

BOAT
Name Sky Sail Nr SLO972

GPH
581.2

HULL			
Length Overall	13.580m		
Maximum Beam	4.356m		
Displacement	12,766kg		
Draft	2.299m		
IMS Reg. Division	Cruiser/Racer		
Dynamic Allowance	0.279%		
Fwd Accommodation	Yes		
Hull Construction	Solid		
Carbon Rudder	No		
Crew Arm Extension			
IMSL	12.922m	VCGD	0.240m Sink 32.60kg/mm
RL	9.737m	VCGM	0.173m WS 44.31m ²
LSM0	12.846m	Displacement/Length ratio	6.0221



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GENERAL
Class Elan 450
Designer Rob Humphreys
Builder Elan Yachts
Series 01/2008
Age 10/2010
Age Allowance 0.357%
Offset File ELAN450S.off - 27/04/2011 11:25:26
Measurement by - 19/07/2013

Rating Office

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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	563.5			632.2		
Time on Time	1.0648			1.0677		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	679.0	511.3	451.6	881.9	637.6	543.8
Time on Time	0.9941	1.3201	1.4947	0.7654	1.0586	1.2413

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TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1028.9	840.9	736.2	676.7	651.6	640.5	629.8
52°	662.1	554.7	490.6	460.1	448.1	443.3	440.4
60°	620.6	525.4	470.5	446.2	434.9	430.1	426.8
75°	590.1	502.2	456.7	435.7	423.3	414.7	406.9
90°	596.0	501.4	449.7	427.6	418.6	407.9	388.4
110°	594.5	488.2	439.8	418.3	403.9	389.7	370.8
120°	609.2	498.8	444.8	420.6	402.1	384.1	357.4
135°	673.6	544.7	469.8	434.8	414.8	396.2	358.0
150°	799.9	635.7	536.2	471.7	437.6	418.1	382.9
Run VMG	923.7	734.0	619.2	541.8	492.7	454.5	412.5

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Number **I01/19**
ORC Ref **SLO00003824**
Issued On **05/03/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Selected Courses							
Windward / Leeward	976.3	787.5	677.7	609.3	572.1	547.5	521.2
Circular Random	810.7	650.3	563.2	512.2	480.9	460.8	436.6
Coastal / Long Distance	971.0	738.0	606.8	527.8	488.9	460.3	416.2
Non Spinnaker	879.1	698.5	598.9	539.5	502.5	478.7	450.5

Crew Weight

Default 984kg
Maximum **950kg**
Minimum* **713kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

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	44.0°	42.1°	41.4°	41.2°	40.5°	40.1°	39.6°
Beat VMG	3.50	4.28	4.89	5.32	5.53	5.62	5.72
52°	5.44	6.49	7.34	7.82	8.03	8.12	8.18
60°	5.80	6.85	7.65	8.07	8.28	8.37	8.44
75°	6.10	7.17	7.88	8.26	8.51	8.68	8.85
90°	6.04	7.18	8.00	8.42	8.60	8.83	9.27
110°	6.06	7.37	8.19	8.61	8.91	9.24	9.71
120°	5.91	7.22	8.09	8.56	8.95	9.37	10.07
135°	5.34	6.61	7.66	8.28	8.68	9.09	10.06
150°	4.50	5.66	6.71	7.63	8.23	8.61	9.40
Run VMG	3.90	4.90	5.81	6.64	7.31	7.92	8.73
Gybe Angles	141.3°	147.8°	149.1°	153.0°	160.1°	180.0°	180.0°

Special Scoring

	ToD	ToT
Double H.GPH	589.2	1.0184
Double H.OSN	572.4	1.0483
Non Spin GPH	619.0	0.9693
Non Spin OSN	599.5	1.0008

Sails Limitations	
Headsails	Spinnakers
6	4

Class Division Length

CDL = 11.330

Storm Sails Areas

Heavy Weather Jib **43.44**
Storm Jib (JL=11.66) **16.09**
Storm Trysail **17.89**

Owner

BOAT	
Name Sky	Sail Nr SLO972
File SLO972	Data in meters/kilograms

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 17.420	E 5.868 MDT1 0.146 MW 0.201
IG 17.610	J 4.880 MDL1 0.285 GO 0.290
ISP 18.790	SFJ 0.310 MDT2 0.135 BD 0.200
BAS 1.790	SPL 5.410 MDL2 0.201 MWT 360.20
FSP 0.078	TPS 5.200 TL 2.200 MCG 6.620

