

BOAT	GPH	HULL
Name QUEMAS Sail Nr ITA-16816	656,0	Length Overall 10,025m Maximum Beam 3,428m Displacement 5.077kg Draft 1,919m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0,266% Fwd Accommodation Yes Hull Construction Solid Carbon Rudder No Crew Arm Extension
GENERAL		IMSL 9,254m VCGD -0,060m Sink 17,09kg/mm
Class ELAN 333 Designer HUMPHREYS Builder ELAN Series 01/1998 Age 07/2004 Age Allowance 0,488% Offset File ELAN333.OFF - 13/04/2016 17:39:40 Measurement by BERTONE-PINDOZZI - 24/06/2016		RL 7,622m VCGM 0,034m WS 22,70m²
		LSM0 9,266m Displacement/Length ratio 6,3816



World Leader in Rating Technology

2016
ORC International
Certificate

Rating Office
FEDERAZIONE ITALIANA VELA
Distr.:UVAI www.uvai.it
Tel.068841273
Fax.068841293
E-mail uvairoma@tin.it



SCORING OPTIONS						
	OFFSHORE COASTAL / LONG DISTANCE			INSHORE WINDWARD / LEEWARD		
Time On Distance	636,7			709,2		
Time On Time	0,9423			0,9518		
Performance Line	PLT		PLD	PLT		PLD
	0,638		37,2	0,777		182,8
Triple Number	Low	Medium	High	Low	Medium	High
	0,8917	1,1636	1,3182	0,6890	0,9423	1,1043

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1140,4	945,8	837,4	764,9	731,3	714,7	705,0
52°	740,1	622,0	556,0	525,7	512,0	505,8	501,0
60°	695,0	586,1	534,7	511,6	498,2	490,8	485,0
75°	658,2	559,5	519,6	499,6	483,9	470,5	455,6
90°	661,7	559,6	513,4	491,8	479,2	468,0	439,7
110°	665,3	551,5	508,7	483,6	461,5	443,8	420,2
120°	683,9	564,0	514,6	488,9	464,4	440,1	407,0
135°	751,4	613,2	537,1	504,7	481,7	458,2	413,2
150°	883,4	703,4	597,3	534,2	504,9	483,4	440,0
Run VMG	1020,0	812,3	688,7	606,6	549,6	514,5	471,7
Selected Courses							
Windward / Leeward	1080,2	879,1	763,1	685,7	640,5	614,6	588,4
Circular Random	907,7	731,5	636,3	580,4	545,6	522,8	493,8
Ocean for PCS	1110,4	857,4	714,0	625,8	568,3	528,4	473,2
Non Spinnaker	970,4	776,0	669,5	606,2	566,5	540,6	508,7

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	43,8°	42,1°	42,3°	41,1°	39,6°	38,7°	39,1°
Beat VMG	3,16	3,81	4,30	4,71	4,92	5,04	5,11
52°	4,86	5,79	6,48	6,85	7,03	7,12	7,19
60°	5,18	6,14	6,73	7,04	7,23	7,33	7,42
75°	5,47	6,43	6,93	7,21	7,44	7,65	7,90
90°	5,44	6,43	7,01	7,32	7,51	7,69	8,19
110°	5,41	6,53	7,08	7,44	7,80	8,11	8,57
120°	5,26	6,38	7,00	7,36	7,75	8,18	8,85
135°	4,79	5,87	6,70	7,13	7,47	7,86	8,71
150°	4,08	5,12	6,03	6,74	7,13	7,45	8,18
Run VMG	3,53	4,43	5,23	5,93	6,55	7,00	7,63
Gybe Angles	145,9°	150,4°	151,4°	157,9°	180,0°	180,0°	180,0°

Certificate
Number **168161**
ORC Ref **ITA00020282**
Issued On **30/06/2016**
VPP Ver. **2016 1.01**
Valid until **31/12/2016**

Crew Weight
Declared **630kg**
Default* **617kg**
Non Manual Pwr **No**

Special Scoring
ToD ToT
Double H.GPH **660,2 0,9089**
Double H.OSN **642,7 0,9335**
Non Spin GPH **691,1 0,8682**
Non Spin OSN **669,2 0,8966**
N/S Perf. Line **10,4 0,567**

Sails Limitations
Headsails **6** Spinnakers **3**

Class Division Length
CDL = **8,439**

Storm Sails Areas
Heavy Weather Jib **22,72**
Storm Jib (JL=8,43) **8,42**
Storm Trysail **9,69**

