

BOAT	GPH	HULL
Name CELESTIAL Sail Nr 9535	438.2	Length Overall 15.850m Maximum Beam 4.418m Displacement 6,953kg Draft 3.610m IMS Reg. Division Performance Dynamic Allowance 0.001% Fwd Accommodation No Hull Construction Carbon, Aramid Carbon Rudder Yes Crew Arm Extension
GENERAL		IMSL 15.587m VCGD -1.338m Sink 33.65kg/mm RL 16.025m VCGM -1.328m WS 42.02m² LSM0 15.175m Displacement/Length ratio 1.9897
Class TP 52 J&V Designer J/V Builder Mc Conaghy Series 01/2011 Age 01/2011 Age Allowance 0.260% Offset File 52ALL-11.off - 03/12/2019 15:51:26 Measurement by - 28/11/2019		



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	425.8			484.7		
Time on Time	1.4090			1.3926		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	506.3	389.6	329.7	659.4	492.8	412.9
Time on Time	1.3333	1.7327	2.0471	1.0236	1.3696	1.6347

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	736.4	598.8	550.0	527.5	512.5	498.7	491.9
52°	475.0	400.4	380.0	368.8	360.5	349.3	337.1
60°	443.1	385.4	363.3	349.0	339.6	330.2	314.6
75°	420.5	373.2	339.3	320.7	309.4	301.6	280.8
90°	423.4	375.6	336.5	304.7	286.9	275.0	259.2
110°	455.9	381.1	345.5	317.3	294.2	264.7	228.1
120°	471.3	387.0	341.2	311.4	290.4	265.3	230.8
135°	528.7	412.8	366.5	323.6	284.1	255.2	222.6
150°	636.8	491.3	416.3	370.4	335.9	295.8	233.9
Run VMG	735.3	567.3	480.7	432.1	387.8	341.5	270.0
Selected Courses							
Windward / Leeward	735.8	583.1	515.4	479.8	450.1	420.1	381.0
Circular Random	609.8	490.5	425.6	385.8	358.5	337.9	307.3
Coastal / Long Distance	735.8	548.4	462.0	408.2	373.1	338.6	287.8
Non Spinnaker	668.4	534.0	459.8	414.0	383.1	360.4	327.7

Certificate

Number **3309**
ORC Ref **AUS00000640**
Issued On **03/12/2019**
VPP Ver. **2019 1.01**
Valid until **30/06/2020**

Crew Weight

Default **1,248kg**
Maximum **1,275kg**
Minimum* **956kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	449.9	1.3335
Double H.OSN	440.1	1.3632
Non Spin GPH	474.0	1.2658
Non Spin OSN	464.7	1.2912

Sails Limitations

Headsails	Spinnakers
7	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	44.0°	41.9°	39.4°	38.5°	37.4°	36.7°	36.7°
Beat VMG	4.89	6.01	6.54	6.82	7.02	7.22	7.32
52°	7.58	8.99	9.47	9.76	9.99	10.31	10.68
60°	8.12	9.34	9.91	10.31	10.60	10.90	11.44
75°	8.56	9.65	10.61	11.23	11.64	11.93	12.82
90°	8.50	9.58	10.70	11.81	12.55	13.09	13.89
110°	7.90	9.45	10.42	11.34	12.24	13.60	15.78
120°	7.64	9.30	10.55	11.56	12.40	13.57	15.60
135°	6.81	8.72	9.82	11.12	12.67	14.11	16.17
150°	5.65	7.33	8.65	9.72	10.72	12.17	15.39
Run VMG	4.90	6.35	7.49	8.33	9.28	10.54	13.33
Gybe Angles	140.8°	140.7°	146.6°	151.5°	143.7°	142.7°	143.8°

Class Division Length

CDL = 15.808

Storm Sails Areas

Heavy Weather Jib **52.27**
Storm Jib (JL=12.79) **19.36**
Storm Trysail **25.46**

