

BOAT Name Barba Branko Sail Nr CRO 4311	GPH 548.0	HULL Length Overall 13.730m Maximum Beam 4.148m Displacement 9,061kg Draft 2.730m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.000% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class IMX 45 Designer Jeppesen Builder X Yachts Series 05/2000 Age 01/2003 Age Allowance 0.487% Offset File IMX45MK3.OFF - 17/06/2011 23:48:34 Measurement by - 05/04/2011		IMSLS 12.176m VCGD -0.053m Sink 26.91kg/mm RL 11.050m VCGM -0.017m WS 36.00m² LSM0 12.130m Displacement/Length ratio 5.0768



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	534.9			598.3		
Time on Time	1.1218			1.1281		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	617.4	488.3	439.3	796.9	601.4	527.5
Time on Time	1.0933	1.3823	1.5365	0.8470	1.1223	1.2796

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	870.6	724.3	660.2	635.2	623.4	620.4	606.4
52°	575.3	488.7	458.4	448.7	444.0	441.4	434.9
60°	545.7	471.3	446.2	436.9	432.1	429.5	423.5
75°	523.5	460.3	436.4	422.8	414.9	409.9	405.2
90°	527.9	461.3	435.0	417.7	403.1	391.3	379.3
110°	565.7	469.9	433.3	411.0	391.4	379.7	360.9
120°	581.8	479.2	437.6	413.2	390.1	369.6	341.5
135°	645.4	522.4	458.9	429.8	406.5	382.6	336.5
150°	767.1	612.4	518.0	462.2	432.6	410.5	366.4
Run VMG	885.8	707.2	598.1	528.0	482.3	446.8	402.6

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Number **033/19**
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VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight
Default 907kg
Maximum **795kg**
Minimum* **596kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **572.6 1.0479**
Non Spin OSN **559.7 1.0719**

Selected Courses							
Windward / Leeward	878.2	715.7	629.2	581.6	552.8	533.6	504.5
Circular Random	745.5	605.7	532.2	490.2	464.5	447.0	422.7
Coastal / Long Distance	878.9	673.8	568.4	508.4	475.3	448.9	404.7
Non Spinnaker	788.8	636.8	555.5	508.3	479.0	459.3	432.5

Sails Limitations
Headsails **6** Spinnakers **4**

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	42.1°	40.7°	39.4°	38.2°	37.7°	37.7°	37.9°
Beat VMG	4.14	4.97	5.45	5.67	5.77	5.80	5.94
52°	6.26	7.37	7.85	8.02	8.11	8.16	8.28
60°	6.60	7.64	8.07	8.24	8.33	8.38	8.50
75°	6.88	7.82	8.25	8.51	8.68	8.78	8.88
90°	6.82	7.80	8.28	8.62	8.93	9.20	9.49
110°	6.36	7.66	8.31	8.76	9.20	9.48	9.98
120°	6.19	7.51	8.23	8.71	9.23	9.74	10.54
135°	5.58	6.89	7.85	8.38	8.86	9.41	10.70
150°	4.69	5.88	6.95	7.79	8.32	8.77	9.83
Run VMG	4.06	5.09	6.02	6.82	7.46	8.06	8.94
Gybe Angles	142.7°	146.6°	149.5°	154.9°	165.2°	180.0°	180.0°

Class Division Length
CDL = **11.614**

Storm Sails Areas
Heavy Weather Jib **48.21**
Storm Jib (JL=12.29) **17.86**
Storm Trysail **19.50**

Owner

BOAT			
Name	Barba Branko	Sail Nr	CRO 4311
File	CRO4311	Data in	meters/kilograms

RIG			
Forestay Tension	Aft	Spreaders	3
Inner Stay	None Fitted	Runners	0
Carbon Mast	Yes	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	18.117	E	6.150
IG	18.775	J	4.960
ISP	18.825	SFJ	0.420
BAS	1.795	SPL	5.210
FSP	0.084	TPS	5.900
MDT1	0.145	MW	0.268
MDL1	0.268	GO	0.300
MDT2	0.120	BD	0.295
MDL2	0.165	MWT	281.00
TL	1.450	MCG	6.420

