

BOAT	GPH	HULL
Name Arwen Sail Nr FIN-14671	622.3	Length Overall 10.640m Maximum Beam 3.458m Displacement 5,860kg Draft 2.236m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.038% Fwd Accommodation Yes Hull Construction Solid Carbon Rudder No Crew Arm Extension
GENERAL		IMSL 9.650m VCGD 0.201m Sink 19.65kg/mm RL 8.902m VCGM 0.176m WS 25.58m² LSM0 9.598m Displacement/Length ratio 6.6276
Class FIRST 36.7 Designer Farr Builder Beneteau Series 01/2001 Age 01/2006 Age Allowance 0.487% Offset File F196.BOF - 05/09/2002 09:35:34 Measurement by - 10/06/2019		



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	606.0			673.2		
Time on Time	0.9901			1.0026		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	706.1	552.9	498.8	909.2	676.0	592.3
Time on Time	0.9560	1.2209	1.3533	0.7424	0.9985	1.1397

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	998.4	835.2	742.7	707.7	694.0	688.1	687.9
52°	660.8	561.9	518.8	503.7	498.2	495.6	494.6
60°	627.4	541.5	507.2	492.4	486.3	483.2	481.5
75°	602.0	528.0	498.9	482.0	470.2	463.9	458.6
90°	608.0	527.9	497.0	478.6	462.7	448.8	432.5
110°	644.3	535.9	494.1	470.1	448.7	433.1	415.1
120°	664.7	548.9	500.1	474.7	452.0	430.1	399.4
135°	735.1	601.2	526.0	492.3	469.4	446.8	404.2
150°	869.9	691.9	587.5	523.6	492.7	471.1	429.3
Run VMG	1004.5	799.0	677.2	595.7	538.3	501.9	459.2
Selected Courses							
Windward / Leeward	1001.4	817.1	710.0	651.7	616.2	595.0	573.5
Circular Random	849.5	689.1	604.0	555.5	526.2	507.6	484.9
Coastal / Long Distance	1001.7	769.2	642.9	573.1	536.7	508.5	464.4
Non Spinnaker	888.2	716.5	624.4	571.3	539.1	518.4	492.8

Certificate

Number **14671**
ORC Ref **FIN00003907**
Issued On **10/06/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight

Default **649kg**
Maximum **715kg**
Minimum* **536kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	632.0	0.9493
Double H.OSN	617.5	0.9717
Non Spin GPH	643.9	0.9318
Non Spin OSN	626.5	0.9577

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	41.9°	40.8°	39.9°	38.3°	37.6°	37.3°	38.0°
Beat VMG	3.61	4.31	4.85	5.09	5.19	5.23	5.23
52°	5.45	6.41	6.94	7.15	7.23	7.26	7.28
60°	5.74	6.65	7.10	7.31	7.40	7.45	7.48
75°	5.98	6.82	7.22	7.47	7.66	7.76	7.85
90°	5.92	6.82	7.24	7.52	7.78	8.02	8.32
110°	5.59	6.72	7.29	7.66	8.02	8.31	8.67
120°	5.42	6.56	7.20	7.58	7.96	8.37	9.01
135°	4.90	5.99	6.84	7.31	7.67	8.06	8.91
150°	4.14	5.20	6.13	6.88	7.31	7.64	8.39
Run VMG	3.58	4.51	5.32	6.04	6.69	7.17	7.84
Gybe Angles	145.3°	150.2°	152.1°	157.6°	179.9°	180.0°	180.0°

Class Division Length

CDL = 9.277

Storm Sails Areas

Heavy Weather Jib **27.36**
Storm Jib (JL=9.26) **10.14**
Storm Trysail **11.71**

