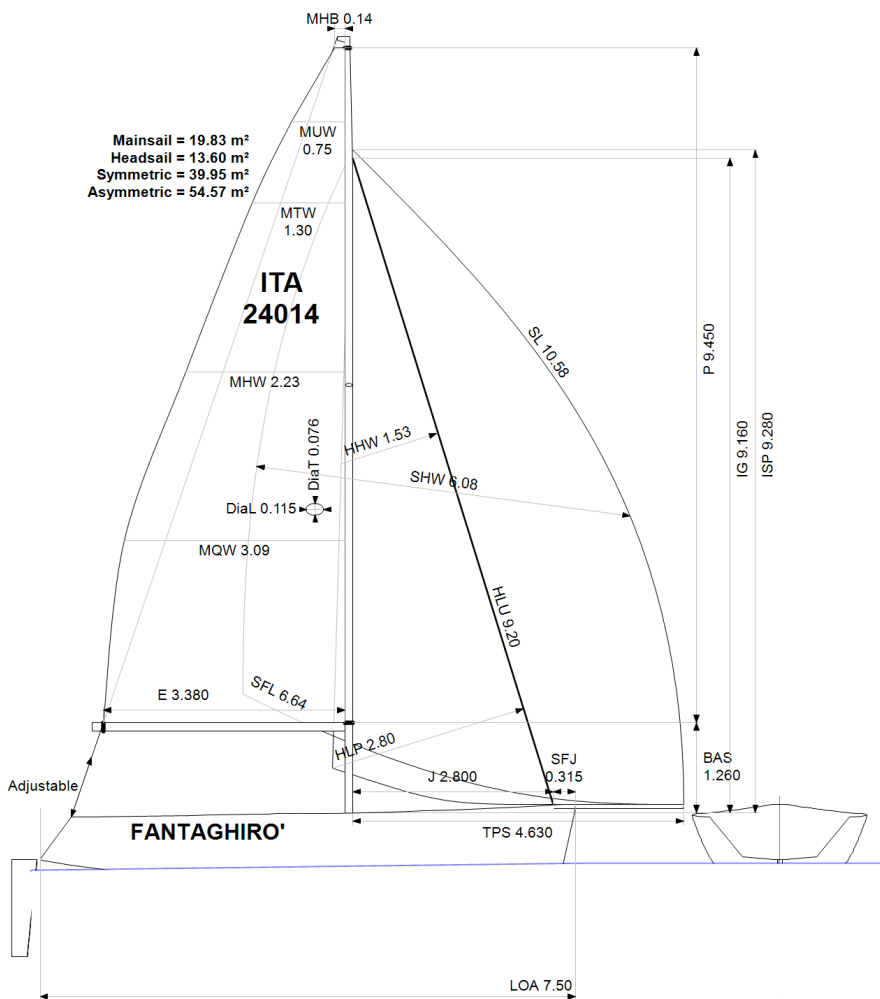


APH ToD: **589.2** CDL: **7.181**

APH ToT: **1.0184** CertNo: **25/1**



BOAT

Class **Este 24**
Designer **Frers**
Builder **Cantieri d'Este**
Age date **03/1997**
Series date **09/1994**
Offset file **ESTE24.OD.OFF**
Data file **I24014**

HULL

Length Overall **7.495 m**
Maximum Beam **2.448 m**
Draft **1.692 m**
Displacement **1,146 kg**
DLR **4.2779**
IMS Division **Sportboat**
Dynamic Allowance **0.000%**
Age Allowance **0.487%**

PROPELLER

Installation **No Propeller**
Type **N/A**
Diameter **N/A**

CREW

Maximum weight **400 kg** (declared)
Minimum weight **270 kg** * when applied
Non Manual Power **No**
Crew Arm Extension

SAIL AREAS (m²)

	Measured	Rated
Mainsail	19.83	20.33
Headsail Luffed	13.60	13.60

	Measured	Rated
Headsail Flying		
Symmetric	39.95	39.95
Asymmetric	54.57	54.57

(All asymmetric spinnakers with SHW/SFL > 85%)

STORM SAIL AREAS (m²)

Trysail	5.59
Storm Jib	4.26
Heavy Weather Jib	11.50

SAIL LIMITS

Headsails	5
Spinnakers	4 * Asymmetric SHALL NOT be tacked on the pole

STABILITY

Righting Moment	N/A
Stability Index	N/A

The owner and any other person in charge is responsible that boat is complying with her certificate in accordance with RRS 78.1 and ORC Rule 304.