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date		17/05/2019	SG
			1.0253
FFM	1.600	FF	1.599
FAM	1.275	FA	1.277
SFFP	0.352	SAFP	12.917
W1	120.0	PD1	546.5
W2	120.0	PD2	545.7
W3	120.0	PD3	553.5
W4	120.0	PD4	556.9
WD	14.300	GSA	1.0
RSA	1.0	PLM	9000.0
LCF from stem on CL / on sheer		7.632 / 7.882	
Maximum beam station from stem		8.972	
RM Measured		245.4kg-m	
RM Default		274.7kg-m	
Limit of positive stability / Stab.Index		122.5° / 126.0	
Freeboard at mast at 5.380		1.375	



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MIZZEN RIG AND SAILS			
N/A			

PROPELLER			
Installation	Strut	PRD	0.458
Type	Folding 2 blades	PBW	0.116
Twin Screw	No	PIPA	0.0030
ST1	0.048	ST3	0.172
ST2	0.172	ST4	0.096
ST5	0.257	EDL	2.640

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COMMENTS			

MOVABLE BALLAST			
N/A			

CENTERBOARD			
N/A			



SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.180	1.32	2.34	3.98	5.16	66.47	67.77	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	Area	Area (r)	Formula	
	18.32	18.32	18.32	9.52	9.10	144.06		SL · (SFL + 4·SHW) / 6	
Asymmetric	SLU	SLE	SL	SHW	SFL	Area	Area (r)	Formula	
	18.06	16.52	17.29	6.00	7.98	92.16	116.39	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
0.11	0.86	1.65	3.28	4.97	6.66	18.52	61.49			29/03/2019	Carbon	G-LM
0.09	0.78	1.51	3.07	4.72	6.49	18.20	57.43			29/03/2019	Carbon	Genoa Heavy light 3DL
0.11	0.62	1.21	2.43	3.71	4.97	18.37	45.37	Y		29/03/2019	Carbon	G_3

MEASUREMENT INVENTORY				
Measurer CROAK6				
Date 17/05/2019				
Comment				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
1	Engine	VOLVO	D2-55	
Id	Item	Weight Description		

