

BOAT
Name TORMENTO Sail Nr PER 40

GPH
615.9

HULL					
Length Overall	12.360 m				
Maximum Beam	3.890 m				
Displacement	7,664 kg				
Draft	2.241 m				
IMS Reg. Division	Cruiser/Racer				
Dynamic Allowance	0.182%				
Fwd Accommodation	Yes				
Hull Construction	Solid				
Carbon Rudder	No				
Trim Tab	No				
IMS L	10.079	VCGD	-0.012	VCGM	-0.052
Sink	21.28 kg/mm	Wetted Area	30.38 m²		



2010
ORC International
Certificate

GENERAL
Class Frers 40
Designer Frers
Builder Cadarsó
Series 01/1990
Age 01/1990
Age Allowance 0.975%
Offset File tormento.off - 06/10/1992 10:00:52
Measurement by Chalco/Carrion - 30/09/1992

SCORING OPTIONS						
	OFFSHORE			INSHORE		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	615.9			688.3		
Time On Time	0.9742			0.9807		
Performance Line	PLT	PLD		PLT	PLD	
	0.875	116.4		1.050	315.7	
Triple Number	Low	Medium	High	Low	Medium	High
	0.9587	1.2355	1.3868	0.7301	0.9943	1.1542

Rating Office

Roberto Peschiera
peschiera56@gmail.com
Asociación de Veleros
Oceánicos del Peru

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1035.4	850.3	761.4	718.0	691.5	675.0	672.8
52°	665.6	558.2	516.0	496.1	484.7	477.3	471.9
60°	620.0	534.8	497.9	478.1	467.9	460.9	453.7
75°	585.5	518.1	484.4	461.9	446.9	439.4	430.7
90°	583.6	507.4	472.1	454.1	445.2	431.2	414.6
110°	595.6	516.9	478.2	451.1	430.8	418.1	404.8
120°	635.4	534.9	490.0	460.0	436.3	417.2	391.8
135°	733.2	586.5	520.7	483.5	456.6	434.5	397.9
150°	878.0	691.8	580.3	522.3	486.8	460.6	420.3
Run VMG	1013.8	798.8	669.8	590.3	537.2	500.5	451.5

Certificate	
Number	PERI13
ORC Ref	PER00000315
Issued On	03/07/2010
VPP Ver.	2010 1.11
Valid until	31/03/2011

Selected Courses							
Windward / Leeward	1043.9	838.1	726.9	662.4	621.6	594.6	568.4
Circular Random	846.7	684.5	597.7	547.3	516.3	496.2	472.3
Ocean for PCS	905.0	716.0	611.2	547.4	505.6	476.0	434.9
Non Spinnaker	909.0	727.8	629.2	570.8	534.4	510.7	482.6

Crew Weight	
Declared	750 kg
Default*	727 kg
Non Manual Power	No

Special Scoring		
	ToD	ToT
Double Handed	619.1	0.9692
Non Spinnaker	649.3	0.9240
N/S Perf. Line	76.3	0.769

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	44.7°	44.3°	41.5°	39.5°	38.4°	38.1°	38.2°
Beat VMG	3.48	4.23	4.73	5.01	5.21	5.33	5.35
52°	5.41	6.45	6.98	7.26	7.43	7.54	7.63
60°	5.81	6.73	7.23	7.53	7.69	7.81	7.94
75°	6.15	6.95	7.43	7.79	8.06	8.19	8.36
90°	6.17	7.09	7.63	7.93	8.09	8.35	8.68
110°	6.04	6.96	7.53	7.98	8.36	8.61	8.89
120°	5.67	6.73	7.35	7.83	8.25	8.63	9.19
135°	4.91	6.14	6.91	7.45	7.88	8.29	9.05
150°	4.10	5.20	6.20	6.89	7.40	7.82	8.56
Run VMG	3.55	4.51	5.38	6.10	6.70	7.19	7.97
Gybe Angles	142.5°	146.1°	151.1°	161.8°	168.5°	172.4°	174.3°

Sails Limitations		
Genoas	Jibs	Spinnakers
1	0	3
Spinnaker configuration Symmetric		

