiber Rigging <b>No</b>	Main Furler <b>Yes</b>			
Lenticular Rigging <b>No</b>	Without Backstay <b>No</b>			
Articulated Bowsprit <b>No</b>				
P <b>16.400</b>	E <b>5.790</b>	MDT1 <b>0.151</b>	MW <b>0.245</b>	
IG <b>17.415</b>	J <b>4.730</b>	MDL1 <b>0.245</b>	GO <b>0.255</b>	
ISP <b>18.180</b>	SFJ <b>0.330</b>	MDT2 <b>0.150</b>	BD <b>0.250</b>	
BAS <b>1.813</b>	SPL <b>0.000</b>	MDL2 <b>0.193</b>	MWT	
FSP <b>0.072</b>	TPS <b>5.650</b>	TL <b>0.720</b>	MCG	

<b>Certificate</b>	
Number <b>030818</b>	
ORC Ref <b>ISR00000129</b>	
Issued On <b>18/08/2018</b>	
VPP Ver. <b>2018 1.00</b>	
Valid until <b>31/12/2018</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 3 or 4 blades</b>	PBW <b>0.125</b>	
Twin Screw <b>No</b>	PIPA <b>0.0039</b>	
ST1 <b>0.050</b>	ST3 <b>0.180</b>	ST5 <b>0.258</b>
ST2 <b>0.180</b>	ST4 <b>0.112</b>	EDL <b>2.820</b>

<b>COMMENTS</b>	

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



Invalid for racing

World Leader In Rating Technology

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

<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.150	1.07	1.89	3.36	4.56	52.50	53.13	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric	SLU	SLE	SL	SHW	SFL	Area	Formula		
	19.50	17.14	18.32	10.30	9.83	155.81	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>
0.08	0.70	1.32	2.58	3.80	4.99	17.19	43.88	Y		08/08/2018	Carbon	

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>Roni Raviv ISR1</b>				
Date <b>03/08/2018</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>	
1	Engine	Yanmar	4JH45	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		
4	Fwd Items	42.0 4-Fenders + Misc-30-		

<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 Condtn Description</i>
2	Tank	Disel	Inox - Fix	200.0	6.25	447.0 Stb side
1	Tank	Water	PVC - Fix	340.0	6.25	0.0 Port side
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>		
2	Battery		7.10	2x110 Ah Stb side		
3	Battery		2.00	Windlass Battery		
1	Battery		7.10	1x 70 Ah Centerline		
1	Misc		2.00	Windlass		

