

 ORC Offshore Racing Congress <i>World leader in rating technology</i>											
2020 ORC Club Certificate											
Rating Office EYU Purje 8 11911, Tallinn Estonia											
Certificate Number Est381 Issued On 5/25/2020 ORC Ref 03580000IOM VPP Ver. 2020 1.02 Valid until 31/12/2020											
Crew Weight <table style="width: 100%; margin-top: 5px;"> <tr> <td style="width: 40%;">Default</td> <td style="width: 30%; text-align: right;">555kg</td> <td style="width: 30%;"></td> </tr> <tr> <td>Maximum</td> <td style="text-align: right;">670kg</td> <td></td> </tr> <tr> <td>Minimum*</td> <td style="text-align: right;">503kg</td> <td></td> </tr> </table> *when applied by the NoR and S Non Manual Pwr No			Default	555kg		Maximum	670kg		Minimum*	503kg	
Default	555kg										
Maximum	670kg										
Minimum*	503kg										
Special Scoring <table style="width: 100%; margin-top: 5px;"> <tr> <th></th> <th style="text-align: right; font-weight: normal;">ToD</th> <th style="text-align: right; font-weight: normal;">ToT</th> </tr> <tr> <td>Non Spin GPH 621.5</td> <td style="text-align: right;">0.9654</td> <td></td> </tr> <tr> <td>Non Spin OSN 604.8</td> <td style="text-align: right;">0.9921</td> <td></td> </tr> </table>				ToD	ToT	Non Spin GPH 621.5	0.9654		Non Spin OSN 604.8	0.9921	
	ToD	ToT									
Non Spin GPH 621.5	0.9654										
Non Spin OSN 604.8	0.9921										
Sails Limitations Headsails 5 Spinnakers 4											
Spinnaker configuration Symmetric: Yes 86.14 Asymmetric: Yes 66.21 Flying H/S: No Spin. Pole: Yes											
Class Division Length CDL = 9.086											
Stability (Measured) Limit Positive Stab.: 130.1° Stability Index: 123.8											

COMMENTS	
Ex. SWE381	

MOVABLE BALLAST
N/A
CENTERBOARD
N/A

Certificate

Number **Est381**
ORC Ref **035800001OM**
Issued On **5/25/2020**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

SAILS INVENTORY																
MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	0.18	1.09	1.95	3.14	3.94	35.08	EST7	29/04/2020	NS	Carbon						
HEADSAILS (3)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.09	0.51	0.96	1.77	2.60	3.42	11.49	103%	20.27	Y	No	EST7	29/04/2020	NS	Carbon	J-2
2	0.09	0.50	0.95	1.76	2.58	3.40	11.50	103%	20.14	Y	No	EST7	29/04/2020	NS	Carbon	J-2
3	0.09	0.44	0.83	1.56	2.29	3.03	10.46	92%	16.25	Y	No		19/04/2018	NS	Unknow	HW-jib
SYMMETRIC SPINNAKERS (3)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
3	13.71	13.71	13.71	7.65	7.10	86.15	EST7	29/04/2020	NS	Nylon	White S-2					
2	13.54	13.54	13.54	7.61	7.24	85.04	EST7	29/04/2020	NS	Nylon	Red S-2					
1	11.66	11.66	11.66	5.50	6.88	56.13		19/04/2018	NS	Unknown	S-4					
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
1	11.73	11.76	11.75	5.20	6.84	54.11	asy77	EST7	29/04/2020	North Sails	Unknown	A-5				

MEASUREMENT INVENTORY					
Measurer 1129 Date 22/05/2019 Comment Internal Ballast total = 24.0					
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG</i>	<i>Description</i>
b1	Ballast	12.0	6.30	0.00	Lead
b2	Ballast	12.0	6.80	0.00	Lead
b1	Battery	8.3	6.30	0.00	Li 40 Ah
b2	Battery	8.3	6.60	0.00	Li 40 Ah

MEASUREMENT INVENTORY								
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn</i>	<i>Description</i>
f	Tank	fuel	plastic	25.0	6.50	0.00	θ-θ	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG</i>	<i>Description</i>			
b1	Ballast	12.0	6.30	0.00	Lead			
b2	Ballast	12.0	6.80	0.00	Lead			
b1	Battery	8.3	6.30	0.00	Li 40 Ah			
b2	Battery	8.3	6.60	0.00	Li 40 Ah			

2020

ORC Club Certificate Appendix

BOAT			
Name	CALENA	Certificate Number	Est381
Sail Nr	EST 381	Issued On	5/25/2020

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	952.6	781.5	712.6	691.2	682.7	672.9	668.7
52°	622.0	539.9	513.6	502.2	495.9	492.6	480.7
60°	587.8	526.6	500.6	484.5	475.6	470.4	456.1
75°	556.4	510.1	486.3	459.9	443.1	433.9	423.2
90°	542.3	496.6	462.8	442.0	423.6	402.6	382.6
110°	558.7	503.1	461.9	422.3	389.7	367.5	336.4
120°	584.8	508.6	463.6	423.6	389.0	357.8	308.8
135°	647.1	534.6	489.8	445.0	400.7	357.7	294.1
150°	765.3	613.8	532.0	490.7	450.6	410.8	325.0
Run VMG	883.7	708.7	610.7	553.6	509.9	473.8	375.2
Selected Courses							
Windward / Leeward	918.2	745.1	661.6	622.4	596.3	573.4	521.9
Circular Random	782.9	639.9	563.9	518.8	488.6	465.6	429.5
Coastal / Long Distance	914.7	703.4	601.7	544.4	506.3	469.6	404.6
Non Spinnaker	857.6	692.4	603.4	550.7	516.4	491.8	455.5

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	43.1°	40.5°	37.3°	36.4°	36.0°	35.4°	35.8°
Beat VMG	3.78	4.61	5.05	5.21	5.27	5.35	5.38
52°	5.79	6.67	7.01	7.17	7.26	7.31	7.49
60°	6.12	6.84	7.19	7.43	7.57	7.65	7.89
75°	6.47	7.06	7.40	7.83	8.12	8.30	8.51
90°	6.64	7.25	7.78	8.15	8.50	8.94	9.41
110°	6.44	7.16	7.79	8.52	9.24	9.80	10.70
120°	6.16	7.08	7.77	8.50	9.26	10.06	11.66
135°	5.56	6.73	7.35	8.09	8.99	10.06	12.24
150°	4.70	5.87	6.77	7.34	7.99	8.76	11.08
Run VMG	4.07	5.08	5.90	6.50	7.06	7.60	9.59
Gybe Angles	143.8°	146.5°	154.0°	162.0°	180.0°	180.0°	143.8°