

BOAT Name GRANMA X Sail Nr GRE-88	GPH 612.1	HULL Length Overall 11.360m Maximum Beam 3.660m Displacement 5,463kg Draft 2.101m Plan Review IMS Reg. Division Performance Dynamic Allowance 0.000% Hull Construction Cored Carbon Rudder No Crew Arm Extension IMSL 9.831m VCGD -0.020m Sink 19.61kg/mm RL 9.009m VCGM 0.045m WS 26.06m² LSM0 9.761m Displacement/Length ratio 5.8742
GENERAL Class IMX-38 Designer N.JEPPESEN Builder X-YACHTS Series 09/1992 Age 04/1996 Age Allowance 0.487% Offset File ORC0010.OFF - 23/11/1995 11:10:40 Measurement by - 11/03/2006		



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Rating Office
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Επιτροπή
Ανοικτής Θαλάσσης
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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	594.3			662.5		
Time on Time	1.0096			1.0188		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	700.4	542.4	484.3	901.7	664.7	579.1
Time on Time	0.9637	1.2445	1.3937	0.7486	1.0155	1.1656

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1027.5	850.8	749.3	703.5	688.6	683.1	670.0
52°	674.2	568.8	516.7	496.4	489.0	485.7	480.8
60°	638.5	544.6	503.5	484.8	475.1	470.4	466.1
75°	610.9	526.4	493.0	474.0	459.4	449.0	440.7
90°	619.2	529.2	489.0	472.5	454.7	437.9	415.1
110°	624.2	519.1	479.2	453.8	433.4	421.3	401.2
120°	641.0	528.9	483.9	456.2	430.2	408.3	382.3
135°	706.6	573.3	505.2	473.7	447.4	421.9	374.1
150°	833.3	663.8	562.1	504.4	475.2	450.9	404.7
Run VMG	962.2	766.4	648.6	574.0	522.7	487.6	440.3

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Number **00231**
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VPP Ver. **2020 1.02**
Valid until **28/02/2021**

Crew Weight
Default **665kg**
Maximum **700kg**
Minimum* **525kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	647.2	0.9271
Non Spin OSN	627.5	0.9561

Selected Courses							
Windward / Leeward	994.8	808.6	698.9	638.7	605.7	585.3	555.2
Circular Random	841.3	680.0	593.9	544.2	513.7	493.4	466.3
Coastal / Long Distance	991.6	760.2	632.2	561.2	524.0	494.4	446.6
Non Spinnaker	905.2	725.0	627.0	569.5	533.8	510.3	480.6

Sails Limitations

Headsails	Spinnakers
5	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	42.8°	41.3°	40.5°	39.0°	38.6°	38.6°	38.3°
Beat VMG	3.50	4.23	4.80	5.12	5.23	5.27	5.37
52°	5.34	6.33	6.97	7.25	7.36	7.41	7.49
60°	5.64	6.61	7.15	7.43	7.58	7.65	7.72
75°	5.89	6.84	7.30	7.60	7.84	8.02	8.17
90°	5.81	6.80	7.36	7.62	7.92	8.22	8.67
110°	5.77	6.93	7.51	7.93	8.31	8.55	8.97
120°	5.62	6.81	7.44	7.89	8.37	8.82	9.42
135°	5.09	6.28	7.13	7.60	8.05	8.53	9.62
150°	4.32	5.42	6.40	7.14	7.58	7.98	8.90
Run VMG	3.74	4.70	5.55	6.27	6.89	7.38	8.18
Gybe Angles	145.0°	149.0°	151.0°	157.0°	174.0°	180.0°	180.0°

