

BOAT Name ALCANCE Sail Nr ECU-3377	GPH 607,0	HULL Length Overall 12,310m Maximum Beam 3,800m Displacement 6.407kg Draft 2,182m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0,000% Fwd Accommodation No Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class F&C 40 Designer G. FRERS Builder AS. ROBERTO FRERS Series 01/1986 Age 01/1986 Age Allowance 0,487% Offset File ALCANCE.OFF - 23/09/1993 02:11:14 Measurement by P. GUTIERREZ - 02/10/2017		IMSL 9,952m VCGD -0,148m Sink 19,94kg/mm RL 8,829m VCGM -0,038m WS 27,71m² LSMO 10,005m Displacement/Length ratio 6,3974



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2017
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Rating Office
Federación Ecuatoriana
de Vela
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SCORING OPTIONS	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	Low	Medium	High	Low	Medium	High
Time On Distance	591,9			662,2		
Time On Time	1,0136			1,0194		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	692,7	538,8	480,5	900,1	667,0	576,2
Time on Time	0,9745	1,2527	1,4049	0,7499	1,0120	1,1714

TIME ALLOWANCES	Wind Velocity						
	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1008,7	843,3	752,6	710,7	689,1	675,8	665,3
52°	654,3	550,5	505,1	489,8	482,2	477,7	473,5
60°	613,9	523,0	489,2	475,2	467,4	462,5	457,7
75°	580,0	504,5	476,8	459,4	446,1	438,1	430,7
90°	579,8	502,6	474,4	455,4	438,2	424,0	407,8
110°	631,1	519,1	476,6	451,2	430,1	416,9	399,8
120°	649,4	531,3	482,5	456,2	431,2	410,1	384,2
135°	717,1	579,9	505,6	473,1	449,2	425,8	383,6
150°	844,5	669,8	565,4	503,5	473,6	451,3	408,9
Run VMG	975,1	773,4	652,4	574,4	521,3	484,7	440,4

Certificate
Number **FVEC14**
ORC Ref **ECU00005610**
Issued On **04/10/2017**
VPP Ver. **2017 1.00**
Valid until **31/03/2018**

Crew Weight
Declared **680kg**
Default* **689kg**
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **629,9 0,9525**
Non Spin OSN **615,0 0,9756**

Selected Courses	Windward / Leeward						
	991,9	808,3	702,5	642,5	605,2	580,2	552,9
Circular Random	833,1	674,1	589,2	540,0	509,7	489,7	464,6
Ocean for PCS	1025,1	793,1	662,5	582,7	530,7	494,4	444,4
Non Spinnaker	873,0	702,8	610,9	556,9	523,2	500,9	472,6

Sails Limitations
Headsails **5** | Spinnakers **3**

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	43,9°	43,2°	42,4°	40,9°	40,0°	39,3°	38,8°
Beat VMG	3,57	4,27	4,78	5,07	5,22	5,33	5,41
52°	5,50	6,54	7,13	7,35	7,47	7,54	7,60
60°	5,86	6,88	7,36	7,58	7,70	7,78	7,87
75°	6,21	7,14	7,55	7,84	8,07	8,22	8,36
90°	6,21	7,16	7,59	7,90	8,22	8,49	8,83
110°	5,70	6,94	7,55	7,98	8,37	8,64	9,00
120°	5,54	6,78	7,46	7,89	8,35	8,78	9,37
135°	5,02	6,21	7,12	7,61	8,01	8,46	9,39
150°	4,26	5,37	6,37	7,15	7,60	7,98	8,80
Run VMG	3,69	4,65	5,52	6,27	6,91	7,43	8,17
Gybe Angles	145,3°	149,4°	150,8°	156,2°	173,1°	180,0°	180,0°

Class Division Length
CDL = **9,391**

Storm Sails Areas
Heavy Weather Jib **35,53**
Storm Jib (JL=10,54) **13,16**
Storm Trysail **12,37**

