

BOAT Name SYNERGY Sail Nr MON-13	GPH 463.6	HULL Length Overall 11.994m Maximum Beam 3.556m Displacement 3,665kg Draft 3.206m IMS Reg. Division Performance Dynamic Allowance 0.000% Fwd Accommodation No Hull Construction Carbon, Light Stanch. Carbon Rudder Yes Crew Arm Extension
GENERAL Class MELGES 40 Designer BOTIN & PARTNERS Builder PCT Series 08/2016 Age 08/2016 Age Allowance 0.098% Offset File MELG40.off - 12/03/2019 21:44:02 Measurement by - 05/05/2019		IMSL 11.855m VCGD -0.159m Sink 22.41kg/mm RL 14.197m VCGM -0.159m WS 26.80m² LSM0 11.585m Displacement/Length ratio 2.3571



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	453.0			514.2		
Time on Time	1.3246			1.3128		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	523.3	417.8	352.4	668.1	524.3	438.6
Time on Time	1.2898	1.6157	1.9154	1.0103	1.2875	1.5390

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	723.9	614.8	577.0	560.4	546.0	535.1	528.8
52°	479.3	433.7	414.7	402.6	390.9	376.5	364.9
60°	459.8	419.4	395.9	382.7	372.7	355.2	341.4
75°	448.3	405.3	367.5	351.0	339.8	327.3	303.2
90°	451.9	408.3	361.6	329.1	313.7	302.9	278.3
110°	471.4	411.9	368.5	338.1	313.1	278.5	250.5
120°	485.7	419.9	363.7	329.8	307.7	277.8	239.0
135°	538.0	446.2	398.2	347.6	301.1	266.6	225.1
150°	643.4	511.8	445.7	406.7	358.5	315.9	234.4
Run VMG	742.9	590.9	517.3	469.6	414.0	364.8	270.6

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Number **01301**
ORC Ref **ESP00004138**
Issued On **09/05/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight
Default **849kg**
Maximum **737kg**
Minimum* **553kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Double H.GPH **475.4 1.2621**
Double H.OSN **466.2 1.2869**
Non Spin GPH **497.2 1.2068**
Non Spin OSN **488.1 1.2293**

Selected Courses							
Windward / Leeward	733.4	602.9	547.2	515.0	480.0	449.9	399.7
Circular Random	630.5	514.9	451.9	412.4	383.9	361.2	325.4
Coastal / Long Distance	734.3	570.3	491.9	439.3	400.3	362.9	304.1
Non Spinnaker	684.0	554.8	483.8	439.7	409.0	385.5	349.8

Sails Limitations
Headsails **7** Spinnakers **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	42.0°	38.8°	35.8°	34.5°	33.8°	33.4°	33.9°
Beat VMG	4.97	5.86	6.24	6.42	6.59	6.73	6.81
52°	7.51	8.30	8.68	8.94	9.21	9.56	9.87
60°	7.83	8.58	9.09	9.41	9.66	10.13	10.55
75°	8.03	8.88	9.79	10.26	10.59	11.00	11.87
90°	7.97	8.82	9.96	10.94	11.48	11.89	12.93
110°	7.64	8.74	9.77	10.65	11.50	12.93	14.37
120°	7.41	8.57	9.90	10.92	11.70	12.96	15.06
135°	6.69	8.07	9.04	10.36	11.95	13.51	15.99
150°	5.60	7.03	8.08	8.85	10.04	11.40	15.36
Run VMG	4.85	6.09	6.96	7.67	8.70	9.87	13.30
Gybe Angles	141.5°	145.3°	152.0°	150.0°	143.0°	142.5°	143.7°

Class Division Length
CDL = **13.028**

Storm Sails Areas
Heavy Weather Jib **40.84**
Storm Jib (JL=11.31) **15.13**
Storm Triesail **17.80**

Owner

BOAT	
Name SYNERGY	Sail Nr MON-13
File MON13	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS		
Inclining Test Boom Inclining	LCFD	8.455
Flotation date 05/05/2019	SG	1.0260
FFM 0.082	FF 0.082	SFFP 0.000
FAM 0.418	FA 0.418	SAFP 11.986
W1 94.8	PD1 262.9	WD 5.351
W2 94.8	PD2 257.4	GSA 1.0
W3 94.8	PD3 257.4	RSA 1.0
W4 94.8	PD4 259.8	PLM 9000.0
LCF from stem on CL / on sheer		6.780 / 6.997
Maximum beam station from stem		7.800
RM Measured		154.0kg-m
RM Default		115.0kg-m
Limit of positive stability / Stab.Index		98.4° / 94.3
Freeboard at mast at 5.360		0.959



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RIG	
Forestay Tension Aft	Spreaders 2
Inner Stay None Fitted	Runners 1
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	
P 18.000	E 5.650 MDT1 0.140 MW 0.260
IG 17.360	J 5.260 MDL1 0.260 GO 0.270
ISP 19.710	SFJ 0.100 MDT2 0.125 BD 0.200
BAS 1.710	SPL 0.220 MDL2 0.220 MWT 159.30
FSP 0.056	TPS 7.280 TL 1.470 MCG 7.330

