

BOAT Name TECHNICOL Sail Nr EST-615	GPH 570.0	HULL Length Overall 12.350m Maximum Beam 3.646m Displacement 6,841kg Draft 2.309m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.000% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class X-41 mod Designer JEPPESEN Builder X YACHTS Series 01/2006 Age 04/2010 Age Allowance 0.390% Offset File X41_k2016_mkRUD.off - 15/07/2017 Measurement by Tetsmann/Luciani - 10/05/2018		IMSL 11.061m VCGD -0.231m Sink 22.89kg/mm RL 10.141m VCGM -0.243m WS 32.25m² LSM0 10.938m Displacement/Length ratio 5.2276



World Leader in Rating Technology

2018
ORC International
Certificate

Rating Office

Offshore
Racing
Congress



World Leader In Rating Technology

SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	554.1			620.2		
Time on Time	1.0828			1.0883		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	651.6	505.3	450.2	841.2	622.7	543.4
Time on Time	1.0359	1.3359	1.4992	0.8024	1.0840	1.2421

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	951.1	779.4	693.2	663.1	649.9	639.6	629.3
52°	622.7	519.1	477.4	464.6	459.1	456.4	448.2
60°	589.1	498.3	465.0	451.9	446.2	442.9	434.3
75°	565.0	485.4	455.8	438.3	426.4	419.9	413.9
90°	571.8	487.8	454.2	435.0	416.5	401.1	384.6
110°	588.0	484.4	446.2	421.3	400.0	387.6	365.6
120°	602.3	493.0	450.2	421.9	395.3	373.6	345.0
135°	664.1	534.3	470.5	440.4	412.9	385.8	331.1
150°	787.5	627.7	527.6	471.0	442.7	417.6	368.5
Run VMG	909.4	724.8	609.3	537.6	492.6	457.9	409.8

Certificate

Number **EST615**
ORC Ref **EST00000110**
Issued On **14/05/2018**
VPP Ver. **2018 1.00**
Valid until **31/12/2018**

Crew Weight

Default 782kg
Maximum **850kg**
Minimum* **638kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	574.5	1.0444
Double H.OSN	560.3	1.0708
Non Spin GPH	602.7	0.9955
Non Spin OSN	586.1	1.0236

Selected Courses							
Windward / Leeward	930.2	752.1	651.2	600.3	571.2	548.7	519.5
Circular Random	784.2	633.2	553.0	506.8	478.2	458.7	432.0
Coastal / Long Distance	928.1	707.0	588.5	524.8	489.8	459.8	412.5
Non Spinnaker	842.4	674.6	583.9	530.8	497.8	475.7	446.8

Sails Limitations

Headsails	Spinnakers
6	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	43.0°	41.7°	40.3°	39.0°	39.0°	38.3°	38.5°
Beat VMG	3.79	4.62	5.19	5.43	5.54	5.63	5.72
52°	5.78	6.94	7.54	7.75	7.84	7.89	8.03
60°	6.11	7.22	7.74	7.97	8.07	8.13	8.29
75°	6.37	7.42	7.90	8.21	8.44	8.57	8.70
90°	6.30	7.38	7.93	8.28	8.64	8.98	9.36
110°	6.12	7.43	8.07	8.54	9.00	9.29	9.85
120°	5.98	7.30	8.00	8.53	9.11	9.64	10.44
135°	5.42	6.74	7.65	8.17	8.72	9.33	10.87
150°	4.57	5.73	6.82	7.64	8.13	8.62	9.77
Run VMG	3.96	4.97	5.91	6.70	7.31	7.86	8.79
Gybe Angles	141.5°	147.1°	148.9°	155.7°	168.4°	180.0°	180.0°

Class Division Length

CDL = **10.602**

Storm Sails Areas

Heavy Weather Jib **39.52**
Storm Jib (JL=11.12) **14.64**
Storm Trysail **15.12**

