

BOAT Name DIRECTO Sail Nr EST 998	GPH 627.0	HULL Length Overall 10.300m Maximum Beam 3.536m Displacement 4,691kg Draft 1.908m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.110% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class ITALIA 9.98 Designer POLLI Builder ITALIA YACHTS Series 09/2014 Age 10/2016 Age Allowance 0.130% Offset File IY998mp.off - 6/24/2016 11:04:28 PM Measurement by A.Tetsmann - 28/06/2018		IMSL 9.451m VCGD 0.102m Sink 17.85kg/mm RL 8.314m VCGM 0.091m WS 23.70m² LSMO 9.183m Displacement/Length ratio 6.0578



Rating Office
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11911, Tallinn
Estonia

SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	608.7			681.8		
Time on Time	0.9857			0.9900		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	721.2	554.3	494.4	931.5	683.6	597.3
Time on Time	0.9360	1.2178	1.3654	0.7246	0.9874	1.1301

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1072.4	885.4	780.0	732.3	716.9	712.3	706.2
52°	700.7	586.5	528.8	506.0	497.7	494.5	491.0
60°	662.5	558.5	512.6	492.8	482.6	478.4	475.8
75°	633.9	539.6	501.5	480.8	464.8	453.3	445.6
90°	640.1	535.6	493.9	476.8	459.2	441.2	416.4
110°	636.3	526.6	485.0	457.6	433.8	420.2	398.8
120°	653.0	537.3	490.7	461.7	434.1	409.8	378.4
135°	719.2	582.9	512.7	480.6	453.8	427.3	376.3
150°	854.2	677.1	570.8	510.7	481.3	456.4	408.7
Run VMG	986.3	781.9	658.9	580.3	527.6	492.7	444.6

Certificate
Number **Est998**
ORC Ref **EST00000282**
Issued On **6/28/2018**
VPP Ver. **2018 1.00**
Valid until **12/31/2018**

Crew Weight
Default **610kg**
Maximum **680kg**
Minimum* **510kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring		
	ToD	ToT
Double H.GPH	631.3	0.9505
Double H.OSN	615.4	0.9750
Non Spin GPH	660.3	0.9087
Non Spin OSN	640.0	0.9375

Selected Courses							
	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Windward / Leeward	1029.4	833.7	719.5	656.3	622.2	602.5	575.4
Circular Random	865.6	697.8	608.0	556.2	524.5	503.7	476.9
Coastal / Long Distance	1025.1	782.4	648.7	574.2	535.2	504.0	452.8
Non Spinnaker	925.1	739.9	639.5	580.7	544.7	521.4	492.1

Sails Limitations	
Headsails	Spinnakers
5	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	43.8°	42.0°	41.3°	40.5°	40.4°	40.5°	40.6°
Beat VMG	3.36	4.07	4.62	4.92	5.02	5.05	5.10
52°	5.14	6.14	6.81	7.12	7.23	7.28	7.33
60°	5.43	6.45	7.02	7.31	7.46	7.52	7.57
75°	5.68	6.67	7.18	7.49	7.74	7.94	8.08
90°	5.62	6.72	7.29	7.55	7.84	8.16	8.65
110°	5.66	6.84	7.42	7.87	8.30	8.57	9.03
120°	5.51	6.70	7.34	7.80	8.29	8.79	9.51
135°	5.01	6.18	7.02	7.49	7.93	8.43	9.57
150°	4.21	5.32	6.31	7.05	7.48	7.89	8.81
Run VMG	3.65	4.60	5.46	6.20	6.82	7.31	8.10
Gybe Angles	145.2°	149.2°	150.4°	157.4°	175.6°	180.0°	180.0°

Class Division Length
CDL = **8.883**

Storm Sails Areas	
Heavy Weather Jib	25.63
Storm Jib (JL=8.96)	9.49
Storm Trysail	10.99

