

BOAT
Name EL TUNANTE
Sail Nr PER 3005

GPH
589.1

HULL					
Length Overall	13.350 m				
Maximum Beam	4.250 m				
Displacement	10,564 kg				
Draft	2.241 m				
IMS Reg. Division	Cruiser/Racer				
Dynamic Allowance	0.544%				
Fwd Accommodation	Yes				
Hull Construction	Solid				
Carbon Rudder	No				
Crew Arm Extension					
IMS L	12.241	VCGD	0.205	VCGM	0.174
Sink	29.57 kg/mm	Wetted Area	37.98 m²		



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2011
ORC International
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GENERAL
Class Dufour 44
Designer Umberto Felci
Builder Dufour
Series 04/2002
Age 10/2006
Age Allowance 0.585%
Offset File dufour44.off - 29/12/2003 08:41:30
Measurement by Juan Carrion - 29/01/2009

SCORING OPTIONS						
	OFFSHORE			INSHORE		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	589.1			647.9		
Time On Time	1.0185			1.0418		
Performance Line	PLT	PLD		PLT	PLD	
	0.853	78.1		0.825	164.9	
Triple Number	Low	Medium	High	Low	Medium	High
	0.9827	1.2994	1.4861	0.7466	1.0310	1.2190

Rating Office

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TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1021.0	839.3	740.8	690.6	660.6	641.5	634.2
52°	650.7	540.1	488.8	464.1	450.9	442.8	436.1
60°	603.6	510.2	465.6	443.5	432.7	425.6	418.0
75°	565.6	488.4	449.9	426.6	411.0	403.1	394.1
90°	570.5	491.7	450.6	430.0	411.5	396.5	377.3
110°	606.0	498.7	448.6	420.2	398.1	382.3	367.5
120°	627.1	512.3	458.2	427.8	405.1	385.5	353.9
135°	708.2	566.8	492.7	451.7	425.8	405.0	369.0
150°	851.6	669.2	560.8	496.2	456.4	430.6	392.3
Run VMG	983.4	772.7	647.5	567.0	512.1	472.4	423.5

Certificate	
Number	PERI28
ORC Ref	PER00000219
Issued On	12/09/2011
VPP Ver.	2011 1.02
Valid until	31/03/2012

Selected Courses							
Windward / Leeward	1020.9	818.0	704.7	636.9	593.2	563.5	535.4
Circular Random	821.7	659.4	571.1	518.8	485.9	464.3	438.4
Ocean for PCS	877.8	689.6	583.6	518.0	474.4	443.3	400.2
Non Spinnaker	869.6	693.1	595.8	537.3	500.2	475.7	446.1

Crew Weight	
Declared	830 kg
Default*	926 kg
Non Manual Power	No

Special Scoring		
	ToD	ToT
Double Handed	590.9	1.0154
Non Spinnaker	615.2	0.9753
N/S Perf. Line	50.2	0.772

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	45.4°	44.5°	43.1°	40.9°	39.7°	39.0°	39.7°
Beat VMG	3.53	4.29	4.86	5.21	5.45	5.61	5.68
52°	5.53	6.67	7.36	7.76	7.98	8.13	8.26
60°	5.96	7.06	7.73	8.12	8.32	8.46	8.61
75°	6.37	7.37	8.00	8.44	8.76	8.93	9.13
90°	6.31	7.32	7.99	8.37	8.75	9.08	9.54
110°	5.94	7.22	8.03	8.57	9.04	9.42	9.80
120°	5.74	7.03	7.86	8.41	8.89	9.34	10.17
135°	5.08	6.35	7.31	7.97	8.45	8.89	9.76
150°	4.23	5.38	6.42	7.26	7.89	8.36	9.18
Run VMG	3.66	4.66	5.56	6.35	7.03	7.62	8.50
Gybe Angles	141.4°	146.1°	149.0°	158.1°	164.7°	169.3°	173.8°

Sails Limitations		
Genoas	Jibs	Spinnakers
4	3	4
Spinnaker configuration Symmetric		

Storm Sails Areas	
Heavy Weather Jib	42.88
Storm Jib (JL=11.59)	15.88
Storm Triesail	16.26

