

BOAT Name Flying Cloud Sail Nr ITA-14840	GPH 553.4	HULL Length Overall 12.005m Maximum Beam 4.018m Displacement 5,686kg Draft 2.573m IMS Reg. Division Performance Dynamic Allowance 0.000% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class Millenium 40 QB Designer Lostuzzi Builder Starmarina Series 09/2003 Age 06/2004 Age Allowance 0.487% Offset File I14840.off - 31/10/2014 16:44:10 Measurement by - 08/06/2019		IMSL 11.441m VCGD -0.134m Sink 22.56kg/mm RL 10.721m VCGM -0.086m WS 29.32m² LSM0 11.328m Displacement/Length ratio 3.9115



2019
ORC International
Certificate

Rating Office

Offshore
Racing
Congress

COPY ONLY
Invalid for
RACING

World Leader In Rating Technology

SCORING OPTIONS						
Time on Distance	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	539.4			606.8		
Time on Time	1.1123			1.1125		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	622.9	493.9	441.6	802.9	608.3	537.7
Time on Time	1.0837	1.3667	1.5287	0.8407	1.1096	1.2554

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	901.3	744.7	670.9	644.9	632.9	620.5	611.7
52°	595.3	503.8	471.7	461.2	455.9	453.1	443.2
60°	564.5	487.2	460.5	448.7	442.4	438.8	426.7
75°	540.8	476.5	450.7	432.6	419.6	412.2	404.5
90°	545.8	475.5	449.7	427.8	406.7	390.2	373.3
110°	548.9	467.4	435.0	413.3	397.6	382.2	355.9
120°	562.9	472.8	437.8	406.0	381.4	364.2	335.6
135°	633.0	507.4	457.3	426.4	393.9	361.7	304.5
150°	753.3	602.5	509.3	461.3	438.0	414.0	349.9
Run VMG	869.8	695.7	588.1	532.2	505.5	472.6	404.0

Certificate
Number **044/19**
ORC Ref **ROU10025722**
Issued On **13/06/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight
Default **822kg**
Maximum **780kg**
Minimum* **585kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Double H.GPH **565.1 1.0617**
Double H.OSN **552.9 1.0851**
Non Spin GPH **590.1 1.0168**
Non Spin OSN **575.9 1.0419**

Selected Courses							
Windward / Leeward	885.5	720.2	629.5	588.6	569.2	546.5	507.8
Circular Random	752.3	611.6	537.6	495.3	468.5	449.4	419.8
Coastal / Long Distance	884.0	678.1	571.0	513.5	482.1	452.6	401.8
Non Spinnaker	818.7	658.8	572.4	521.4	489.0	466.8	436.6

Sails Limitations
Headsails **6** Spinnakers **4**

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	42.1°	40.7°	38.8°	37.4°	36.9°	36.3°	36.8°
Beat VMG	3.99	4.83	5.37	5.58	5.69	5.80	5.89
52°	6.05	7.15	7.63	7.81	7.90	7.95	8.12
60°	6.38	7.39	7.82	8.02	8.14	8.20	8.44
75°	6.66	7.56	7.99	8.32	8.58	8.73	8.90
90°	6.60	7.57	8.01	8.42	8.85	9.23	9.64
110°	6.56	7.70	8.28	8.71	9.05	9.42	10.11
120°	6.40	7.61	8.22	8.87	9.44	9.89	10.73
135°	5.69	7.10	7.87	8.44	9.14	9.95	11.82
150°	4.78	5.97	7.07	7.80	8.22	8.70	10.29
Run VMG	4.14	5.17	6.12	6.76	7.12	7.62	8.91
Gybe Angles	142.9°	145.4°	148.4°	151.5°	150.3°	176.3°	143.8°

Class Division Length
CDL = **11.082**

Storm Sails Areas
Heavy Weather Jib **38.53**
Storm Jib (JL=10.99) **14.27**
Storm Trysail **15.30**

Owner

BOAT		
Name Flying Cloud	Sail Nr ITA-14840	
File ITA14840	Data in meters/kilograms	