Owner

BOAT			
Name	TECHNONICOL	Sail Nr	EST-615
File	Est0615	Data in	meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date		05/07/2017	SG 1.0250
FFM	1.460	FF	1.461 SFFP 0.200
FAM	1.096	FA	1.096 SAFFP 11.995
W1	111.9	PD1	515.3 WD 12.210
W2	111.9	PD2	515.5 GSA 1.0
W3	111.9	PD3	514.1 RSA 1.0
W4	111.9	PD4	515.4 PLM 9000.0
LCF from stem on CL / on sheer		6.917 / 7.131	
Maximum beam station from stem		8.432	
RM Measured		208.9kg-m	
RM Default		203.0kg-m	
Limit of positive stability / Stab.Index		131.0° / 134.5	
Freeboard at mast at 5.210		1.218	



World Leader in Rating Technology

2018

IMS Measurement Certificate

RIG			
Forestay Tension	Aft	Spreaders	2
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	15.800	E	5.470 MDT1 0.131 MW 0.240
IG	17.035	J	5.210 MDL1 0.240 GO 0.263
ISP	17.065	SFJ	MDT2 0.115 BD 0.270
BAS	1.865	SPL	5.400 MDL2 0.190 MWT 187.00
FSP	0.076	TPS	TL 0.550 MCG 5.700

Certificate	
Number	EST615
ORC Ref	EST00000110
Issued On	14/05/2018
VPP Ver.	2018 1.00
Valid until	31/12/2018

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation	Strut	PRD	0.430
Type	Folding 2 blades	PBW	0.125
Twin Screw	No	PIPA	0.0036
ST1	0.060	ST3	0.180 ST5 0.325
ST2	0.180	ST4	0.100 EDL 1.520

COMMENTS	

MOVABLE BALLAST	
N/A	



World Leader In Rating Technology

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.380	1.31	2.17	3.59	4.60	52.54	53.70	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	
	17.09	17.09	17.09	9.79	9.58	138.83			
Asymmetric	SLU	SLE	SL	SHW	SFL	Area (r)		AS · (SFL + 4·SHW) / 6	
	16.92	15.56	16.24	5.88	7.83	84.85 109.84			

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
0.19	0.97	1.75	3.01	4.22	5.48	16.89	49.53			15/06/2017	Unknow	Jib 1
0.18	0.88	1.61	2.91	4.14	5.47	16.89	48.24			15/06/2017	Unknow	Jib 2
0.12	0.69	1.32	2.58	3.90	5.35	16.71	44.02			08/05/2017	Unknow	Jib 3
0.13	0.63	1.17	2.21	3.18	4.01	14.81	31.69			08/05/2017	Unknow	Staysail