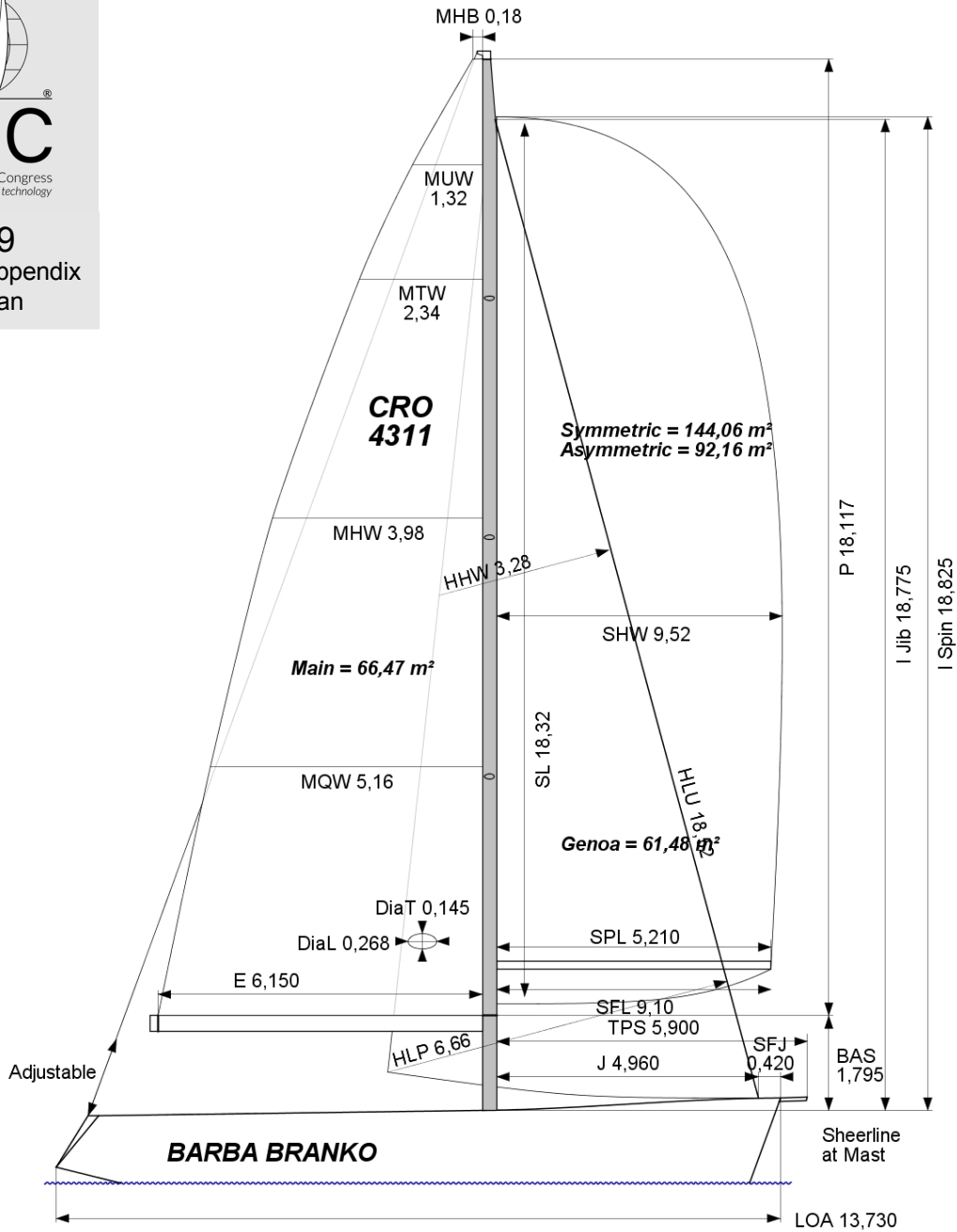
MEASUREMENT INVENTORY									
Id	Item	Tank	Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description
1	Tank	water		rigid	195.0	6.50			0-0 stainless steel - on
2	Tank	fuel		rigid	160.0	9.50			30-0 stainless steel - on
Id	Item	Weight	Distance	VCG Description					
1	Ballast	99.5	8.96	3 pieces Sb					
2	Ballast	98.5	8.96	3 pieces P					
3	Ballast	95.6	6.36	3 pieces P					
4	Ballast	94.4	6.36	3 pieces Sb					
1	Battery	35.0	6.50	service 140 AH - SB					
2	Battery	19.0	9.50	engine 70 AH - SB					



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.18	1.32	2.34	3.98	5.16	66.47		29/03/2019	North sails	Carbon	3 DI

HEADSAILS (3)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.11	0.86	1.65	3.28	4.97	6.66	18.52	134%	61.49				29/03/2019	North sails	Carbon	G-LM
2	0.09	0.78	1.51	3.07	4.72	6.49	18.20	131%	57.43				29/03/2019	North sails	Carbon	Genoa Heavy light
3	0.11	0.62	1.21	2.43	3.71	4.97	18.37	100%	45.37	Y			29/03/2019	North sails	Carbon	G_3

SYMMETRIC SPINNAKERS (4)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
3	18.32	18.32	18.32	9.52	9.10	144.06		02/10/2007	North Sails	Unknown	Runner S2+
1	18.50	18.50	18.50	9.32	9.32	143.69		25/10/2013	North sails	Unknown	Runner S1.5 2012
2	18.32	18.32	18.32	9.40	9.10	142.60		23/03/2009	North sails	Nylon	Runner 1 0.6
4	18.39	18.39	18.39	9.19	9.11	140.60		19/06/2011	North Sails	Nylon	Reacher 1.5

ASYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
1	18.06	16.52	17.29	6.00	7.98	92.16	asym		05/04/2011	North	Kevlar	code0