RIG				
Forestay Tension Aft	Spreaders 2			
Inner Stay None Fitted	Runners 0			
Carbon Mast Yes	Jumper Struts None			
Taper Hollows No	Jib Furler No			
Fiber Rigging No	Main Furler No			
Lenticular Rigging No	Without Backstay No			
Articulated Bowsprit No				
P 15.750	E 5.550	MDT1 0.110	MW 0.203	
IG 16.840	J 4.800	MDL1 0.203	GO 0.218	
ISP 17.930	SFJ	MDT2 0.100	BD 0.245	
BAS 1.700	SPL 0.000	MDL2 0.175	MWT 129.00	
FSP 0.066	TPS 5.800	TL 0.700	MCG 6.320	

INCLINING TEST AND FREEBOARDS					
Inclining Test Current Inclining					
Flotation date 08/06/2019			SG 1.0150		
FFM 1.370	FF 1.373	SFFP 0.198			
FAM 0.960	FA 0.962	SAFP 11.630			
W1 103.1	PD1 601.6	WD 12.235			
W2 103.1	PD2 601.4	GSA 1.0			
W3 103.1	PD3 598.9	RSA 1.0			
W4 103.1	PD4 600.9	PLM 9000.0			
LCF from stem on CL / on sheer			6.943 / 7.222		
Maximum beam station from stem			7.913		
RM Measured			165.4kg-m		
RM Default			172.4kg-m		
Limit of positive stability / Stab.Index			117.1° / 114.0		
Freeboard at mast at 4.800			1.121		



ORC
Offshore Racing Congress
World leader in rating technology

2019
IMS Measurement
Certificate

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.435		
Type Folding 2 blades	PBW 0.115		
Twin Screw No	PIPA 0.0037		
ST1 0.051	ST3 0.200	ST5 0.260	
ST2 0.170	ST4 0.115	EDL 1.800	

Certificate	
Number 044/19	
ORC Ref ROU10025722	
Issued On 13/06/2019	
VPP Ver. 2019 1.01	
Valid until 31/12/2019	

COMMENTS

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



COPY ONLY
Invalid for Racing

World Leader In Rating Technology

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.500	1.34	2.18	3.56	4.62	52.70	53.82	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	Area	Formula		
	20.40	16.90	18.65	9.95	10.12	155.17	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	Meas.Date	Material	Comment
0.12	0.86	1.57	2.81	3.91	4.88	16.50	44.12	N		07/06/2019	Carbon	LIGHT 2019
0.18	0.84	1.55	2.80	3.92	4.87	16.45	43.92	N	N		Unknow	
0.12	0.78	1.42	2.59	3.71	4.79	16.35	41.37	N	N		Unknow	

MEASUREMENT INVENTORY				
Measurer				
Date 08/06/2019				
Comment 3 doors missing, table missing, oven				
<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>	
e	Engine	Lombardini	40hp	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Description</i>	