Rated boat velocities in knots

Wind Velocity	4 kt	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	24 kt
Beat Angles	42.3°	42.3°	39.8°	37.3°	36.4°	36.1°	36.0°	36.5°	38.6°
Beat VMG	2.45	3.37	4.07	4.49	4.64	4.72	4.76	4.77	4.64
52°	3.83	5.07	5.86	6.23	6.40	6.49	6.56	6.63	6.60
60°	4.07	5.30	6.02	6.37	6.59	6.71	6.80	6.90	6.90
75°	4.19	5.42	6.12	6.50	6.83	7.05	7.20	7.41	7.49
90°	4.27	5.56	6.30	6.66	6.92	7.25	7.56	8.00	8.26
110°	4.32	5.64	6.45	7.04	7.53	7.91	8.28	9.01	9.78
120°	4.18	5.50	6.36	6.99	7.62	8.27	8.86	10.01	11.38
135°	3.60	4.95	5.97	6.60	7.20	7.92	8.81	11.76	13.67
150°	2.94	4.18	5.24	6.03	6.58	7.09	7.65	10.13	13.47
Run VMG	2.55	3.62	4.54	5.24	5.73	6.21	6.64	8.77	11.67
Gybe Angles	143.5°	143.5°	148.0°	151.9°	153.5°	170.0°	169.6°	140.8°	145.5°

Time Allowances in secs/NM									
Wind Velocity	4 kt	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	24 kt
Beat VMG	1466.7	1067.6	884.5	801.8	775.5	763.4	756.8	754.9	775.4
52°	940.7	710.1	614.3	577.8	562.7	554.6	548.9	542.9	545.4
60°	885.5	679.7	598.4	564.9	546.3	536.7	529.6	521.5	521.5
75°	858.5	663.9	588.6	553.7	527.3	510.4	500.1	486.1	480.7
90°	843.4	647.9	571.0	540.2	520.6	496.4	476.2	450.0	435.8
110°	833.0	638.4	557.7	511.4	478.0	455.0	434.7	399.6	368.0
120°	862.2	654.5	566.0	515.2	472.5	435.3	406.3	359.6	316.3
135°	1000.5	726.8	602.7	545.6	499.9	454.5	408.6	306.2	263.3
150°	1223.1	860.6	686.4	596.6	546.8	508.0	470.8	355.3	267.2
Run VMG	1411.1	993.7	792.6	687.2	628.0	580.1	541.8	410.3	308.5
Selected Courses									
Windward / Leeward	1438.3	1030.6	838.5	744.5	701.8	671.8	649.3	582.6	541.9
All purpose	1083.6	798.4	670.0	609.1	576.2	551.2	530.8	485.0	458.8

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	723.2	0.8296
All purpose	589.2	1.0184

Data in meters/kilograms (Metric)

HULL AND APPENDAGES (Lightship Trim)

Class	Este 24	LOA	7.495	VCGD	-0.299
Measurement	16/01/2014	Max. Beam	2.448	VCGM	-0.220
HIN		Draft	1.692	RM Rated (kg·m)	24.0
Plan review		Displacement	1,146	Limit of positive stability(°)	N/A
Hull construction	Cored	Wetted area	10.53	Stability Index	N/A
Carbon rudder	No	IMS L	6.947	Default crew weight	368
Light stanchions	No	LSM0	6.446	Declared crew weight	400
Trim tab	No	Acc. length	7.495		
		Sink (kg/mm)	7.95		

PROPELLER

Propeller Type	No Propeller
Hydro generator	No

RIG

Forestay tension	Aft	P	9.450	E	3.380
Inner stay	None Fitted	IG	9.160	J	2.800
Mast material	Aluminum	ISP	9.280	BAS	1.260
Single headsail furler	No	MDT1	0.076	FSD	Foil
Mainsail furler	No	MDL1	0.115	SFJ	0.315
Articulated bowsprit	No	MDT2	0.063	SPL	2.910
Non-circular rigging	No	MDL2	0.075	WPL	
Fiber rigging	No	TL	1.700	TPS	4.630
Adjustable mast foot	No	MW	0.115	BD	0.115
Running backstays	0	GO	0.135	MWT	
Checkstays	0			MCG	
Spreaders	1				
Rotating mast	No				