Owner

BOAT Name Arwen Sail Nr FIN-14671 File L14671 Data in meters/kilograms		INCLINING TEST AND FREEBOARDS Inclining Test Current Inclining Flotation date 29/04/2012 SG 1.0050		 ORC Offshore Racing Congress World leader in rating technology 2019 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		FFM 1.326 FF 1.343 SFFP 0.367 FAM 1.033 FA 1.035 SAFF 10.162 W1 77.2 PD1 513.5 WD 10.770 W2 77.2 PD2 511.0 GSA 1.0 W3 77.2 PD3 507.2 RSA 1.0 W4 77.2 PD4 505.3 PLM 9000.0		
P 13.850 E 4.830 MDT1 0.110 MW 0.201 IG 14.166 J 3.980 MDL1 0.201 GO 0.220 ISP 14.202 SFJ 0.000 MDT2 0.110 BD 0.160 BAS 1.588 SPL 4.070 MDL2 0.201 MWT 165.00 FSP 0.074 TPS TL 0.000 MCG 5.100		LCF from stem on CL / on sheer 5.913 / 6.144 Maximum beam station from stem 6.980 RM Measured 128.6kg-m RM Default 145.0kg-m Limit of positive stability / Stab.Index 109.4° / 112.0 Freeboard at mast at 3.980 1.186		
MIZZEN RIG AND SAILS N/A		PROPELLER Installation Strut PRD 0.410 Type Folding 2 blades PBW 0.110 Twin Screw No PIPA 0.0032 ST1 0.042 ST3 0.180 ST5 0.230 ST2 0.180 ST4 0.112 EDL 2.400		
COMMENTS N/A		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	
	0.170	1.00	1.79	3.09	4.03	39.54	40.30	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	82.93		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)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0.09	0.79	1.53	3.07	4.61	6.19	14.09	43.49			10/06/2019	Unknow	
0.10	0.77	1.51	3.04	4.61	6.14	14.10	43.24			12/05/2018	Unknow	
0.10					5.57	14.08	39.85				Unknow	Stratis
0.08	0.54	1.04	2.07	3.13	4.18	14.07	29.41			24/05/2013	Carbon	