Storm Sails Areas	
Heavy Weather Jib	37.81
Storm Jib (JL=10.88)	14.01
Storm Trysail	11.49

Owner

Jacobo Said
Paz Soldán 170, ofi 204,
San Isidro
Lima, Peru
jacobosaid@hotmail.com

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

Signature

BOAT	
Name TORMENTO	Sail Nr PER 40
File PER40.dxt	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 22/09/2008		SG 1.0255
FFM 1.225	FF 1.225	SFFP 0.600
FAM 1.005	FA 1.005	SAFP 10.830
W1 23.250	PD1 62.5	WD 12.800
W2 46.500	PD2 125.0	GSA 38.0
W3 69.750	PD3 187.5	RSA 7800.0
W4 93.000	PD4 250.0	PLM 2130.0
Maximum beam station from stern		6.973
RM Measured / Default		176.6 / 167.1
Limit of positive stability		116.6°
Stability Index		119.0
Freeboard at mast at 4.977		1.067



ORC
World Leader in Rating Technology


2010
IMS Measurement
Certificate

RIG			
Forestay Tension Aft	Spreaders 3		
Inner Forestay Adjustable	Runners 2		
Carbon Mast No	Jumpers None		
Taper Hollows No	Jib Furler Yes		
Fiber Rigging No	w/o Backstay No		
P 14.500	E 4.530	MDT1 0.121	TL 2.670
IG 16.607	J 4.920	MDL1 0.223	MWT 238.00
ISP 16.577	SFJ 0.057	MDT2 0.121	MCG 5.425
SPS 4.823	SPL 4.842	MDL2 0.174	CPW 2.315
BAS 1.727	TPS	MW 0.174	BD 0.168
BAL 0.360	FSP 0.070	GO 0.212	BWT 20.00

PROPELLER			
Installation Shaft	PRD 0.480		
Type Feathering 2 blades	PBW 0.150		
Twin Screw No	PIPA 0.0061		
PSA 19.000	PHL 0.145	ST3 0.135	ESL 1.070
PSD 0.031	ST1 0.012	ST4 0.057	
PHD 0.075	ST2 0.135	ST5 0.265	

Certificate

Number **PER113**
ORC Ref **PER00000315**
Issued On **03/07/2010**
VPP Ver. **2010 1.11**
Valid until **31/03/2011**



AVOP

MIZZEN RIG AND SAILS	
N/A	

WATER BALLAST	
N/A	

COMMENTS

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	HB	MGT	MGU	MGM	MGL	MSW	Area	Area (r)	Formula
	0.170	0.96	1.71	2.94	3.82	22.50	39.26	39.90	$P/8 \cdot (E + 2 \cdot MGL + 2 \cdot MGM + 1.5 \cdot MGU + MGT + 0.5 \cdot HB)$
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG		
	0.00	0.88	1.77	3.53	5.30	16.78	7.06	59.23	$0.1125 \cdot JL \cdot (1.445 \cdot LPG + 2 \cdot JGL + 2 \cdot JGM + 1.5 \cdot JGU + JGT + 0.5 \cdot JH)$
Symmetric	SL	SMG	SF						
	16.40	8.86	8.64					120.49	$SL \cdot (SF + 4 \cdot SMG) / 6$