Class Division Length
CDL = **9.415**

Storm Sails Areas

Heavy Weather Jib	32.84
Storm Jib (JL=10.14)	12.17
Storm Trysail	11.48

Owner

BOAT	
Name GRANMA X	Sail Nr GRE-88
File GR88IMX	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS					
Inclining Test Current Inclining					
Flotation date 13/05/2017				SG 1.0265	
FFM	1.219	FF	1.219	SFFP	1.098
FAM	0.957	FA	0.957	SAFP	10.595
W1	80.0	PD1	259.0	WD	12.260
W2	80.0	PD2	259.0	GSA	50.2
W3	80.0	PD3	259.0	RSA	5941.7
W4	80.0	PD4	259.0	PLM	2069.0
LCF from stem on CL / on sheer				6.239 / 6.480	
Maximum beam station from stem				6.705	
RM Measured				136.0kg-m	
RM Default				132.8kg-m	
Limit of positive stability / Stab.Index				112.9° / 112.3	
Freeboard at mast at 4.650				1.091	



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RIG					
Forestay Tension	Aft	Runners/Checkstays		0	
Inner Stay	None Fitted	Main Furler		No	
Carbon Mast	No	Jib Furler		No	
Fiber Rigging	No	Main Furler		No	
Non-Circular Rigging	No				
Articulated Bowsprit	No				
P	13.380	E	4.900	MDT1	0.117
IG	15.500	J	4.390	MDL1	0.200
ISP	15.453	SFJ	0.260	MDT2	0.116
BAS	1.848	SPL	4.485	MDL2	0.160
FSD	0.042	TPS		TL	1.600
				MW	0.160
				GO	0.187
				BD	0.190
				MWT	180.00
				MCG	5.000

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation	Strut	PRD	0.410
Type	Folding 2 blades	PBW	0.110
Twin Screw	No	PIPA	0.0031
ST1	0.048	ST3	0.170
ST2	0.170	ST4	0.097
		ST5	0.280
		EDL	1.480

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COMMENTS	
ex "AEOLOS II", ex "ELLINIX", ex "MAISTRATO".	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.18	0.98	1.81	3.11	4.11	38.68	39.48	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	15.18	15.18	15.18	8.17	7.90	102.67	SL · (SFL + 4·SHW) / 6		
Asymmetric									
Not Available									

HEADSAILS												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB), HS flying rated area = 35.93												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Flying	Meas.Date	Material	Comment
0.15	0.73	1.32	2.33	3.30	4.26	15.30	34.77	Y	No	12/09/2019	Kevlar	J1 L
0.13	0.71	1.27	2.28	3.28	4.28	15.36	34.53		No	06/07/2017	Polyest	#3
0.09	0.58	1.09	2.14	3.22	4.28	15.38	33.16		No	29/07/2010	Unknow	
					3.58	15.30	27.88		Yes	09/06/2011	Unknow	staysail

MEASUREMENT INVENTORY				
Measurer GRE-16				
Date 13/05/2017				
Comment				
Internal Ballast total = 0.0				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
1	Engine	VOLVO PENTA	2030	
Id	Item	Weight Description		