Owner
ESCUELA SUPERIOR NAVAL
SALINAS, ECUADOR


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

Signature

BOAT	
Name ALCANCE	Sail Nr ECU-3377
File ECU3377	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 02/10/2017		SG 1,0253	
FFM 1,321	FF 1,322	SFFP 0,650	
FAM 0,989	FA 0,989	SAFP 10,800	
W1 95,0	PD1 583,0	WD 11,700	
W2 95,0	PD2 580,8	GSA 1,0	
W3 95,0	PD3 578,3	RSA 1,0	
W4 95,0	PD4 581,2	PLM 9000,0	
LCF from stem on CL / on sheer		6,503 / 6,741	
Maximum beam station from stem		6,850	
RM Measured		150,7kg·m	
RM Default		153,0kg·m	
Limit of positive stability / Stab.Index		117,0° / 117,3	
Freeboard at mast at 4,860		1,113	

RIG			
Forestay Tension Aft	Spreaders 3		
Inner Stay Adjustable	Runners 2		
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			
P 14,050	E 5,033	MDT1 0,119	MW 0,229
IG 16,172	J 4,768	MDL1 0,229	GO 0,244
ISP 16,447	SFJ 0,092	MDT2 0,119	BD 0,179
BAS 2,062	SPL 4,895	MDL2 0,229	MWT
FSP 0,072	TPS	TL	MCG




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MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Shaft exposed	PRD 0,416		
Type Folding 2 blades	PBW 0,104		
Twin Screw No	PIPA 0,0097		
PSA 14,800	PHL 0,143	ST3 0,137	ESL 3,965
PSD 0,029	ST1 0,025	ST4 0,050	
PHD 0,072	ST2 0,118	ST5 0,215	

COMMENTS	
medio estab, flotacion y v	

MOVEABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0,166	1,06	1,91	3,22	4,19	41,91	42,78	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL			SL · (SFL + 4·SHW) / 6	
	15,93	15,93	15,93	8,51	8,47	112,86			
Asymmetric	SLU	SLE	SL	SHW	SFL			AS · (SFL + 4·SHW) / 6	
	15,32	13,86	14,59	7,13	7,45	87,47 95,56			

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
0,08	0,89	1,72	3,45	5,24	7,11	16,22	56,87			22/09/2011	Kevlar	
0,07	0,89	1,75	3,50	5,28	7,10	16,10	56,82			20/08/2017	Carbon	USADA
0,07	0,86	1,68	3,40	5,20	7,13	16,17	56,24			09/10/2014	Carbon	NUEVA
0,08	0,88	1,70	3,40	5,18	7,08	16,00	55,55			30/06/2014	Kevlar	REMEDIACION