FLOTATION AND STABILITY

Calculation method	RM entered directly
RM entered	24.0
Flotation Date	25/03/2025

MAINSAIL

<i>Id</i>	<i>MHB</i>	<i>MUW</i>	<i>MTW</i>	<i>MHW</i>	<i>MQW</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	0.14	0.75	1.30	2.23	3.09	19.83	25/03/2025	

HEADSAIL

<i>Id</i>	<i>HHB</i>	<i>HUW</i>	<i>HTW</i>	<i>HHW</i>	<i>HQW</i>	<i>HLP</i>	<i>HLU</i>	<i>Btn</i>	<i>Flying FT</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	0.08	0.43	0.82	1.53	2.17	2.80	9.20	No	No	13.60	11/04/2022	

SYMMETRIC SPINNAKER

<i>Id</i>	<i>SLU</i>	<i>SLE</i>	<i>SL</i>	<i>SHW</i>	<i>SFL</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	9.10	9.10	9.10	5.18	5.62	39.95	25/03/2025	

ASYMMETRIC SPINNAKER

<i>Id</i>	<i>SLU</i>	<i>SLE</i>	<i>SL</i>	<i>SHW</i>	<i>SFL</i>	<i>Ratio</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	11.21	9.94	10.58	6.08	6.64	92%	54.57	15/02/2014	

APH ToD: **632.1** CDL: **6.822**

APH ToT: **0.9492** CertNo: 25/1

BOAT

Class **Este 24**
Designer **Frers**
Builder **Cantieri d'Este**
Age date **03/1997**
Series date **09/1994**
Offset file **ESTE24.OD.OFF**
Data file **I24014**

HULL

Length Overall **7.495 m**
Maximum Beam **2.448 m**
Draft **1.692 m**
Displacement **1,146 kg**
DLR **4.2779**
IMS Division **Sportboat**
Dynamic Allowance **0.090%**
Age Allowance **0.487%**

PROPELLER

Installation **No Propeller**
Type **N/A**
Diameter **N/A**

CREW

Maximum weight **250 kg** (declared)
Minimum weight **130 kg** * when applied
Non Manual Power **No**
Crew Arm Extension

SAIL AREAS (m²)

	Measured	Rated
Mainsail	19.83	20.33
Headsail Luffed	13.60	13.60
Headsail Flying		
Symmetric		
Asymmetric		

STORM SAIL AREAS (m²)