MIZZEN RIG AND SAILS	
N/A	

PROPELLER	
Type No Propeller	

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COMMENTS	

MOVABLE BALLAST	
Keel Angle	45.0
List Angle	13.3
BLR Index	0.7317

BILGEBOARD		
BS 2.500	BT 0.045	BA
BF 0.550	BX 4.960	
BC 0.330	BY	

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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	1.650	2.19	2.94	4.05	4.92	69.97	71.66	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		
	22.25	18.25	20.25	10.61	11.50	182.05	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
0.15	0.92	1.62	2.87	4.11	5.24	17.82	50.03	Y		05/05/2019	Carbon	

MEASUREMENT INVENTORY				
Measurer	ESP295			
Date	05/05/2019			
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	LOMBARDINI	20 HP	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

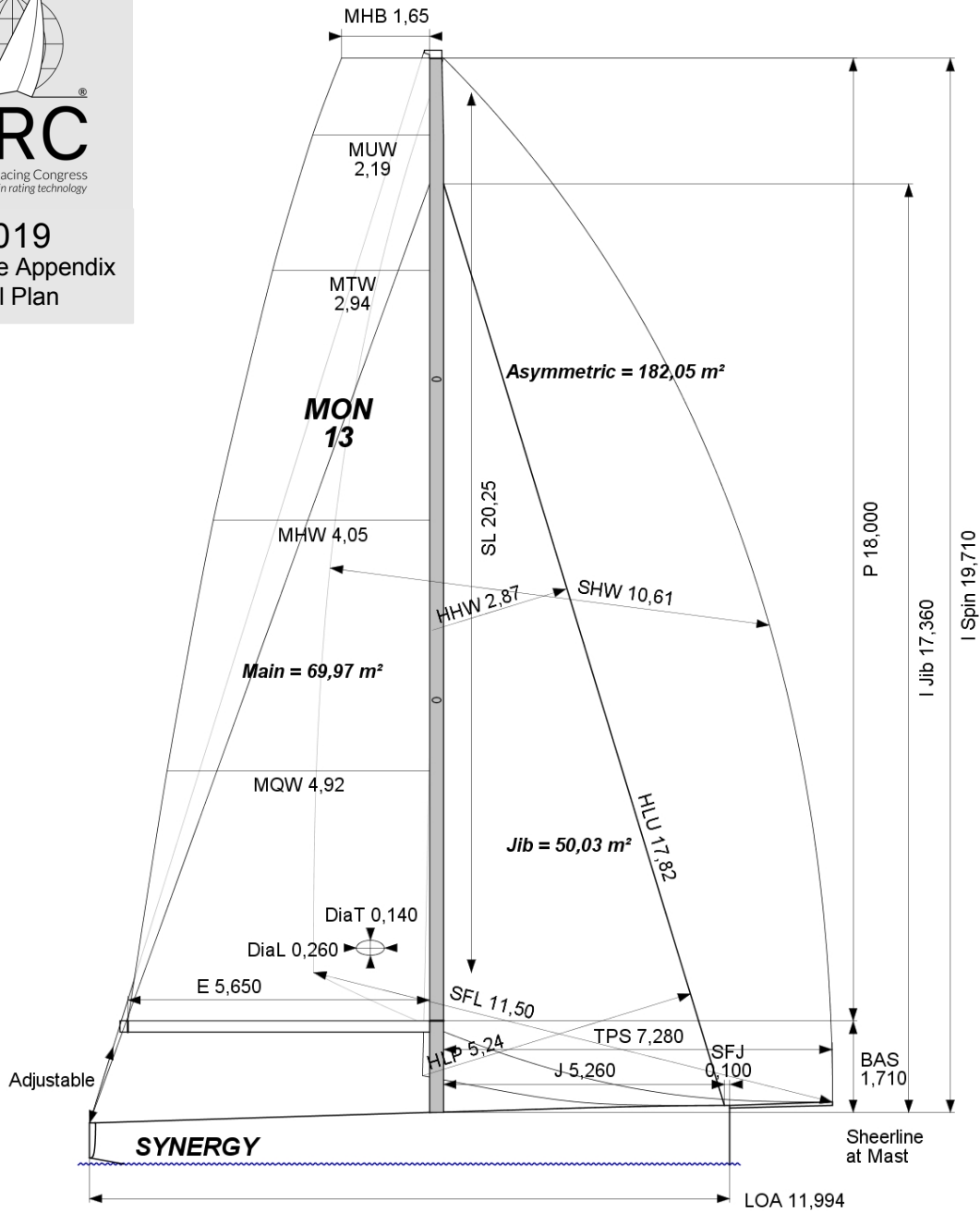
MEASUREMENT INVENTORY								
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn</i>	<i>Description</i>
#1	Tank	G.O.	PVC	40.0	4.75	-0.10	0-0	
#2	Tank	H2O	INFLA		4.25	-0.10	0-0	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>				
#1	Ballast	53.9	6.25	-0.10 LEAD PIG				
#2	Ballast	53.2	6.25	-0.10 LEAD PIG				
#1	Battery		6.25	-0.10 2 x 24v				
#2	Battery		6.25	-0.10 1 x 12v				
#3	Battery		7.80	-0.10 1 x 12v				



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SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
MN	1.65	2.19	2.94	4.05	4.92	69.79		05/05/2019	QUANTUM	Carbon						
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
J1	0.15	0.92	1.62	2.87	4.11	5.24	17.82	100%	50.03	Y			05/05/2019	QUANTUM	Carbon	
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
A2	22.25	18.25	20.25	10.61	11.50	182.05	asym		05/05/2019	QUANTUM	Nylon					
A1.5	22.18	18.48	20.33	10.35	11.64	179.72	asym		05/05/2019	QUANTUM	Nylon					