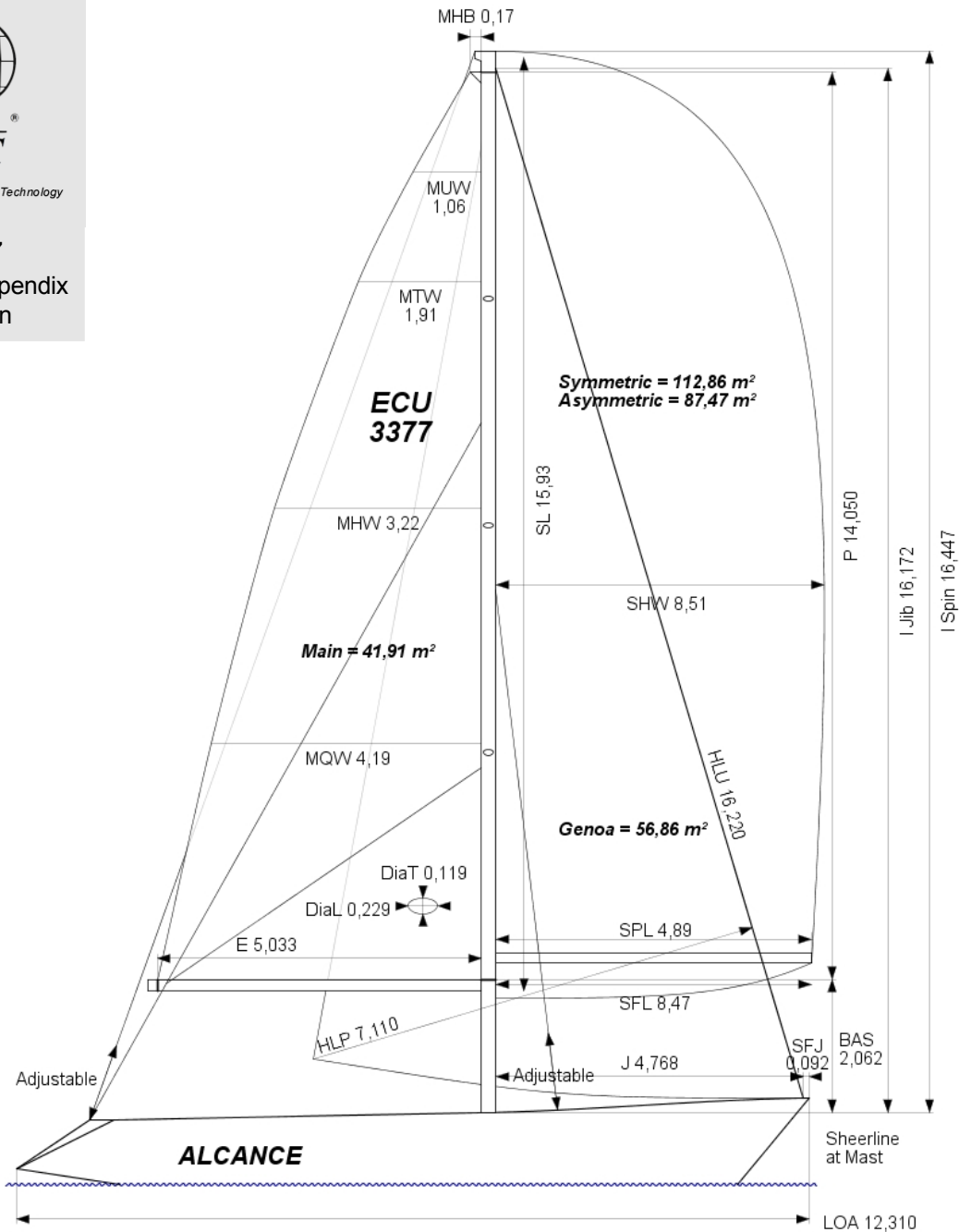
MEASUREMENT INVENTORY				
Measurer PATRICIO GUTIERREZ P G				
Date 02/10/2017				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
C5	Engine	YANMAR	28 HP	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

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>
B7	Tank	PETROLEO	PVC	54,0	5,00	0,00	5,0	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>				
C7	Ballast	50,0	5,00	0,00	PANES DE PLOMO DENTRO DE CARLINGA			
E7	Battery	26,0	5,10	0,00	2 BAT. X 12 V - 100 AMP			



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Sail Plan



SAILS INVENTORY

MANSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measur	Meas.Date	Manufacture	Material	Comment					
M2	0,166	1,06	1,91	3,22	4,19	41,91	A V M	20/08/2017	NORTH	Carbon	USADA					
HEADSAILS (4)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measur	Meas.Date	Manufacture	Material	Comment
G1MH	0,08	0,89	1,72	3,45	5,24	7,11	16,22	149%	56,87			PG	22/09/2011	NORTH	Kevlar	
L	0,07	0,89	1,75	3,50	5,28	7,10	16,10	149%	56,82			A V M	20/08/2017	NORTH	Carbon	USADA
H	0,07	0,86	1,68	3,40	5,20	7,13	16,17	150%	56,24			R	09/10/2014	NORTH	Carbon	NUEVA
JT	0,08	0,88	1,70	3,40	5,18	7,08	16,00	148%	55,55			G LIZA	30/06/2014	NORTH	Kevlar	REMEDICION
SYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measur	Meas.Date	Manufacture	Material	Comment					
S1.5	15,93	15,93	15,93	8,51	8,47	112,86	R PESCHIERA	09/10/2014	NORTH	Nylon	NUEVO					
S1	15,74	15,74	15,74	8,52	8,40	111,44	F CARLIER	28/04/2010	NORTH	Nylon						
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measur	Meas.Date	Manufacture	Material	Comment				
A3	15,32	13,86	14,59	7,13	7,45	87,47	asym	P GUTIERREZ	03/10/2017	UK	Nylon	AZ/R/BL				