Trysail **5.59**
Storm Jib **4.26**
Heavy Weather Jib **11.50**

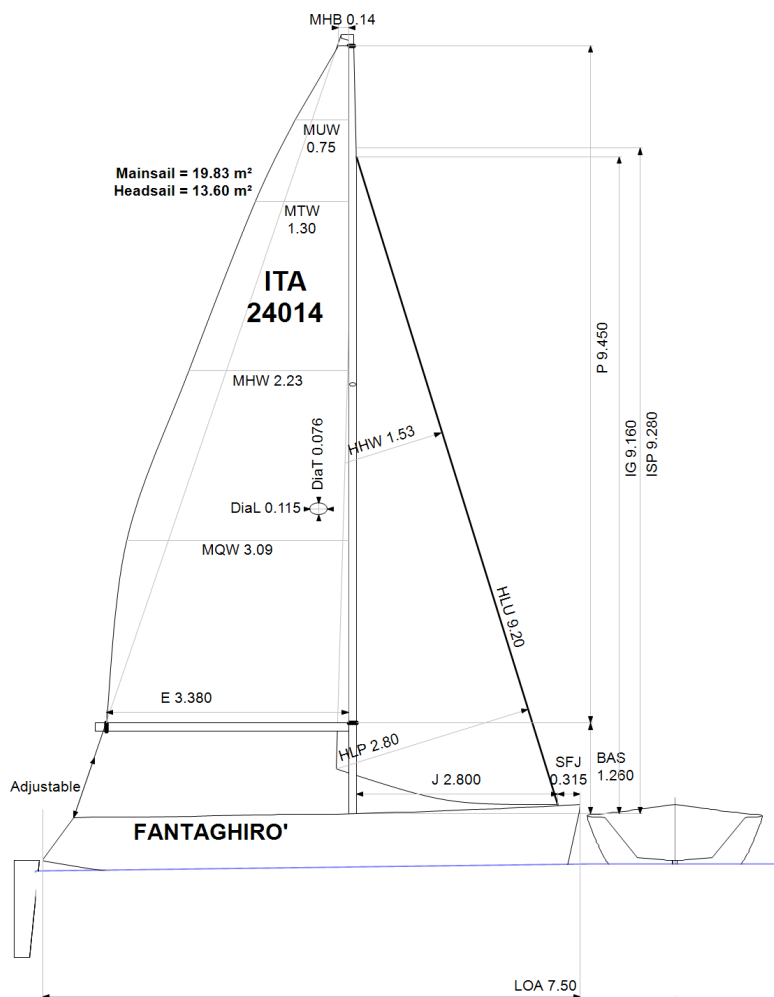
SAIL LIMITS

Headsails **5** * Zero set flying
Spinnakers **0** * No spinnaker pole aboard

STABILITY

Righting Moment **N/A**
Stability Index **N/A**

The owner and any other person in charge is responsible that boat is complying with her certificate in accordance with RRS 78.1 and ORC Rule 304.



Rated boat velocities in knots

Wind Velocity	4 kt	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	24 kt
Beat Angles	41.7°	41.7°	39.4°	37.8°	37.8°	37.8°	37.9°	39.2°	41.5°
Beat VMG	2.51	3.43	4.08	4.34	4.45	4.50	4.53	4.47	4.30
52°	3.89	5.13	5.87	6.14	6.25	6.32	6.37	6.40	6.32
60°	4.13	5.35	6.04	6.32	6.45	6.55	6.62	6.67	6.63
75°	4.29	5.50	6.15	6.52	6.76	6.92	7.04	7.17	7.22
90°	4.16	5.40	6.13	6.56	6.94	7.23	7.46	7.78	7.98
110°	3.49	4.81	5.79	6.36	6.84	7.33	7.83	8.64	9.20
120°	3.22	4.51	5.54	6.18	6.65	7.15	7.72	9.04	10.38
135°	2.72	3.91	4.96	5.77	6.29	6.74	7.22	8.44	10.40
150°	2.25	3.30	4.28	5.10	5.78	6.25	6.64	7.53	8.73
Run VMG	1.97	2.86	3.71	4.54	5.30	5.92	6.37	7.23	8.30
Gybe Angles	145.1°	145.1°	146.7°	174.5°	175.7°	178.1°	179.0°	178.4°	177.5°

Time Allowances in secs/NM									
Wind Velocity	4 kt	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	24 kt
Beat VMG	1436.4	1051.0	883.2	829.1	809.3	799.8	794.7	804.9	836.5
52°	926.1	702.4	612.9	586.3	575.7	569.2	564.8	562.6	569.5
60°	871.6	672.4	596.3	569.6	557.8	549.8	544.1	539.8	543.1
75°	838.9	654.3	585.2	552.4	532.3	520.6	511.5	501.9	498.9
90°	866.2	666.8	587.6	548.7	518.9	497.8	482.6	462.8	450.9
110°	1031.7	749.2	621.8	566.5	526.3	490.8	459.6	416.9	391.4
120°	1118.4	798.2	649.6	582.2	541.1	503.5	466.6	398.3	346.9
135°	1321.4	921.0	726.3	623.8	572.0	534.0	498.7	426.4	346.1
150°	1598.5	1090.2	841.4	705.4	622.4	576.3	542.3	478.1	412.1
Run VMG	1829.5	1258.8	971.5	792.4	678.8	608.0	565.5	498.1	434.0
Selected Courses									
Windward / Leeward	1632.0	1154.9	927.4	810.7	744.0	703.9	680.1	651.5	635.2
All purpose	1217.4	881.4	727.0	654.5	612.8	585.8	565.8	536.9	517.3

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	777.2	0.7720
All purpose	632.1	0.9492

Data in meters/kilograms (Metric)

HULL AND APPENDAGES (Lightship Trim)

Class	Este 24	LOA	7.495	VCGD	-0.299
Measurement	16/01/2014	Max. Beam	2.448	VCGM	-0.220
HIN		Draft	1.692	RM Rated (kg·m)	24.0
Plan review		Displacement	1,146	Limit of positive stability(°)	N/A
Hull construction	Cored	Wetted area	10.53	Stability Index	N/A
Carbon rudder	No	IMS L	6.834	Default crew weight	368
Light stanchions	No	LSM0	6.446	Declared crew weight	250
Trim tab	No	Acc. length	7.495		
		Sink (kg/mm)	7.95		