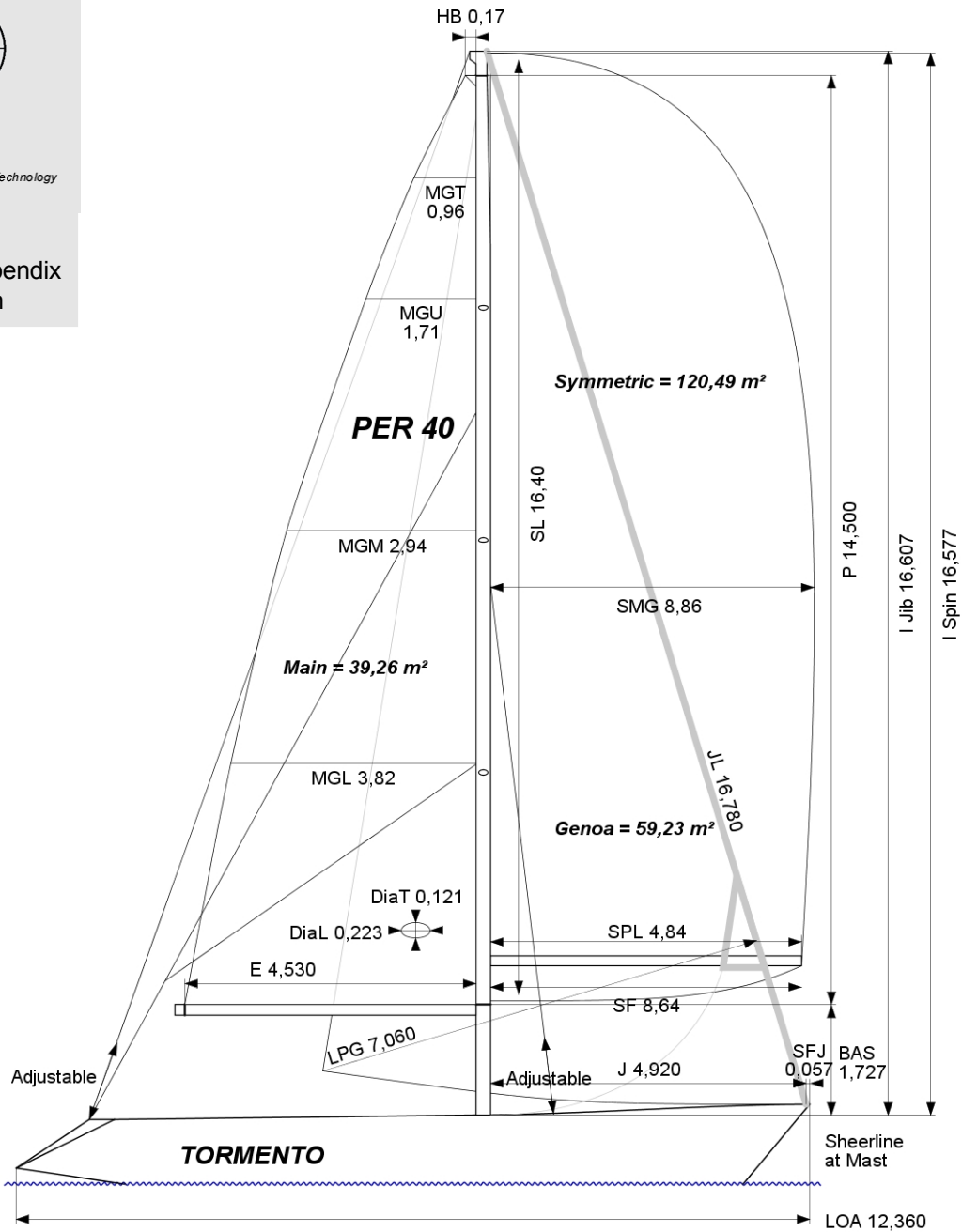
MEASUREMENT INVENTORY			
Measurer	Date	Comment	
Id	Item	Weight	Distanc Description
OR	Anchor	35.0	1.20 *Legacy Anchor*
Id	Item	Weight	Description

MEASUREMENT INVENTORY			
Id	Item	Weight	Distanc Description



World Leader in Rating Technology

2010
Certificate Appendix
Sail Plan



SAILS INVENTORY

MANSAIL

Id	HB	MGT	MGU	MGM	MGL	MSW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	0.170	0.96	1.71	2.94	3.82	22.50	39.26					* Copied from legacy

JIBS / GENOAS

Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Overlp	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC						7.06	16.78	143%	59.24					* Copied from

SYMMETRIC SPINNAKERS

Id	SL	SMG	SF	Area	Measurer	Meas.Date	Manufacture	Material	Comment
ORC	16.40	8.86	8.64	120.49					* Copied from legacy *

ASYMMETRIC SPINNAKERS

Id	SLU	SLE	ASL	AMG	ASF	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
----	-----	-----	-----	-----	-----	------	------	----------	-----------	-------------	----------	---------