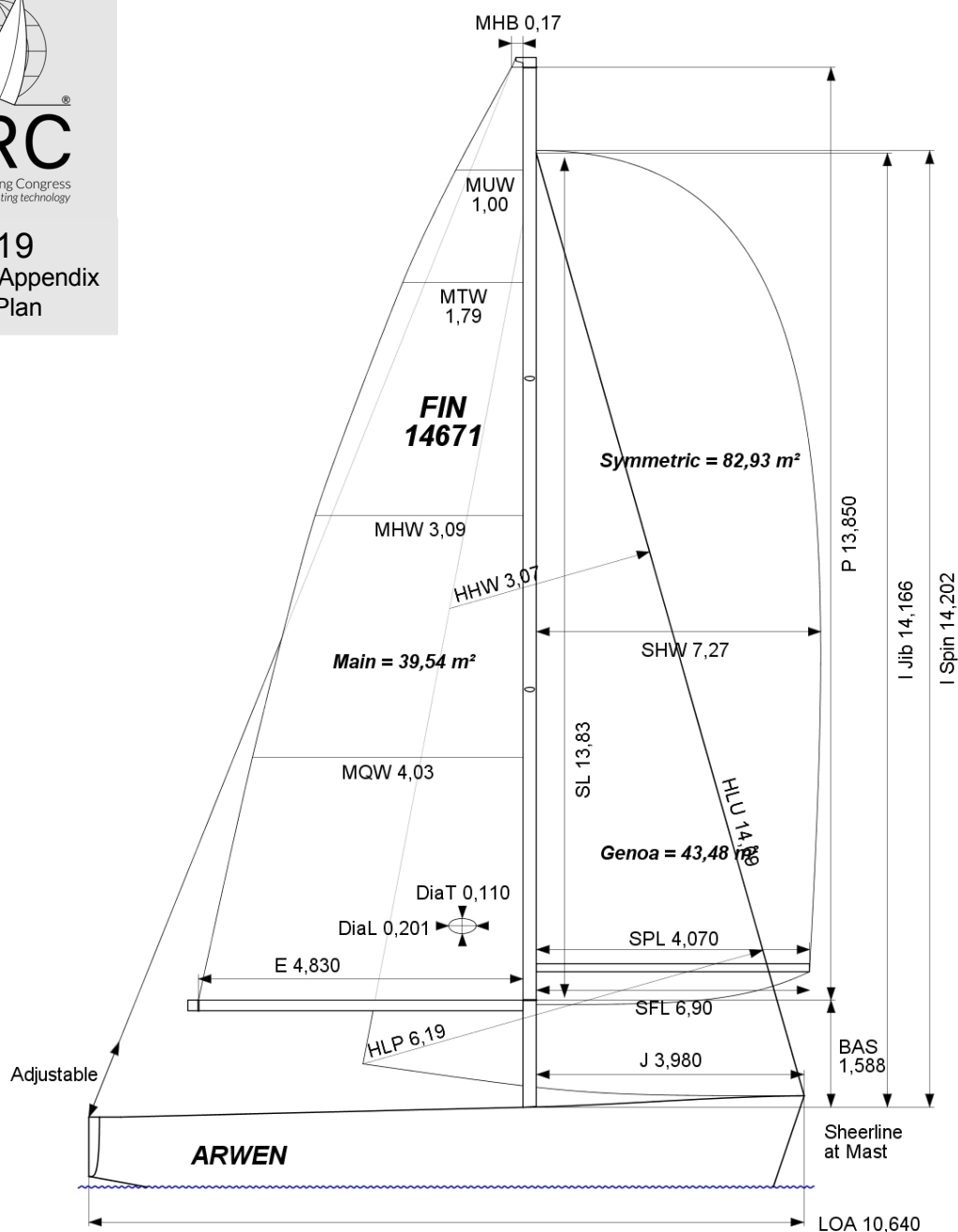
MEASUREMENT INVENTORY Measurer Date 29/04/2012 Comment						MEASUREMENT INVENTORY								
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG</i>	<i>Description</i>	<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn</i>	<i>Description</i>
1	Anchor	15.0	0.50		Delta	1	Tank	Fuel		75.0	8.58		0-0	FB +3.5mm for 75 l
2	Anchor	7.5	9.93			2	Tank	Water		150.0	4.73		0-0	Empty
3	Chain		0.50		5m	3	Tank	Boiler		22.0	7.98			
4	Tools	20.0	2.58			4	Tank	Water		150.0	4.73		0-0	Empty
						5	Tank	Waste		88.0	5.63		0-0	Empty
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>											
1	Engine	Yanmar	3YM 29 HP											
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG</i>	<i>Description</i>	<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG</i>	<i>Description</i>			
						1	Battery		7.98		2*70Ah			
						2	Battery		6.78		2*70Ah			



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
3	0.17	1.00	1.79	3.09	4.03	39.55		12/05/2018	Doyle	Unknown	Stratis Ice					
HEADSAILS (4)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
G1_19	0.09	0.79	1.53	3.07	4.61	6.19	14.09	156%	43.49				10/06/2019	Doyle	Unknown	
G1_18	0.10	0.77	1.51	3.04	4.61	6.14	14.10	154%	43.24				12/05/2018		Unknown	
G2	0.10					5.57	14.08	140%	39.85					Doyle	Unknown	Stratis
G3n	0.08	0.54	1.04	2.07	3.13	4.18	14.07	105%	29.41				24/05/2013	Doyle	Carbon	
SYMMETRIC SPINNAKERS (4)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
Run	13.83	13.83	13.83	7.27	6.90	82.94		05/05/2012	Doyle	Nylon	White					
Heavy	13.82	13.82	13.82	7.17	6.98	82.14		12/05/2018		Unknown						
Light	13.82	13.82	13.82	7.12	7.03	81.80		12/05/2018		Unknown						
Reach	13.80	13.80	13.80	6.97	6.63	79.38		05/05/2012	Quantum	Nylon	White/Grey					
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				