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 10/05/2017		SG 1.0250
FFM 1.508	FF 1.502	SFFP 0.150
FAM 1.114	FA 1.132	SAFP 13.310
W1 140.9	PD1 443.6	WD 12.530
W2 140.9	PD2 438.0	GSA 1.0
W3 140.9	PD3 438.4	RSA 1.0
W4 140.9	PD4 438.7	PLM 9000.0
LCF from stem on CL / on sheer		7.565 / 7.847
Maximum beam station from stem		10.079
RM Measured		316.2kg-m
RM Default		316.8kg-m
Limit of positive stability / Stab.Index		108.4° / 115.5
Freeboard at mast at 5.190		1.296



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MIZZEN RIG AND SAILS	
N/A	

PROPELLER		
Installation Strut	PRD 0.400	
Type Folding 2 blades	PBW	
Twin Screw No	PIPA 0.0039	
ST1 0.065	ST3 0.180	ST5 0.270
ST2 0.180	ST4 0.110	EDL 3.375

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COMMENTS	
0038641618002 TPS 6,90 not used	

MOVABLE BALLAST	
N/A	



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CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.250	1.26	2.25	3.80	4.87	60.90	62.05	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	
	18.45	18.45	18.45	10.50	9.72	159.04			
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL		Area (r)	AS · (SFL + 4·SHW) / 6	
	18.59	17.01	17.80	6.42	8.48	101.34	119.73		

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
0.13	1.05	1.88	3.01	4.08	5.33	17.14	49.78	Y		16/09/2016	Twaron	Light
0.14	1.03	1.84	2.99	4.14	5.40	17.06	49.75	Y		26/06/2017	Unknow	LM
0.11	0.76	1.46	2.67	4.00	5.21	17.14	46.03	Y		19/07/2013	Carbon	MH
0.09	0.68	1.30	2.51	3.77	4.92	16.97	42.66	Y		28/03/2015	Twaron	No.4

MEASUREMENT INVENTORY				
Measurer CRO 5				
Date 10/05/2017				
Comment				
Id	Item	Weight	Distance	VCG Description
	Anchor			
2	Chain	42.0	40.80	rope
4	Chain	8.5	40.80	5 mm x 10 mm
4	Tools	5.0	8.40	
Id	Item	Maker	Model	
1	Engine	Volvo	D2 55	
Id	Item	Weight Description		

