



ORC

Offshore Racing Congress
World leader in rating technology

**2020
ORC Club
Certificate**

Rating Office

EYU
Purje 8
11911, Tallinn
Estonia

Certificate

Number **EST619**
Issued On **5/26/2020**
ORC Ref **03580000IT7**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

Crew Weight

Default 788kg
Maximum **660kg**
Minimum* **495kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

ToD ToT
Non Spin GPH **651.1 0.9215**
Non Spin OSN **631.1 0.9507**

Sails Limitations

Headsails **6** Spinnakers **4**

Spinnaker configuration

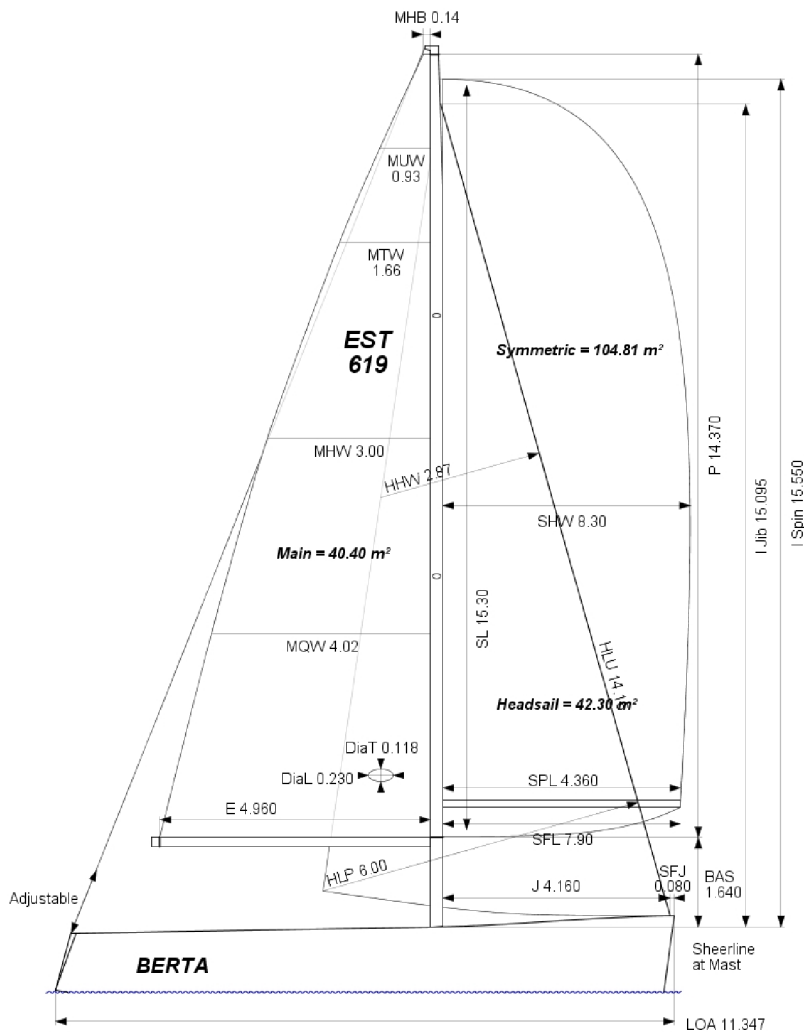
Symmetric: **Yes 104.81**
Asymmetric: **No**
Flying H/S: **No**
Spin. Pole: **Yes**

Class Division Length

CDL = 9.842

Stability (Estimated)

Limit Positive Stab.: **116.3°**
Stability Index: **121.7**



BOAT		GPH		HULL		
Name BERTA Sail Nr EST 619		619.7		Data File Est0619	LOA 11.347m	
				Offset File CLel380sk.off	MB 3.630m	
				Displacement 7,770kg	Draft 2.022m	
CLASS		IMS Division Cruiser/Racer Dynamic All. 0.287%				
Class	Elan 380	Plan Review Construction Solid				
Designer	Humphreys	Fiber Rigging No Aramid Core No				
Builder	Elan	Crew Arm Ex Carbon Rudder No				
Series	04/2008	Light Stanchions				
Age Date	07/2009	IMSL 10.933m	VCGD 0.269m	Sink 23.10kg/mm		
Age Allowance	0.390%	RL 8.750m	VCGM 0.044m	WS 30.03m²		
COMMENTS		LSM0 10.993m Displacement/Length ratio				
		Water Ballast Trim Tab No				
		BLR Index 0.0000				
PROPELLER		CENTERBOARD				
Installation	Strut	PRD	0.410	N/A		
Type	Folding 2 blades	PBW	0.120			
		PIPA	0.0036			
SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	601.4			670.4		
Time on Time	0.9977			1.0068		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	715.2	547.5	488.0	924.7	675.9	582.3
Time on Time	0.9438	1.2329	1.3831	0.7300	0.9986	1.1592

