BOAT

Name **MARY ANN**
Sail Nr **ESP-9595**

GPH

663,9

GENERAL

Class	**BAVARIA 38 CR**
Designer	
Builder	**Bavaria**
Series	**08/2007**
Age	**08/2010**
Age Allowance	**0,293%**
Offset File	**Bava38cr(3).off - 15/01/2015 23:23:00**
Measurement by	**Tacha Montaner - 10/01/2012**

HULL

Length Overall	**11,562m**
Maximum Beam	**3,872m**
Displacement	**7.509kg**
Draft	**1,997m**
IMS Reg. Division	**Cruiser/Racer**
Dynamic Allowance	**0,409%**
Fwd Accommodation	**Yes**
Hull Construction	**Solid**
Carbon Rudder	**No**
Crew Arm Extension	

IMSL	**10,550m**	VCGD	**0,298m**	Sink	**22,79kg/mm**
RL	**7,310m**	VCGM	**0,185m**	WS	**29,74m²**
LSM0	**10,529m**	Displacement/Length ratio			**6,4331**

SCORING OPTIONS

	OFFSHORE COASTAL / LONG DISTANCE			INSHORE WINDWARD / LEEWARD		
Time On Distance	**642,5**			**721,9**		
Time On Time	**0,9338**			**0,9351**		
	PLT	PLD		PLT	PLD	
Performance Line	**0,574**	**-2,9**		**0,661**	**106,2**	
	Low	Medium	High	Low	Medium	High
Triple Number	**0,8542**	**1,1603**	**1,3507**	**0,6533**	**0,9204**	**1,1177**

TIME ALLOWANCES

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	**1210,6**	**985,9**	**865,3**	**781,0**	**728,5**	**704,9**	**689,9**
52°	**772,3**	**639,8**	**563,2**	**514,9**	**491,8**	**482,2**	**475,9**
60°	**717,2**	**599,7**	**529,9**	**494,1**	**476,5**	**466,8**	**460,0**
75°	**672,8**	**565,3**	**506,0**	**479,2**	**463,3**	**451,2**	**434,8**
90°	**674,5**	**567,0**	**503,5**	**472,9**	**455,5**	**447,6**	**425,3**
110°	**692,7**	**566,1**	**498,6**	**469,7**	**449,6**	**430,8**	**401,6**
120°	**713,9**	**582,5**	**507,6**	**474,6**	**454,5**	**435,1**	**397,8**
135°	**791,9**	**638,9**	**545,0**	**494,2**	**469,0**	**450,1**	**412,1**
150°	**941,7**	**735,2**	**617,1**	**540,9**	**494,5**	**470,7**	**435,1**
Run VMG	**1087,4**	**848,9**	**711,9**	**619,9**	**556,4**	**508,5**	**461,2**
Selected Courses							
Windward / Leeward	**1149,0**	**917,4**	**788,6**	**700,4**	**642,4**	**606,7**	**575,5**
Circular Random	**940,0**	**748,8**	**642,9**	**579,0**	**538,6**	**512,2**	**481,0**
Ocean for PCS	**1160,0**	**883,2**	**724,5**	**625,9**	**561,6**	**517,4**	**459,0**
Non Spinnaker	**992,3**	**785,9**	**670,7**	**600,7**	**556,2**	**526,9**	**492,0**

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	**45,3°**	**43,7°**	**43,1°**	**43,2°**	**42,1°**	**41,0°**	**40,3°**
Beat VMG	**2,97**	**3,65**	**4,16**	**4,61**	**4,94**	**5,11**	**5,22**
52°	**4,66**	**5,63**	**6,39**	**6,99**	**7,32**	**7,47**	**7,56**
60°	**5,02**	**6,00**	**6,79**	**7,29**	**7,55**	**7,71**	**7,83**
75°	**5,35**	**6,37**	**7,11**	**7,51**	**7,77**	**7,98**	**8,28**
90°	**5,34**	**6,35**	**7,15**	**7,61**	**7,90**	**8,04**	**8,46**
110°	**5,20**	**6,36**	**7,22**	**7,66**	**8,01**	**8,36**	**8,97**
120°	**5,04**	**6,18**	**7,09**	**7,59**	**7,92**	**8,27**	**9,05**
135°	**4,55**	**5,63**	**6,61**	**7,29**	**7,68**	**8,00**	**8,74**
150°	**3,82**	**4,90**	**5,83**	**6,66**	**7,28**	**7,65**	**8,27**
Run VMG	**3,31**	**4,24**	**5,06**	**5,81**	**6,47**	**7,08**	**7,81**
Gybe Angles	**146,3°**	**150,0°**	**151,7°**	**154,4°**	**165,3°**	**180,0°**	**180,0°**

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2016
ORC International Certificate