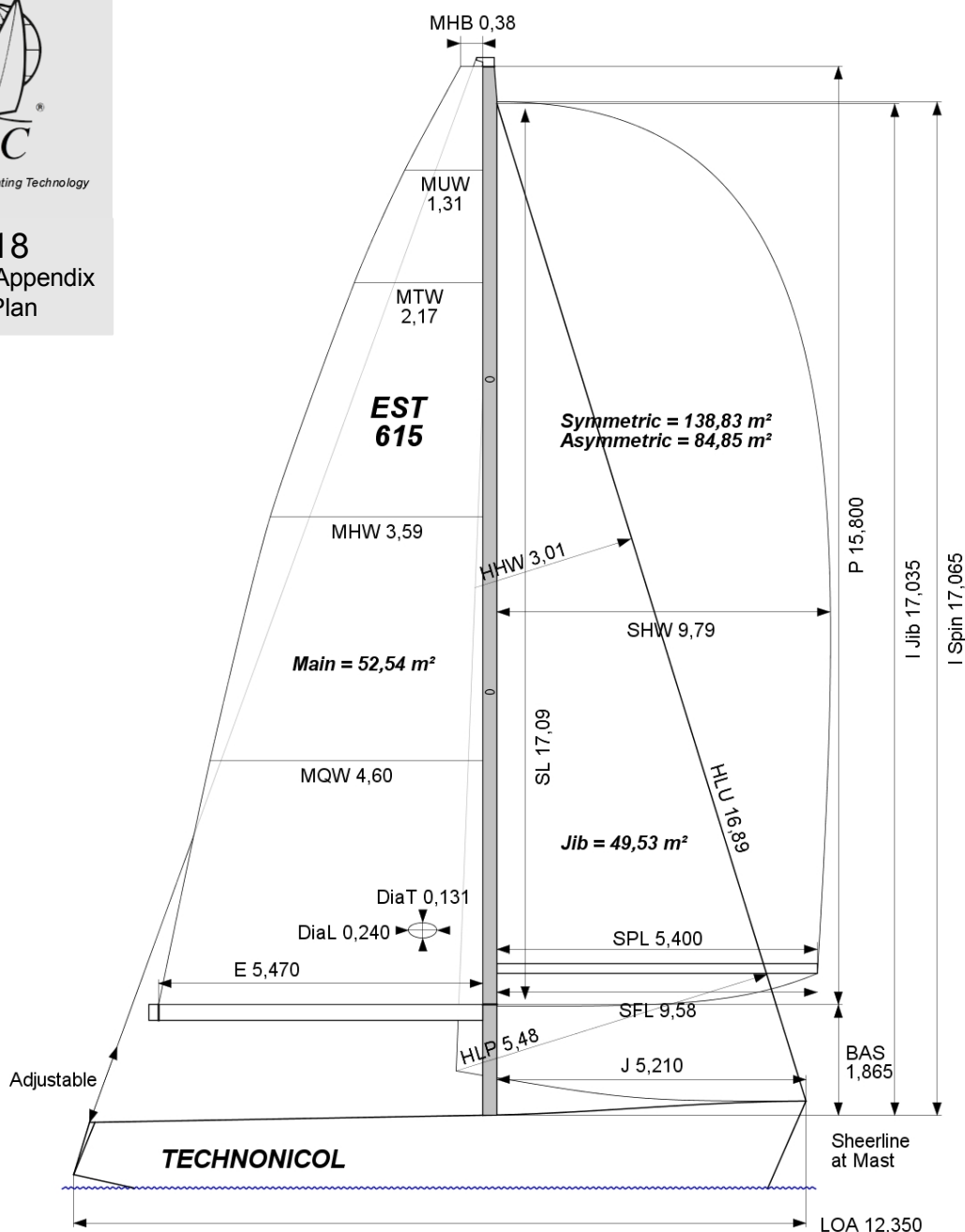
MEASUREMENT INVENTORY				
Measurer Paolo Luciani				
Date 05/07/2017				
Comment ORC Worlds 2017				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
A	Engine	VOLVO PENTA	D2-408	
Id	Item	Weight Description		

MEASUREMENT INVENTORY						
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG Condtn Description
C	Tank	WASTE	Plastic	40.0	4.15	0.00 0-0
B	Tank	FUEL	Steel	90.0	5.50	0.00 5-0
A	Tank	WATER	Plastic	210.0	5.20	0.00 0-0
Id	Item	Weight	Distance	VCG Description		
C	Battery	0.0	7.50	0.00 30 Ah Engine		
B	Battery	0.0	4.50	0.00 180 Ah Sevice		
-	Misc			Removed closet in front cabin		
-	Misc			Removed decorative wall panels		
-	Misc			Removed sofa backboards in saloon		
-	Misc			Rem.hammock, closet doors in back cabin		



World Leader in Rating Technology

2018
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
C	0.380	1.31	2.17	3.59	4.60	52.54	SLO 03	10/05/2018	OneSails	Unknown	P15,80;E5,47

HEADSAILS (4)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
C	0.19	0.97	1.75	3.01	4.22	5.48	16.89	105%	49.53			SLO 03	15/06/2017	OneSails	Unknown	Jib 1
D	0.18	0.88	1.61	2.91	4.14	5.47	16.89	105%	48.24			SLO 03	15/06/2017	OneSails	Unknown	Jib 2
E	0.12	0.69	1.32	2.58	3.90	5.35	16.71	103%	44.02			SLO 03	08/05/2017	OneSails	Unknown	Jib 3
F	0.13	0.63	1.17	2.21	3.18	4.01	14.81	77%	31.69			SLO 03	08/05/2017	OneSails	Unknown	Staysail

SYMMETRIC SPINNAKERS (2)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
C	17.09	17.09	17.09	9.79	9.58	138.83	SLO 03	15/06/2017	OneSails	Unknown	S 1
D	16.97	16.97	16.97	9.70	10.11	138.33	SLO 03	15/06/2017	OneSails	Unknown	S 2

ASYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
A	16.92	15.56	16.24	5.88	7.83	84.85	asym	SLO 03	15/06/2017	OneSails	Unknown	A 0