



World Leader in Rating Technology

2019 (Test) ORC Club One Design Certificate

Rating Office

Certificate

Number **ETCHEL**
 Issued On **15/01/2019**
 ORC Ref **N/A**
 VPP Ver. **2019 1.01**

Invalid for Racing

Crew Weight

Default 381kg
 Maximum **285kg**
 Minimum* **200kg**
*when applied by the NoR and SI
 Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	721.2	0.8319
Non Spin OSN	699.6	0.8576

Sails Limitations

Headsails **5** Spinnakers **3**
Dacron Sails

Spinnaker configuration

Symmetric: **Yes** 43.22
 Asymmetric: **No**
 Flying H/S: **No**
 Spin. Pole: **Yes**

Class Division Length

CDL = 7.014

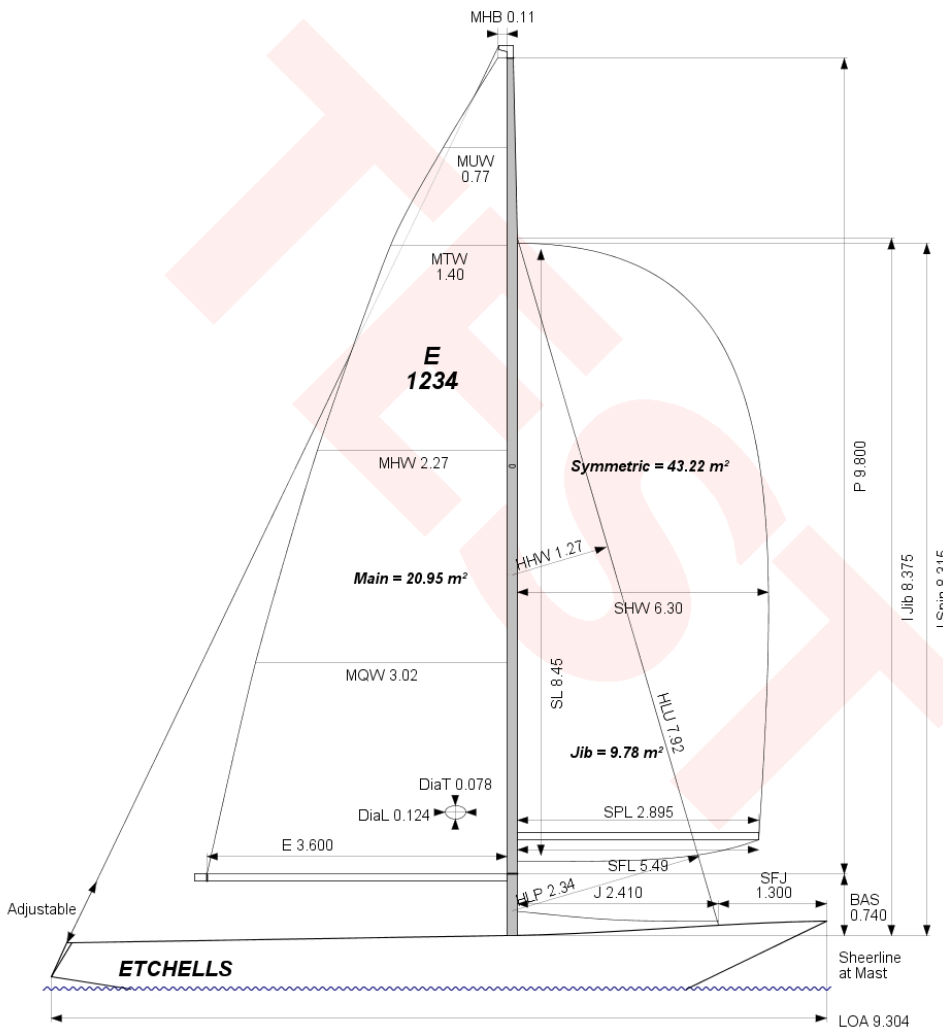
Stability (Estimated)

Limit Positive Stab.: **112.6°**
 Stability Index: **113.0**

Owner

I certify that I understand my responsibilities under ORC Rules and Regulations

Signature



BOAT	GPH	HULL
Name ETHELLES Sail Nr E-1234	682.1	Data File etchells LOA 9.304m Offset File etchell.od MB 2.090m Displacement 1,512kg Draft 1.388m
CLASS Class Etchells Designer ETHELLES Builder PETTICROW Series 03/1967 Age Date 04/1996 Age Allowance 0.487%	IMS Division Performance Dynamic All. 0.184% Fwd Accom. Construction Solid Fiber Rigging No Aramid Core Crew Arm Ex 0.50 Carbon Rudder Light Stanchions	IMSL 7.194m VCGD -0.090m Sink 8.33kg/mm RL 6.832m VCGM -0.084m WS 11.34m² LSMO 6.604m Displacement/Length ratio 5.2497
COMMENTS INTERNATIONAL ONE DESIGN	Water Ballast 0 Trim Tab BLR Index 0.0000	CENTERBOARD N/A
PROPELLER Type No Propeller		

SCORING OPTIONS	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	Time on Distance	663.2			743.8	
Time on Time	0.9046			0.9075		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	781.3	603.9	537.4	1017.6	743.0	652.1
Time on Time	0.8639	1.1178	1.2561	0.6633	0.9085	1.0351



2019 (Test)

ORC Club Certificate Appendix

BOAT		Certificate Number	
Name	ETCHELLS	ETCHEL	
Sail Nr	E-1234	Issued On	15/01/2019

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1182.4	964.8	847.4	807.9	795.7	792.3	781.3
52°	767.4	638.9	584.8	567.9	561.7	558.8	550.3
60°	721.5	609.9	568.7	551.1	543.3	538.9	529.1
75°	689.7	589.9	555.2	531.5	514.6	504.7	497.3
90°	667.7	572.2	544.7	524.5	498.6	478.1	455.3
110°	661.2	563.9	523.8	492.1	473.1	458.9	428.6
120°	687.6	572.3	529.1	490.0	455.8	434.1	399.5
135°	776.5	623.7	553.7	515.3	477.1	440.0	358.1
150°	932.9	732.9	612.7	552.2	516.8	481.7	409.0
Run VMG	1077.2	846.3	707.2	621.6	565.7	530.7	465.9

Selected Courses							
Windward / Leeward	1129.8	905.6	777.3	714.7	680.7	661.5	623.6
Circular Random	939.9	758.3	661.6	605.9	571.4	547.6	512.6
Coastal / Long Distance	1124.5	848.8	703.0	627.0	584.3	550.1	488.8
Non Spinnaker	1011.9	808.2	698.1	634.3	595.0	568.9	532.9

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°	42.1°	40.3°	39.0°	38.8°	38.8°	39.0°
Beat VMG	3.04	3.73	4.25	4.46	4.52	4.54	4.61
52°	4.69	5.63	6.16	6.34	6.41	6.44	6.54
60°	4.99	5.90	6.33	6.53	6.63	6.68	6.80
75°	5.22	6.10	6.48	6.77	7.00	7.13	7.24
90°	5.39	6.29	6.61	6.86	7.22	7.53	7.91
110°	5.44	6.38	6.87	7.32	7.61	7.85	8.40
120°	5.24	6.29	6.80	7.35	7.90	8.29	9.01
135°	4.64	5.77	6.50	6.99	7.54	8.18	10.05
150°	3.86	4.91	5.88	6.52	6.97	7.47	8.80
Run VMG	3.34	4.25	5.09	5.79	6.36	6.78	7.73
Gybe Angles	144.8°	148.5°	150.3°	160.2°	180.0°	180.0°	180.0°