Rating Office

R.F.E.V.
Luis de salazar,9
28002 Madrid

Certificate

Number **959502**
ORC Ref **ESP00019481**
Issued On **21/11/2016**
VPP Ver. **2016 1.01**
Valid until **31/12/2016**

Crew Weight

Declared	**500kg**
Default*	**741kg**
Non Manual Pwr	**No**

Special Scoring

	ToD	ToT
Double H.GPH	**664,4**	**0,9030**
Double H.OSN	**643,4**	**0,9325**
Non Spin GPH	**693,3**	**0,8654**
Non Spin OSN	**669,8**	**0,8958**
N/S Perf. Line	**-19,5**	**0,527**

Sails Limitations

Headsails	Spinnakers
6	**3**

Dacron Sails

Class Division Length

CDL = **8,930**

Storm Sails Areas

Heavy Weather Jib	**24,41**
Storm Jib (JL=8,74)	**9,04**
Storm Trysail	**9,98**

Owner

BOAT

Name	**MARY ANN**	Sail Nr	**ESP-9595**
File	**E9595.dxt**	Data in	**meters/kilograms**

RIG

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**		

P	**12,500**	E	**4,560**	MDT1	**0,115**	MW	**0,210**
IG	**13,414**	J	**4,230**	MDL1	**0,210**	GO	**0,220**
ISP	**13,650**	SFJ	**0,000**	MDT2	**0,115**	BD	**0,170**
BAS	**1,660**	SPL	**3,960**	MDL2	**0,210**	MWT	**100,00**
FSP	**0,064**	TPS	**5,100**	TL	**0,000**	MCG	**6,000**

MIZZEN RIG AND SAILS

N/A

COMMENTS

INCLINING TEST AND FREEBOARDS

Inclining Test	**Current Inclining**				
Flotation date	**05/10/2011**			SG	**1,0250**
FFM	**1,495**	FF	**1,496**	SFFP	**0,171**
FAM	**1,103**	FA	**1,109**	SAFP	**10,900**
W1	**110,70**	PD1	**582,9**	WD	**11,100**
W2	**110,70**	PD2	**583,2**	GSA	**1,0**
W3	**110,70**	PD3	**584,6**	RSA	**1,0**
W4	**110,70**	PD4	**584,1**	PLM	**9000,0**

LCF from stem on CL / on sheer	**6,257 / 6,534**
Maximum beam station from stem	**6,946**
RM Measured	**165,8kg·m**
RM Default	**168,2kg·m**
Limit of positive stability / Stab.Index	**110,1° / 112,6**
Freeboard at mast at 4,230	**1,267**

PROPELLER

Installation	**Strut**			PRD	**0,350**
Type	**Folding 2 blades**			PBW	
Twin Screw	**No**			PIPA	**0,0035**
ST1	**0,042**	ST3	**0,180**	ST5	**0,300**
ST2	**0,180**	ST4	**0,112**	EDL	**2,500**

MOVEABLE BALLAST

N/A

CENTERBOARD

N/A

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2016 IMS Measurement Certificate

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VPP Ver. **2016 1.01**
Valid until **31/12/2016**

SAILS (Maximum Areas)

						Area	Area (r)	Formula
Mainsail	**MHB**	**MUW**	**MTW**	**MHW**	**MQW**			
	0,120	0,90	1,60	2,75	3,67	32,44	32,98	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)
Symmetric	**SLU**	**SLE**	**SL**	**SHW**	**SFL**			
	13,74	13,74	13,74	7,57	7,23	85,90		SL · (SFL + 4·SHW) / 6
Asymmetric	**SLU**	**SLE**	**SL**	**SHW**	**SFL**		**Area (r)**	
	14,00	12,70	13,35	5,70	7,60	67,64	73,85	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	0,75	1,45	2,87	4,33	5,85	13,25	38,49			09/11/2016	Unknow	

MEASUREMENT INVENTORY

Measurer **Tacha Montaner ESP-222**
Date **05/11/2011**
Comment

Id	*Item*	*Weight*	*Distance*	*VCG*	*Description*
~~1~~	~~Anchor~~	~~15,0~~	~~5,50~~		~~50 mts cabo~~
~~1~~	~~Anchor~~	~~14,0~~	~~4,50~~		~~DANFORTH~~
~~1~~	~~Tools~~	~~8,0~~	~~5,50~~		~~CAJA~~

Id	*Item*	*Maker*	*Model*
1	Engine	VOLVO	40 HP

Id	*Item*	*Weight*	*Description*
~~1~~	~~Deck Gear~~	~~6,0~~	~~Escotas varias~~

MEASUREMENT INVENTORY

Id	*Item*	*Tank Use*	*Tank Type*	*Capcty*	*Dist.*	*VCG*	*Condtn*	*Description*
1	Tank	GAS	INOX	150,0	9,00		~~37,5~~	
1	Tank	H2O	PLAST	210,0	9,00		~~10,0~~	
1	Tank	H2O	PLAST	130,0	1,50		~~0,0~~	