PROPELLER

Propeller Type	No Propeller
Hydro generator	No

RIG

Forestay tension	Aft	P	9.450	E	3.380
Inner stay	None Fitted	IG	9.160	J	2.800
Mast material	Aluminum	ISP	9.280	BAS	1.260
Single headsail furler	No	MDT1	0.076	FSD	Foil
Mainsail furler	No	MDL1	0.115	SFJ	0.315
Articulated bowsprit	No	MDT2	0.063	SPL	
Non-circular rigging	No	MDL2	0.075	WPL	
Fiber rigging	No	TL	1.700	TPS	
Adjustable mast foot	No	MW	0.115	BD	0.115
Running backstays	0	GO	0.135	MWT	
Checkstays	0			MCG	
Spreaders	1				
Rotating mast	No				

FLOTATION AND STABILITY

Calculation method	RM entered directly
RM entered	24.0
Flotation Date	25/03/2025



Non Spin/HSF
Club Certificate
2025

FANTAGHIRO'
ITA-24014

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MAINSAIL

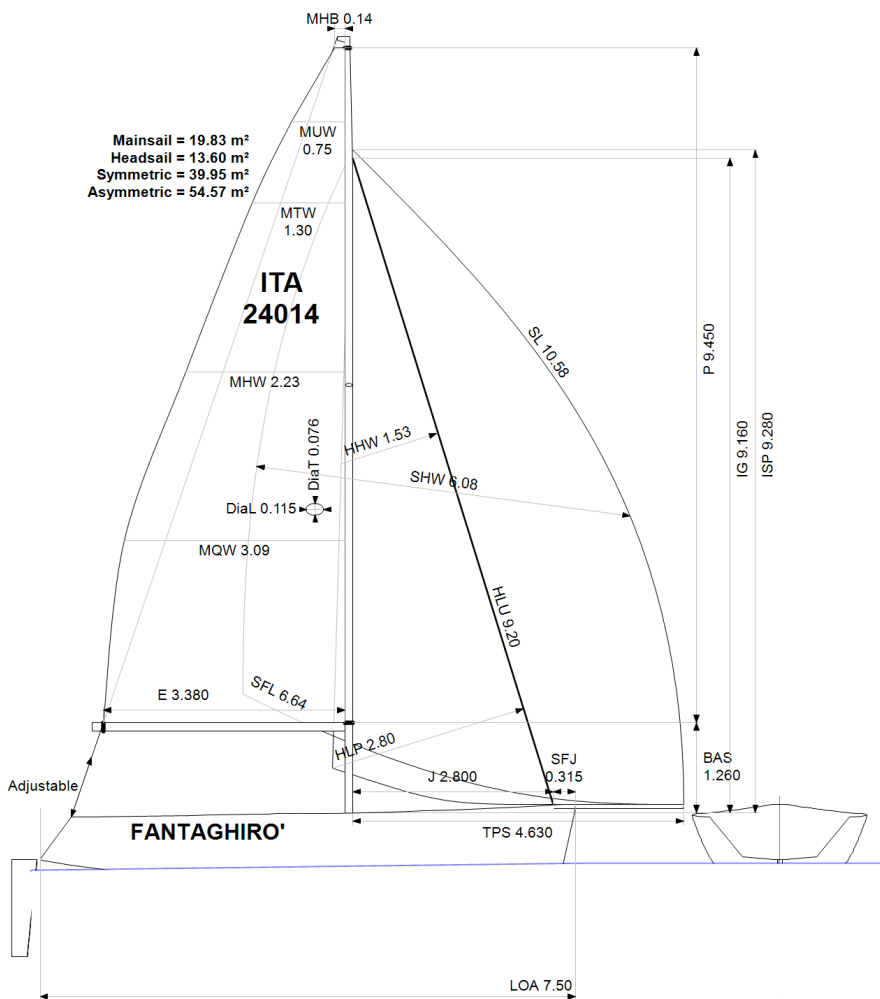
<i>Id</i>	<i>MHB</i>	<i>MUW</i>	<i>MTW</i>	<i>MHW</i>	<i>MQW</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	0.14	0.75	1.30	2.23	3.09	19.83	25/03/2025	