Owner
BONSIGNORE PAOLO
VIA BELPOGGIO,2
34123 TRIESTE
Y.C.MARINA AN GIUSTO

I certify that I understand my responsibilities under ORC Rules and Regulations

Signature

BOAT										INCLINING TEST AND FREEBOARDS									
Name QUEMAS					Sail Nr ITA-16816					Inclining Test Current Inclining									
File I16816.dxt					Data in meters/kilograms					Flotation date 10/04/2015 SG 1,0010									
RIG										FFM 1,233 FF 1,240 SFFP 0,400 FAM 0,941 FA 0,950 SAFFP 9,350									
Forestay Tension Aft Spreaders 2 Inner Stay None Fitted Runners 0 Carbon Mast No Jumper Struts None Taper Hollows No Jib Furler No Fiber Rigging No Main Furler No Lenticular Rigging No Without Backstay No Articulated Bowsprit No										W1 60,000 PD1 530,5 WD 10,840 W2 60,000 PD2 518,5 GSA 1,0 W3 60,000 PD3 529,7 RSA 1,0 W4 60,000 PD4 523,1 PLM 9000,0									
P 12,300 E 4,500 MDT1 0,095 MW 0,163 IG 12,920 J 3,620 MDL1 0,176 GO 0,178 ISP 14,170 SFJ 0,095 MDT2 0,095 BD 0,143 BAS 1,708 SPL 3,900 MDL2 0,129 MWT 134,00 FSP 0,062 TPS 4,440 TL 2,276 MCG 4,330										LCF from stem on CL / on sheer 5,565 / 5,809 Maximum beam station from stem 6,599 RM Measured 97,5kg-m RM Default 96,7kg-m Limit of positive stability / Stab.Index 113,4° / 114,2 Freeboard at mast at 3,620 1,005									
MIZZEN RIG AND SAILS										PROPELLER									
N/A										Installation Strut PRD 0,416 Type Folding 2 blades PBW 0,121 Twin Screw No PIPA 0,0034									
										ST1 0,042 ST3 0,180 ST5 0,321 ST2 0,180 ST4 0,112 EDL 2,200									
COMMENTS										MOVEABLE BALLAST									
										N/A									
CENTERBOARD																			
										N/A									
SAILS (Maximum Areas)																			
Mainsail										MHB MUW MTW MHW MQW 0,060 0,77 1,45 2,66 3,62 Area Area (r) Formula 30,80 31,23 $P/8 \cdot (E + 2 \cdot MQW + 2 \cdot MHW + 1.5 \cdot MTW + MUW + 0.5 \cdot MHB)$									
Symmetric										SLU SLE SL SHW SFL 13,93 13,93 13,93 7,60 7,14 87,16 SL · (SFL + 4 · SHW) / 6									
Asymmetric										SLU SLE SL SHW SFL 12,76 11,82 12,29 4,98 6,57 54,26 65,80 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 0,09 0,65 1,25 2,50 3,80 5,09 12,55 31,80 N N 24/06/2016 Technor 0,07 0,63 1,23 2,51 3,82 5,08 12,10 30,64 N N 03/04/2015 Polyest 0,00 0,00 0,00 0,00 0,00 3,80 12,15 23,50 N N 03/04/2015 Polyest																			
MEASUREMENT INVENTORY										MEASUREMENT INVENTORY									
Measurer BERTONE 134 Date 10/04/2015 Comment										Id Item Tank Use Tank Type Capcty Dist. VCG Condtm Description A Tank DIESEL INOX 80,0 8,20 0,20 20,0 LT B Tank WATER INOX 100,0 4,60 0,25 0,0 A DX C Tank WATER INOX 77,0 4,60 0,25 0,0 A SX									
Id Item Weight Distance VCG Description A Engine VOLVO PENTA 29 HP										Id Item Weight Distance VCG Description A Battery 0,0 7,40 0,30 2 x 63 Ah + 1 x 70 Ah A Misc 0,0 0,94 1,00 SALPA ANCORE ELETTRICO B Misc 0,0 8,20 0,00 BOILER 20 LITRI C Misc 0,0 5,90 0,00 FORNELLO CON FORNO D Misc 0,0 0,00 0,00 AUTOPILOTA									



World Leader in Rating Technology

2016

IMS Measurement Certificate

Certificate

Number **168161**
ORC Ref **ITA00020282**
Issued On **30/06/2016**
VPP Ver. **2016 1.01**
Valid until **31/12/2016**