BOAT	
Name DIRECTO	Sail Nr EST 998
File Est0998	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 28/06/2018		SG 1.0000	
FFM 1.243	FF 1.246	SFFP 0.000	
FAM 0.612	FA 0.627	SAFP 10.300	
W1 60.5	PD1 523.3	WD 11.810	
W2 60.5	PD2 523.8	GSA 1.0	
W3 60.5	PD3 523.8	RSA 1.0	
W4 60.5	PD4 524.3	PLM 9000.0	
LCF from stem on CL / on sheer		5.596 / 5.823	
Maximum beam station from stem		7.304	
RM Measured		107.4kg·m	
RM Default		115.4kg·m	
Limit of positive stability / Stab.Index		117.5° / 114.9	
Freeboard at mast at 4.315		1.215	



2018
IMS Measurement
Certificate

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 13.080	E 4.800	MDT1 0.120	MW 0.183	
IG 13.720	J 4.215	MDL1 0.185	GO 0.201	
ISP 13.832	SFJ 0.100	MDT2 0.120	BD 0.220	
BAS 1.500	SPL 4.210	MDL2 0.155	MWT 144.10	
FSP 0.076	TPS	TL 0.800	MCG 4.990	

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MIZZEN RIG AND SAILS	
N/A	

PROPELLER		
Installation Strut	PRD 0.380	
Type Folding 2 blades	PBW 0.100	
Twin Screw No	PIPA 0.0039	
ST1 0.065	ST3 0.180	ST5 0.343
ST2 0.180	ST4 0.110	EDL 1.250

COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)						
Mainsail	MHB	MUW	MTW	MHW	MQW	Area Area (r) Formula
	0.360	1.05	1.77	2.96	3.90	36.63 37.33 P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)
Symmetric	SLU	SLE	SL	SHW	SFL	88.84 SL · (SFL + 4·SHW) / 6
	13.76	13.76	13.76	7.81	7.50	
Asymmetric	Not Available					

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
0.12	0.74	1.37	2.41	3.36	4.40	13.57	31.68	Y		24/04/2018	Unknow	Light 3DL
0.11	0.71	1.32	2.44	3.45	4.39	13.40	31.46	Y		24/04/2018	Unknow	JibTop 3DL
0.12	0.73	1.36	2.39	3.33	4.36	13.47	31.17	Y		24/04/2018	Unknow	Medium 3Di
0.08	0.59	1.13	2.22	3.29	4.35	13.57	29.97	Y		22/11/2016	Unknow	Heavy