Owner

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

Signature

BOAT	
Name EL TUNANTE	Sail Nr PER 3005
File PER3005.dxt	Data in meters/kilograms

RIG				
Forestay Tension Aft	Spreaders 3		Runners 0	
Inner Forestay None Fitted	Carbon Mast No		Jumper Struts None	
Taper Hollows No	Fiber Rigging No		Jib Furler No	
Lenticular Rigging No	Main Furler No		Without Backstay No	
Articulated Bowsprit No				
P 16.740	E 5.550	MDT1 0.120	TL 1.000	
IG 17.550	J 5.220	MDL1 0.235	MWT	
ISP 17.650	SFJ 0.150	MDT2 0.120	MCG 5.860	
SPS 3.910	SPL 5.120	MDL2 0.180	CPW 2.770	
BAS 1.720	TPS	MW 0.180	BD 0.190	
BAL 0.280	FSP 0.080	GO 0.260	BWT	

MIZZEN RIG AND SAILS				
N/A				

COMMENTS				


INCLINING TEST AND FREEBOARDS					
Inclining Test Current Inclining					
Flotation date 27/04/2011			SG 1.0260		
FFM 1.446	FF 1.446	SFFP 0.502			
FAM 1.165	FA 1.165	SAFP 12.353			
W1 123.90	PD1 437.0	WD 12.587			
W2 123.90	PD2 437.0	GSA 1000.0			
W3 123.90	PD3 437.0	RSA 1000.0			
W4 123.90	PD4 437.0	PLM 9000.0			
Maximum beam station from stem					8.500
RM Measured / Default					281.0 / 287.8
Limit of positive stability					108.0°
Stability Index					112.8
Freeboard at mast at 5.370					1.253

PROPELLER					
Installation Strut	PRD 0.460				
Type Folding	PBW 0.120				
Twin Screw No	PIPA 0.0040				
ST1 0.063	ST3 0.180	ST5 0.310			
ST2 0.180	ST4 0.108	EDL 3.150			

WATER BALLAST					
N/A					

CENTERBOARD					
N/A					

SAILS (Maximum Areas)										
Mainsail	HB	MGT	MGU	MGM	MGL	MSW	Area	Area (r)	Formula	
	0.172	1.09	1.98	3.42	4.57	25.40	53.73	54.54	P/8 · (E + 2·MGL + 2·MGM + 1.5·MGU + MGT + 0.5·HB)	
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG			
	0.10	0.91	1.79	3.63	5.54	17.68	7.51	65.30	0.1125·JL·(1.445·LPG+2·JGL+2·JGM+1.5·JGU+JGT+0.5·JH)	
Symmetric	SL	SMG	SF							
	17.72	9.40	9.28				138.45		SL · (SF + 4·SMG) / 6	