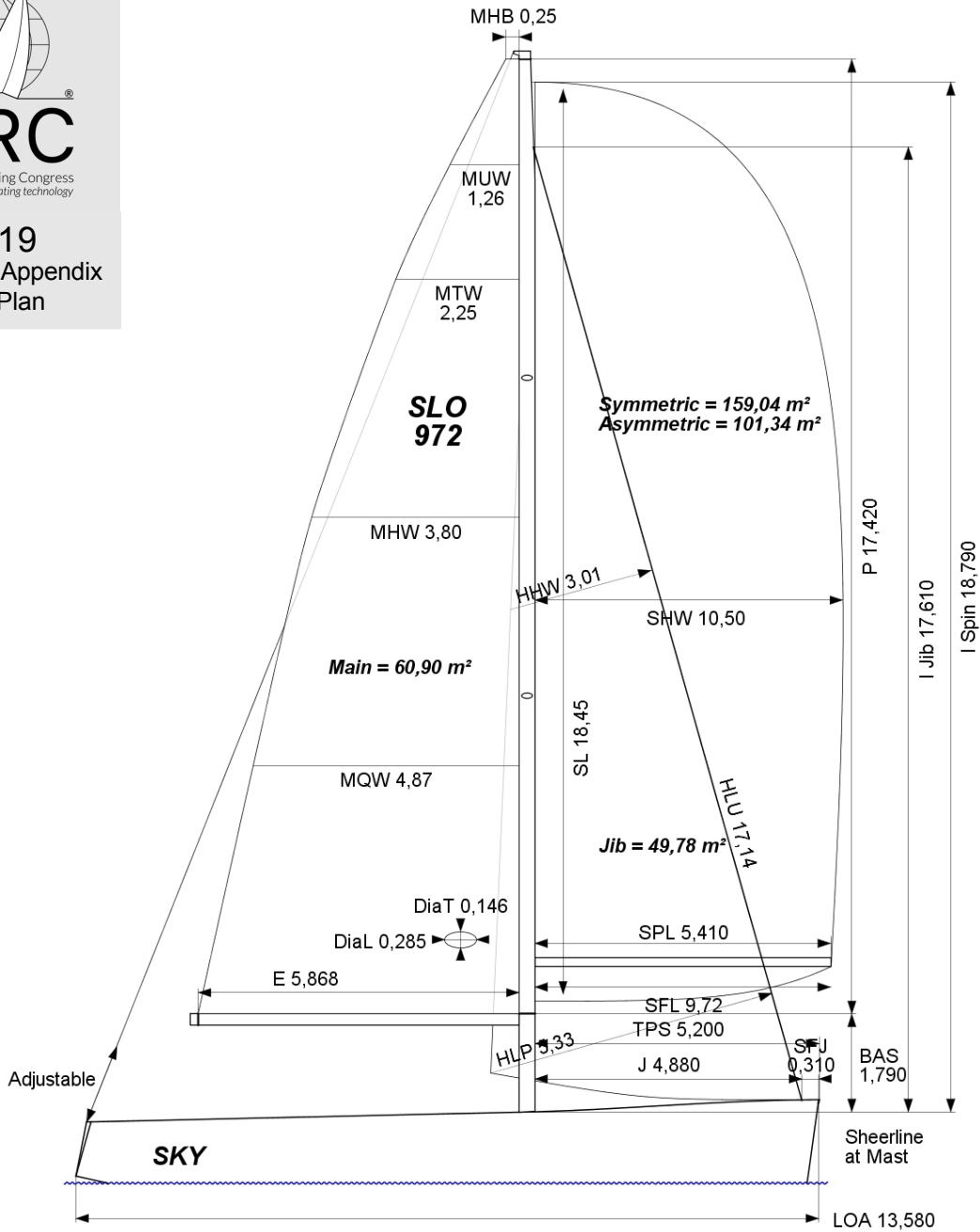
MEASUREMENT INVENTORY									
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description	
5	Tank	Disel	PVC - fix	205.0	10.36		190.0	port side	
4	Tank	Water	PVC - fix	220.0	10.36		0.0	stb side	
3	Tank	Water	PVC - fix	200.0	2.60		0.0	centerline	
2	Tank	Holding	PVC - fix	100.0	5.90		15.0	stb side	
1	Tank	Boiler	Fix - inox	25.0	8.10		25.0	centerline	
Id	Item	Weight	Distance	VCG Description					
2	Battery		6.35	5 x 100 Ah, port side					
1	Battery		2.60	2 x 100 Ah, stb side					



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Sail Plan



SAILS INVENTORY

MAINSAIL (2)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.25	1.26	2.25	3.80	4.87	60.91		13/03/2015	North sails	Carbon	
D	0.17	1.04	1.96	3.56	4.76	57.87		23/04/2011	Victory One	Dacron	

HEADSAILS (4)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1N	0.13	1.05	1.88	3.01	4.08	5.33	17.14	109%	49.78	Y			16/09/2016	One Sails	Twaron	Light
LM	0.14	1.03	1.84	2.99	4.14	5.40	17.06	111%	49.75	Y			26/06/2017	One Sails	Unknow	LM
2	0.11	0.76	1.46	2.67	4.00	5.21	17.14	107%	46.03	Y			19/07/2013	North sails	Carbon	MH
4	0.09	0.68	1.30	2.51	3.77	4.92	16.97	101%	42.66	Y			28/03/2015	One Sails	Twaron	No.4

SYMMETRIC SPINNAKERS (3)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
4	18.45	18.45	18.45	10.50	9.72	159.04		04/04/2017	One Sails	Nylon	White
1	18.46	18.46	18.46	10.46	9.79	158.85		19/07/2013	North sails	Nylon	Black
2	18.18	18.18	18.18	9.61	9.70	145.87		19/07/2013	One sails	Nylon	Orange

ASYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
CO	18.59	17.01	17.80	6.42	8.48	101.35	asym		16/09/2016	One Sails	Technora	Code 0