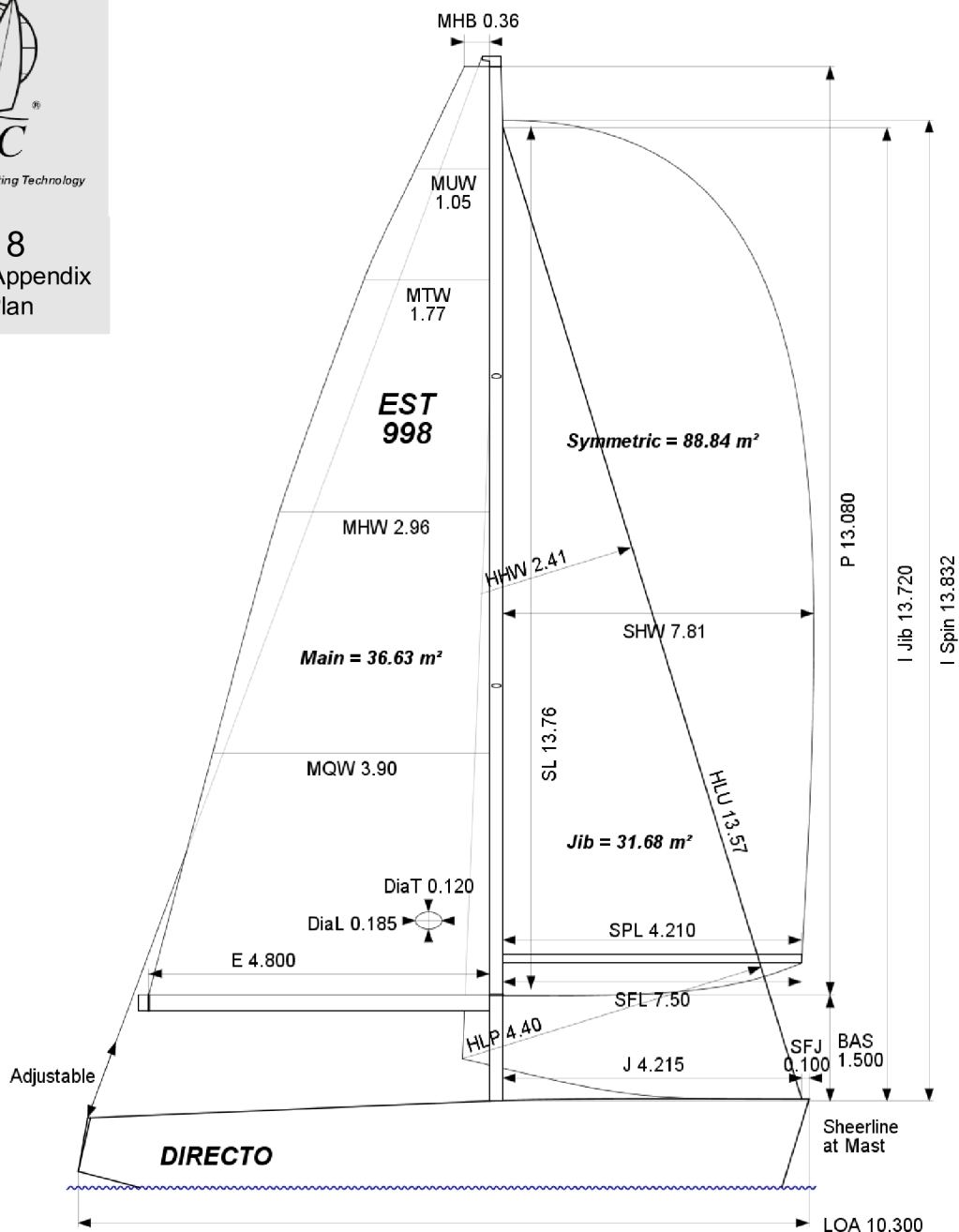
MEASUREMENT INVENTORY				
Measurer Karl-Hannes Tagu EST 7				
Date 28/06/2018				
Comment Tallinn-Pirita				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
1	Engine	Volvo-Penta	D1	
Id	Item	Weight	Description	

MEASUREMENT INVENTORY							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
1	Tank	Water	PVC	110.0	4.30		0-0 Water
2	Tank	Diesel	PVC	61.0	7.50		0-0 Diesel
3	Tank	Waste	PVC	25.0	7.60		0-0 Waste
Id	Item	Weight	Distance	VCG Description			
1	Battery		4.30	70 Ah			
2	Battery		4.30	70 Ah			



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2018
Certificate Appendix
Sail Plan



SAILS INVENTORY																
MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	0.360	1.05	1.77	2.96	3.90	36.63	EST 1	13/07/2017	NORTH	Unknown	Comment					
HEADSAILS (4)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1b	0.12	0.74	1.37	2.41	3.36	4.40	13.57	104%	31.68	Y		EST 7	24/04/2018	NS	Unknown	Light 3DL
4b	0.11	0.71	1.32	2.44	3.45	4.39	13.40	104%	31.46	Y		EST 7	24/04/2018	NS	Unknown	JibTop 3DL
2b	0.12	0.73	1.36	2.39	3.33	4.36	13.47	103%	31.17	Y		EST 7	24/04/2018	NS	Unknown	Medium 3Di
3	0.08	0.59	1.13	2.22	3.29	4.35	13.57	103%	29.97	Y		Sizil	22/11/2016	NORTH	Unknown	Heavy
SYMMETRIC SPINNAKERS (3)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	13.76	13.76	13.76	7.81	7.50	88.84	Hemamali	23/11/2016	NORTH	Nylon	S2					
1	13.86	13.86	13.86	7.68	7.58	88.47	Hemamali	23/11/2016	NORTH	Nylon	S1.5					
3	13.76	13.76	13.76	7.19	7.60	83.39	Hemamali	22/11/2016	NORTH	Unknown	S3					
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				