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IMS Measurement Certificate

Certificate

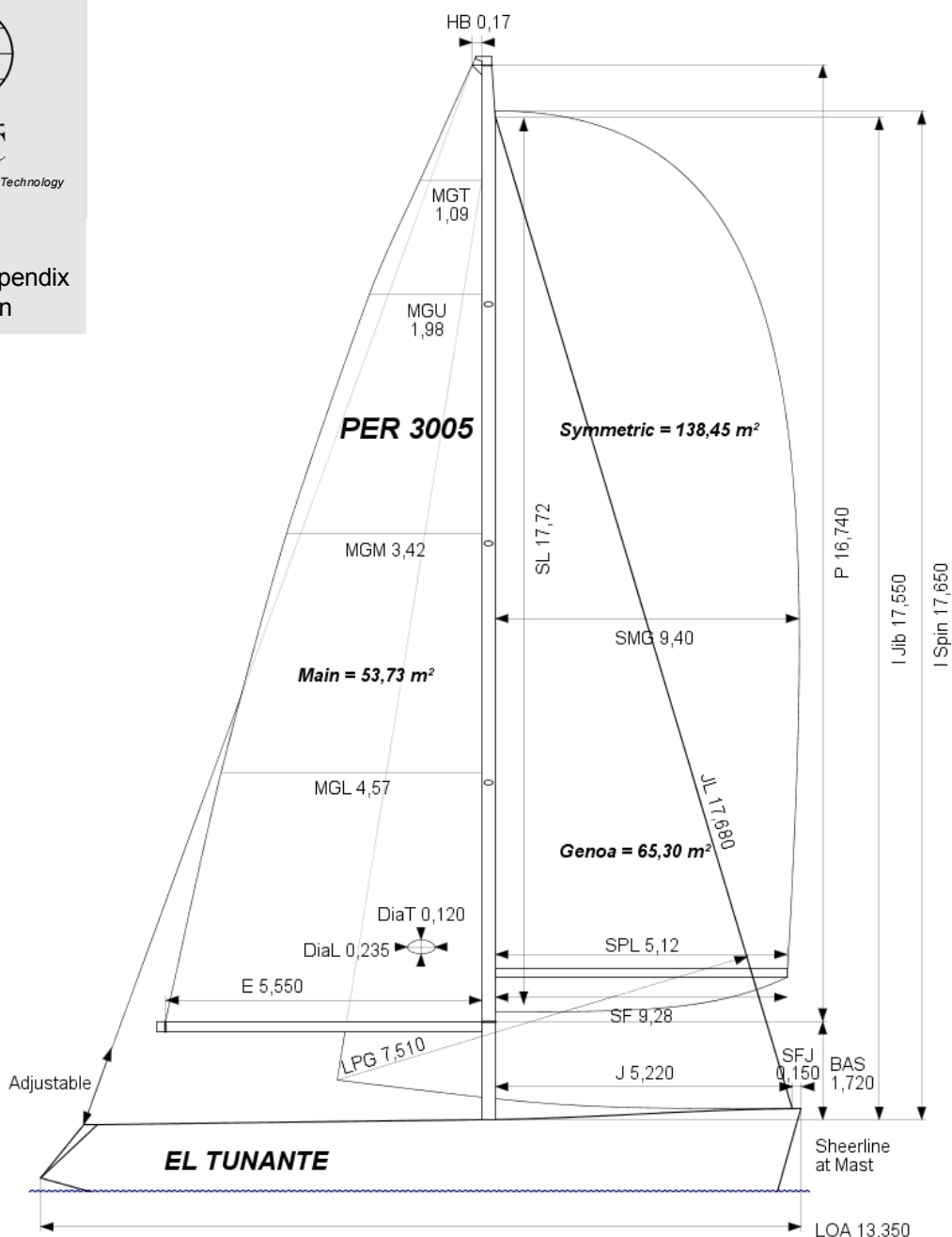
Number **PER128**
 ORC Ref **PER00000219**
 Issued On **12/09/2011**
 VPP Ver. **2011 1.02**
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Certificate Appendix
Sail Plan



SAILS INVENTORY														
MAINSAIL														
Id	HB	MGT	MGU	MGM	MGL	MSW	Area	Measur	Meas.Date	Manufacture	Material	Comment		
M1	0.172	1.09	1.98	3.42	4.57	25.40	53.73	G LIZA / L	07/09/2011	QUANTUM	Carbon	REMEDICION		
JIBS / GENOAS														
Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Ovrlp	Area	Measur	Meas.Date	Manufacture	Material	Comment
REACH	0.10	0.90	1.75	3.55	5.53	7.58	17.62	145%	64.80	G LIZA /	30/08/2011	QUANTUM	Kevlar	NUEVO JIB REACH
C2	0.11	0.92	1.78	3.61	5.53	7.50	17.51	144%	64.54	G LIZA /	30/08/2011	QUANTUM	Kevlar	REMEDICION
C1	0.10	0.91	1.79	3.63	5.54	7.51	17.68	144%	65.31	G LIZA /	31/08/2011	QUANTUM	Kevlar	REMEDICION
SYMMETRIC SPINNAKERS														
Id	SL	SMG	SF	Area	Measur	Meas.Date	Manufacture	Material	Comment					
S1	17.72	9.40	9.28	138.45	G LIZA / L	07/09/2011	QUANTUM	Poly ester	REMEDICION					
S2	17.78	9.33	9.24	137.97	G LIZA / L	07/09/2011	QUANTUM	Poly ester	REMEDICION					
ASYMMETRIC SPINNAKERS														
Id	SLU	SLE	ASL	AMG	ASF	Area	Kind	Measur	Meas.Date	Manufacture	Material	Comment		