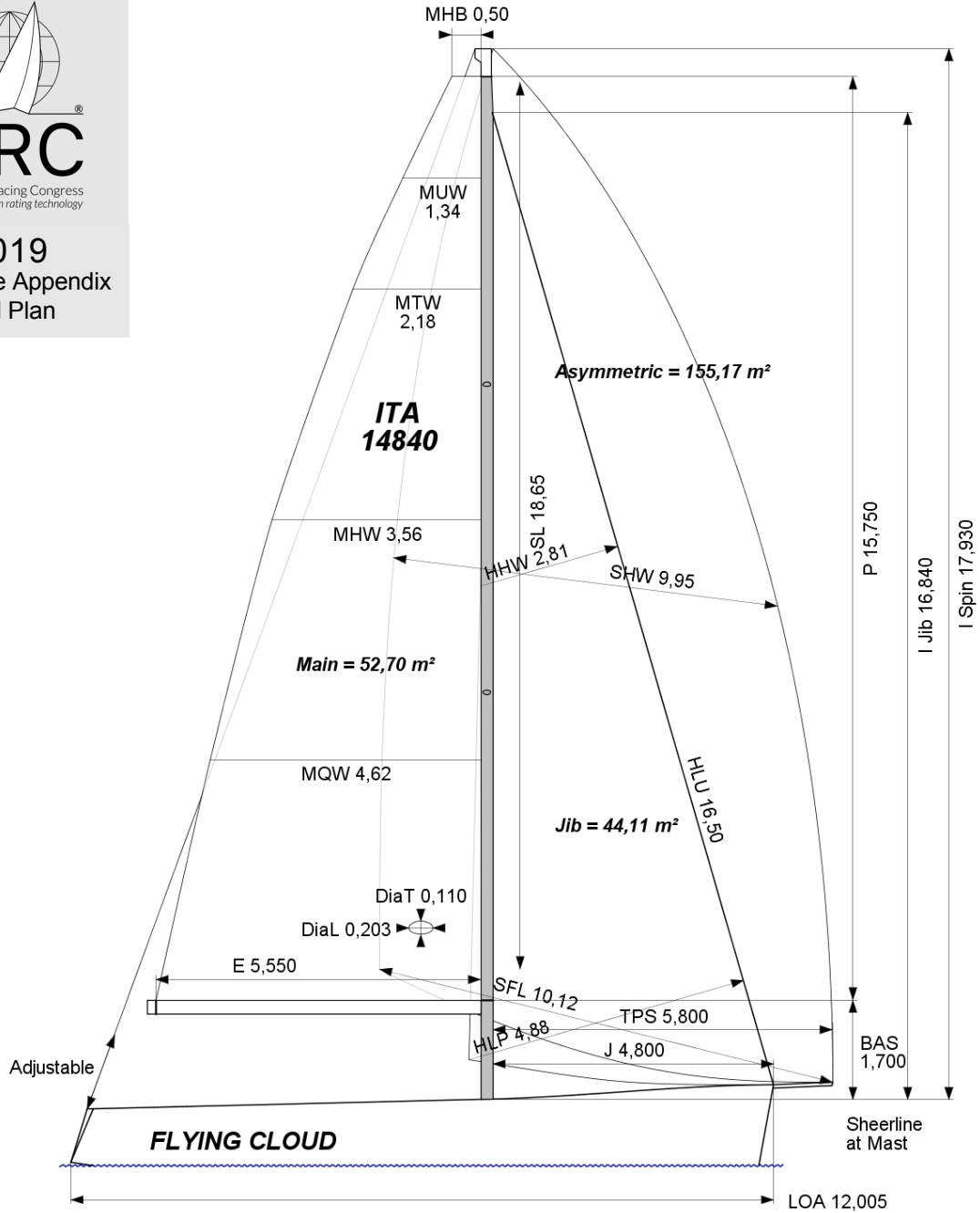
MEASUREMENT INVENTORY									
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn</i>	<i>Description</i>	
w2	Tank	water	plastic	200.0	9.20			empty	
w1	Tank	water	plastic	200.0	9.20			empty	
d2	Tank	diesel	stainless	50.0	6.10			empty	
d	Tank	diesel	stainless	50.0	6.10			empty	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>					
b	Ballast	112.0	5.40	led					
b3	Battery	15.0	8.60						
b2	Battery	15.0	8.60						
b1	Battery	10.0	8.60						
frid	Misc	7.0	6.40						



ORC

Offshore Racing Congress
World leader in rating technology

2019
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
C	0.50	1.34	2.18	3.56	4.62	52.71		09/07/2014		Kevlar	

HEADSAILS (3)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
JL	0.12	0.86	1.57	2.81	3.91	4.88	16.50	102%	44.12	N			07/06/2019	ONE SAILS	Carbon	LIGHT 2019
D	0.18	0.84	1.55	2.80	3.92	4.87	16.45	101%	43.92	N	N				Unknow	
E	0.12	0.78	1.42	2.59	3.71	4.79	16.35	100%	41.37	N	N				Unknow	

SYMMETRIC SPINNAKERS (0)

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

ASYMMETRIC SPINNAKERS (3)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
A	20.40	16.90	18.65	9.95	10.12	155.17	asym		06/11/2010	DOYLE	Nylon	
B	20.75	16.85	18.80	9.73	10.30	154.23	asym		06/11/2010	DOYLE	Nylon	
S	19.55	15.78	17.66	9.85	10.32	146.39	asym		07/06/2019	ONE SAILS	Nylon	2019