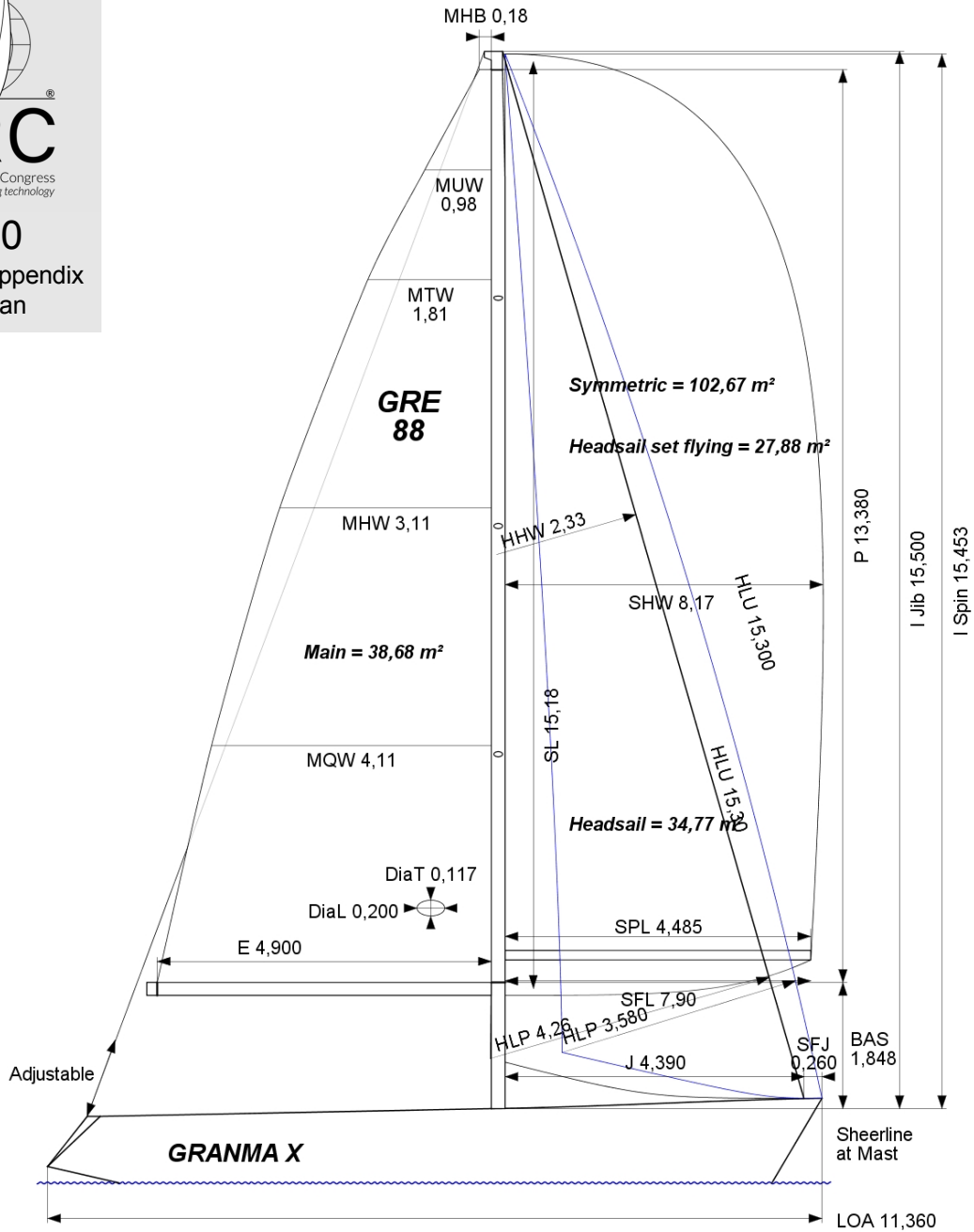
MEASUREMENT INVENTORY							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
2	Tank	FUEL	INOX	80.0	6.50		6-0 6 LT
1	Tank	WATER	PVC	120.0	6.30		0-0 EMPTY
Id	Item	Weight	Distance	VCG Description			
2	Battery	19.0	6.70	70Ah, port			
1	Battery	60.0	6.60	3 x 75Ah, centerline			



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
4	0.18	0.98	1.81	3.11	4.11	38.68		12/09/2019	QUANTUM	Carbon						
HEADSAILS (4)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
10	0.15	0.73	1.32	2.33	3.30	4.26	15.30	97%	34.77	Y	No		12/09/2019	QUANTUM	Kevlar	J1 L
9	0.13	0.71	1.27	2.28	3.28	4.28	15.36	97%	34.53		No		06/07/2017	Quantum	Polyest	#3
6	0.09	0.58	1.09	2.14	3.22	4.28	15.38	97%	33.16		No		29/07/2010		Unknow	
11						3.58	15.30	82%	27.88		Yes		09/06/2011		Unknow	staysail
SYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
9	15.18	15.18	15.18	8.17	7.90	102.67		12/09/2019	QUANTUM	Nylon	S1.5-1					
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				