Id	*Item*	*Weight*	*Distance*	*VCG*	*Description*
6	Battery		4,00		BAT.105AH
1	Misc	10,0	5,00		Chalecos,Bangalas,Arneses

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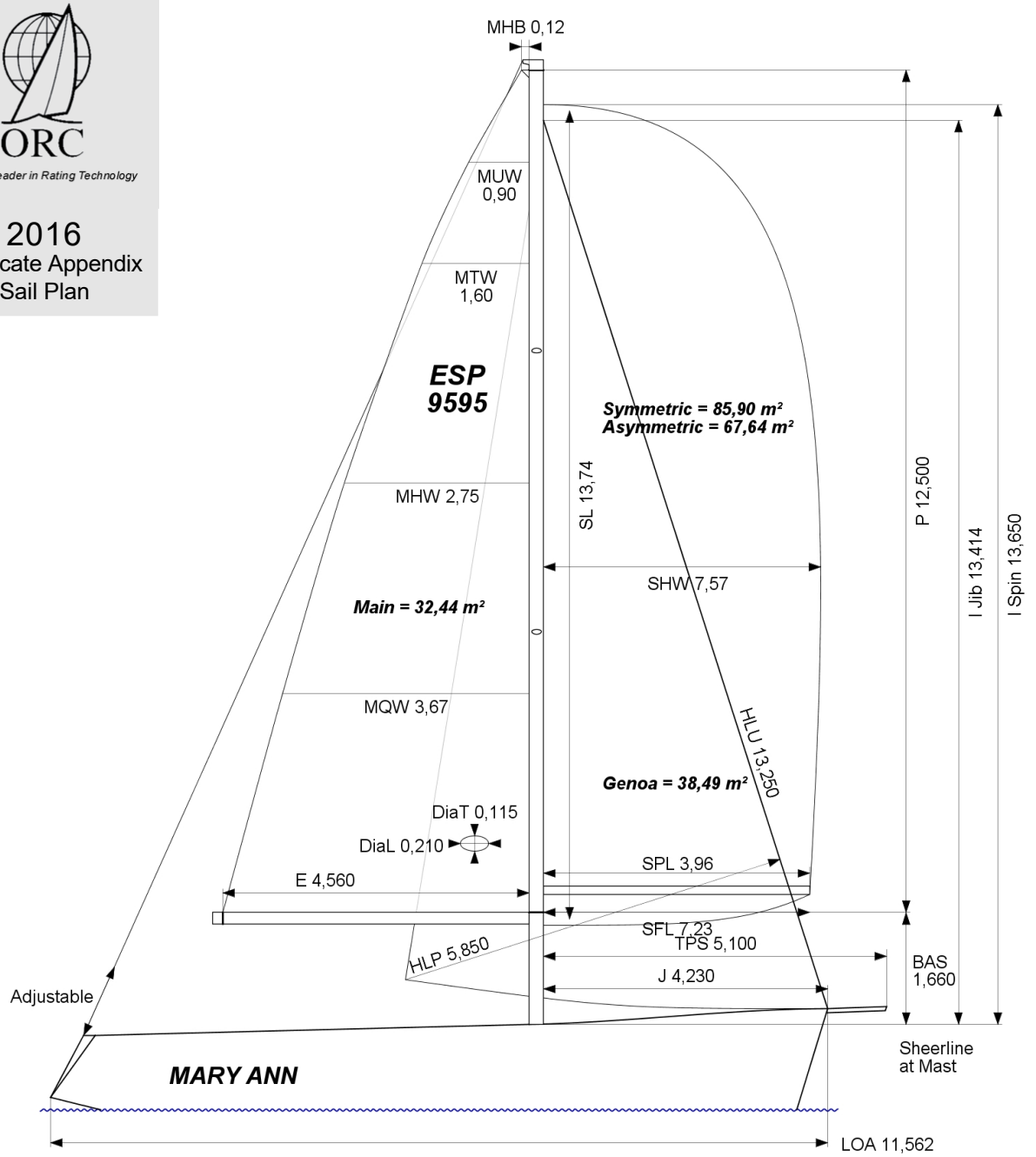
2016
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
North	0,120	0,90	1,60	2,75	3,67	32,44	SPIN	09/11/2016	NS	Unknown	

HEADSAILS

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
3	0,09	0,75	1,45	2,87	4,33	5,85	13,25	138%	38,49			SPIN	09/11/2016	NS	Unknow	

SYMMETRIC SPINNAKERS

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
2	13,74	13,74	13,74	7,57	7,23	85,90	SPIN	09/11/2016		Unknown	S2

ASYMMETRIC SPINNAKERS

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
1	14,00	12,70	13,35	5,70	7,60	67,64	asym	North			Unknown	