Owner

BOAT Name CELESTIAL Sail Nr 9535 File 3309 Data in meters/kilograms		INCLINING TEST AND FREEBOARDS Inclining Test Current Inclining Flotation date 28/11/2019 SG 1.0250		 ORC Offshore Racing Congress World leader in rating technology 2019 IMS Measurement Certificate
RIG Forestay Tension Aft & Forward Spreaders 3 Inner Stay None Fitted Runners 0 Carbon Mast Yes Jumper Struts None Taper Hollows No Jib Furler No Fiber Rigging Yes Main Furler No Lenticular Rigging No Without Backstay No Articulated Bowsprit No		FFM 1.478 FF 1.478 SFFP 0.475 FAM 1.146 FA 1.147 SAFF 14.275 W1 41.0 PD1 50.0 WD 14.550 W2 82.0 PD2 100.0 GSA 19.4 W3 123.0 PD3 150.0 RSA 6400.0 W4 164.0 PD4 200.0 PLM 2040.0		
P 20.340 E 7.150 MDT1 0.141 MW 0.285 IG 19.587 J 6.204 MDL1 0.287 GO 0.313 ISP 22.377 SFJ 0.602 MDT2 0.110 BD 0.345 BAS 2.122 SPL 0.176 MDL2 0.176 MWT 236.00 FSP 0.064 TPS 9.000 TL 3.010 MCG 7.810		LCF from stem on CL / on sheer 8.732 / 8.980 Maximum beam station from stem 12.500 RM Measured 424.6kg-m RM Default 355.6kg-m Limit of positive stability / Stab.Index 142.8° / 141.6 Freeboard at mast at 6.806 1.281		
MIZZEN RIG AND SAILS N/A		PROPELLER Installation Strut PRD 0.421 Type Folding 2 blades PBW 0.108 Twin Screw PIPA 0.0038 ST1 0.050 ST3 0.180 ST5 0.268 ST2 0.180 ST4 0.112 EDL 0.626		
COMMENTS New Mast 2019 New Fin and bulb 2019		MOVABLE BALLAST N/A		 COPY ONLY Invalid for Racing World Leader In Rating Technology
		CENTERBOARD N/A		

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	1.950	2.61	3.55	4.98	6.14	97.38	100.11	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric									
Not Available									
Asymmetric	SLU	SLE	SL	SHW	SFL				
on centerline	25.38	21.63	23.50	13.53	13.65	265.49		AS · (SFL + 4·SHW) / 6	

HEADSAILS									
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
0.11	0.99	1.78	3.20	4.68	6.26	20.20	64.81	Y	
Meas.Date 28/11/2019 Material Carbon									