BOAT	
Name BERTA	Sail Nr EST 619
File Est0619	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Club Estimated VCG			
Flotation date 26/05/2020		SG	
FFM	FF	1.385	SFFP 0.522
FAM	FA	1.038	SAFP 10.963
LCF from stem on CL / on sheer		6.490 / 6.729	
Maximum beam station from stem		7.579	
RM Measured		166.7kg·m	
RM Default		161.9kg·m	
Limit of positive stability / Stab.Index		116.3° / 121.7	
Freeboard at mast at 4.240		1.194	



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2020
Measurements
Datasheet

RIG							
Forestay Tension	Aft	Spreaders	2				
Inner Stay	None Fitted	Runners/Checkstays	0				
Carbon Mast	No	Jib Furler	No				
Fiber Rigging	No	Main Furler	No				
Non-Circular Rigging	No						
Articulated Bowsprit	No						
P	14.370	E	4.960	MDT1	0.118	MW	0.202
IG	15.095	J	4.160	MDL1	0.230	GO	0.235
ISP	15.550	SFJ	0.080	MDT2	0.116	BD	0.170
BAS	1.640	SPL	4.360	MDL2	0.160	MWT	193.60
FSD	0.035	TPS		TL	2.500	MCG	5.350

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation	Strut	PRD	0.410
Type	Folding 2 blades	PBW	0.120
Twin Screw	No	PIPA	0.0036
ST1	0.050	ST3	0.180
ST2	0.180	ST4	0.112
		ST5	0.280
		EDL	2.860

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COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS INVENTORY																
MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
3	0.14	0.93	1.66	3.00	4.02	40.40				Unknown	P14.37;E4.96					
HEADSAILS (3)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
5	0.09	0.74	1.45	2.87	4.60	6.00	14.15	144%	42.30		No					
3	0.09	0.77	1.39	2.44	3.41	4.35	14.82	105%	34.82		No					Unknown G1 LM
4	0.09	0.72	1.29	2.34	3.30	4.32	14.71	104%	33.47		No					Unknown G1 MH
SYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	15.30	15.30	15.30	8.30	7.90	104.81				Unknown	S1,5					
1	14.86	14.86	14.86	7.72	7.39	94.79	VR	09/07/2009	WB	Dacron						
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				



2020

ORC Club Certificate Appendix

BOAT	
Name BERTA	Certificate Number EST619
Sail Nr EST 619	Issued On 5/26/2020

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1058.0	875.7	771.7	713.8	690.5	680.0	679.2
52°	688.2	582.1	520.5	494.6	484.2	479.8	477.3
60°	648.8	553.0	503.3	482.4	471.9	467.1	463.8
75°	619.6	531.2	491.4	472.3	459.9	450.6	442.0
90°	625.9	532.7	487.1	469.7	455.5	442.8	421.6
110°	635.5	525.3	478.6	456.3	438.7	426.7	408.9
120°	652.5	537.3	483.7	459.1	439.0	419.0	391.8
135°	719.2	586.1	508.5	473.9	452.9	432.4	391.2
150°	851.9	676.4	573.5	507.3	475.3	455.3	416.7
Run VMG	983.7	781.1	662.0	580.9	527.0	487.8	446.9
Selected Courses							
Windward / Leeward	1020.9	828.4	716.8	647.4	608.7	583.9	563.1
Circular Random	856.6	690.4	601.0	549.1	517.5	497.4	474.1
Coastal / Long Distance	1017.2	777.7	644.7	565.6	526.1	496.7	452.5
Non Spinnaker	913.8	730.6	630.6	571.6	535.3	512.1	484.8

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	43.5°	41.3°	41.3°	40.5°	39.4°	39.0°	39.4°
Beat VMG	3.40	4.11	4.67	5.04	5.21	5.29	5.30
52°	5.23	6.18	6.92	7.28	7.43	7.50	7.54
60°	5.55	6.51	7.15	7.46	7.63	7.71	7.76
75°	5.81	6.78	7.33	7.62	7.83	7.99	8.15
90°	5.75	6.76	7.39	7.66	7.90	8.13	8.54
110°	5.67	6.85	7.52	7.89	8.21	8.44	8.80
120°	5.52	6.70	7.44	7.84	8.20	8.59	9.19
135°	5.01	6.14	7.08	7.60	7.95	8.32	9.20
150°	4.23	5.32	6.28	7.10	7.57	7.91	8.64
Run VMG	3.66	4.61	5.44	6.20	6.83	7.38	8.06
Gybe Angles	145.0°	149.5°	151.0°	155.0°	170.0°	180.0°	180.0°