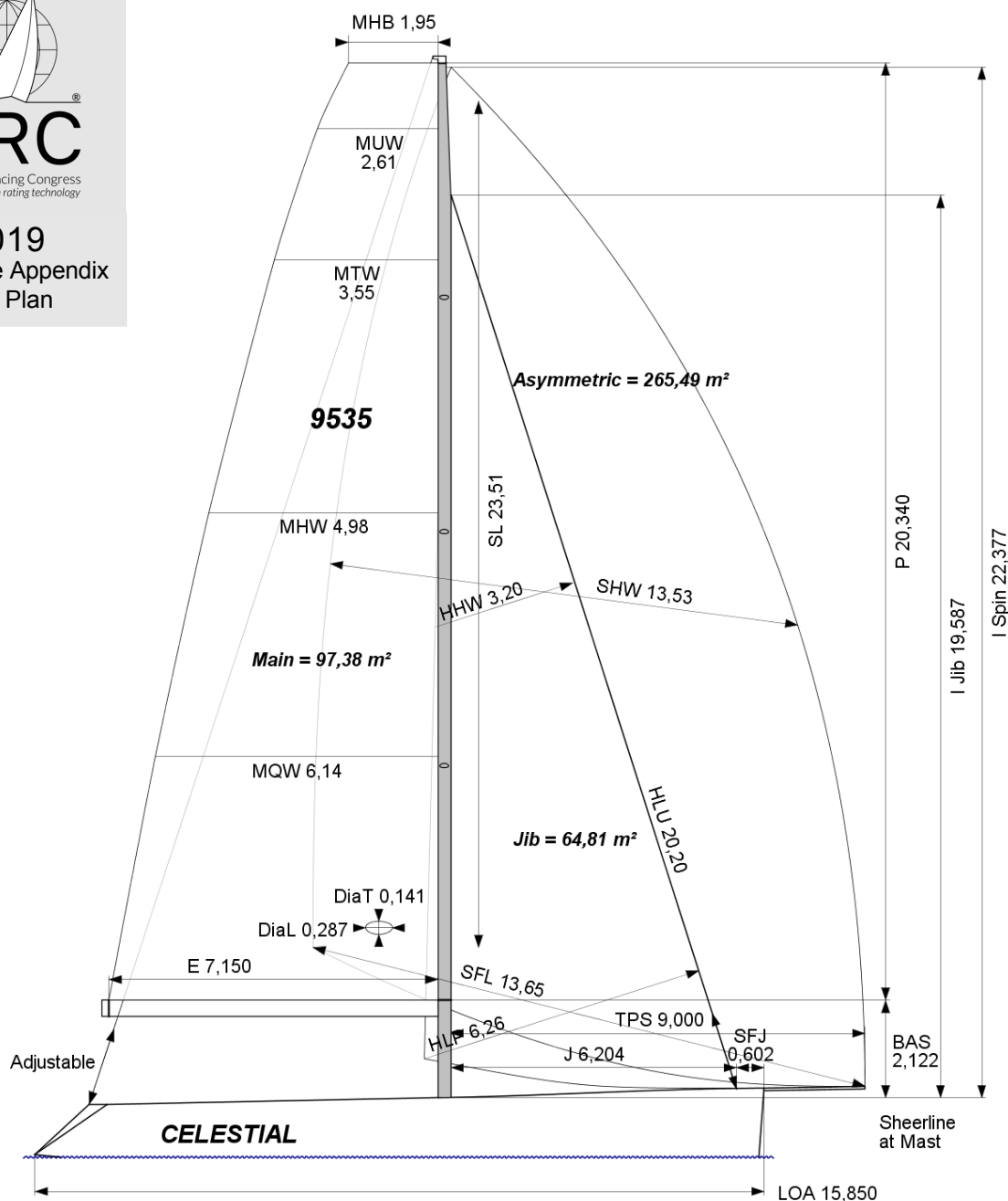
MEASUREMENT INVENTORY					MEASUREMENT INVENTORY																																																										
Measurer 2015 Date 28/11/2019 Comment					<table border="1"> <thead> <tr> <th>Id</th> <th>Item</th> <th>Tank Use</th> <th>Tank Type</th> <th>Capcty</th> <th>Dist.</th> <th>VCG</th> <th>Condtm</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>5</td><td>Tank</td><td>Water</td><td>Rubber</td><td>50.0</td><td>14.65</td><td></td><td>0-0</td><td></td></tr> <tr><td>4</td><td>Tank</td><td>Water</td><td>Rubber</td><td>50.0</td><td>14.65</td><td></td><td>0-0</td><td></td></tr> <tr><td>3</td><td>Tank</td><td>Water</td><td>Plastic</td><td>125.0</td><td>12.60</td><td></td><td>0-0</td><td></td></tr> <tr><td>2</td><td>Tank</td><td>Fuel</td><td>SS</td><td>60.0</td><td>10.60</td><td></td><td>0-0</td><td></td></tr> <tr><td>1</td><td>Tank</td><td>Fuel</td><td>SS</td><td>25.0</td><td>9.40</td><td></td><td>20-0</td><td></td></tr> </tbody> </table>					Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtm	Description	5	Tank	Water	Rubber	50.0	14.65		0-0		4	Tank	Water	Rubber	50.0	14.65		0-0		3	Tank	Water	Plastic	125.0	12.60		0-0		2	Tank	Fuel	SS	60.0	10.60		0-0		1	Tank	Fuel	SS	25.0	9.40		20-0	
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Id	Item	Weight	Distance	VCG	Description																																																										
Id	Item	Maker	Model																																																												
1	Engine	Yanmar	4JH5X1																																																												
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1	Battery	14.0	9.00		Starter 12v Sealed																																																										
2	Battery	24.0	9.00		12v Sealed																																																										
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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	1.95	2.61	3.55	4.98	6.14	97.38		28/11/2019	North	Carbon	

HEADSAILS (1)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.11	0.99	1.78	3.20	4.68	6.26	20.20	101%	64.81	Y			28/11/2019	North	Carbon	

SYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
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ASYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
1	25.38	21.63	23.50	13.53	13.65	265.49	asym		28/11/2019	North	Nylon	