HEADSAIL

<i>Id</i>	<i>HHB</i>	<i>HUW</i>	<i>HTW</i>	<i>HHW</i>	<i>HQW</i>	<i>HLP</i>	<i>HLU</i>	<i>Btn</i>	<i>Flying FT</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	0.08	0.43	0.82	1.53	2.17	2.80	9.20	No	No	13.60	11/04/2022	

APH ToD: **602.8** CDL: **6.575**

APH ToT: **0.9954** CertNo: 25/1



BOAT

Class **Este 24**
Designer **Frers**
Builder **Cantieri d'Este**
Age date **03/1997**
Series date **09/1994**
Offset file **ESTE24.OD.OFF**
Data file **I24014**

HULL

Length Overall **7.495 m**
Maximum Beam **2.448 m**
Draft **1.692 m**
Displacement **1,146 kg**
DLR **4.2779**
IMS Division **Sportboat**
Dynamic Allowance **0.000%**
Age Allowance **0.487%**

PROPELLER

Installation **No Propeller**
Type **N/A**
Diameter **N/A**

CREW

Maximum weight **170 kg** (declared)
Minimum weight **120 kg** * when applied
Non Manual Power **No**
Crew Arm Extension

SAIL AREAS (m²)

	Measured	Rated
Mainsail	19.83	20.33
Headsail Luffed	13.60	13.60
Headsail Flying		
Symmetric	39.95	39.95
Asymmetric	54.57	54.57

(All asymmetric spinnakers with SHW/SFL > 85%)

STORM SAIL AREAS (m²)

Trysail **5.59**
Storm Jib **4.26**
Heavy Weather Jib **11.50**

SAIL LIMITS

Headsails **5**
Spinnakers **4** * Asymmetric SHALL NOT be tacked on the pole

STABILITY

Righting Moment **N/A**
Stability Index **N/A**

The owner and any other person in charge is responsible that boat is complying with her certificate in accordance with RRS 78.1 and ORC Rule 304.

Rated boat velocities in knots

Wind Velocity	4 kt	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	24 kt
Beat Angles	41.7°	41.7°	39.4°	38.6°	38.4°	39.1°	39.3°	41.0°	43.7°
Beat VMG	2.56	3.43	4.01	4.22	4.31	4.35	4.36	4.28	4.06
52°	3.92	5.13	5.82	6.04	6.15	6.21	6.24	6.25	6.13
60°	4.15	5.35	6.00	6.24	6.35	6.43	6.49	6.52	6.45
75°	4.30	5.51	6.14	6.47	6.67	6.81	6.92	7.02	7.04
90°	4.35	5.53	6.13	6.54	6.90	7.17	7.36	7.62	7.80
110°	4.39	5.69	6.44	6.92	7.26	7.57	7.88	8.45	8.94
120°	4.26	5.58	6.42	7.03	7.57	7.99	8.41	9.25	10.12
135°	3.69	5.05	6.06	6.73	7.39	8.18	9.13	10.90	12.44
150°	3.00	4.26	5.33	6.12	6.72	7.29	8.03	10.68	13.88
Run VMG	2.60	3.69	4.62	5.31	5.83	6.31	6.95	9.25	12.02
Gybe Angles	143.3°	143.3°	148.3°	152.2°	152.3°	149.4°	146.3°	144.4°	148.9°

Time Allowances in secs/NM									
Wind Velocity	4 kt	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	24 kt
Beat VMG	1409.0	1048.5	897.6	853.3	836.0	828.4	824.9	840.5	886.5
52°	917.2	702.0	618.9	595.9	585.7	580.1	576.5	575.8	587.3
60°	868.3	672.4	599.7	577.2	566.6	559.6	555.0	552.0	558.4
75°	837.0	653.9	586.3	556.1	539.4	528.5	520.4	513.0	511.2
90°	828.5	651.4	586.8	550.1	521.7	502.4	489.3	472.2	461.6
110°	819.4	632.9	558.8	520.4	496.0	475.3	457.0	426.2	402.7
120°	844.4	644.9	561.0	512.2	475.4	450.4	427.8	389.3	355.9
135°	976.0	713.3	594.0	535.1	487.3	440.3	394.3	330.4	289.4
150°	1201.1	845.0	675.0	588.6	536.0	493.7	448.4	337.1	259.4
Run VMG	1385.1	975.7	779.4	677.4	617.5	570.1	517.7	389.2	299.6
Selected Courses									
Windward / Leeward	1395.8	1012.1	838.5	765.4	726.8	699.3	671.3	614.9	593.0
All purpose	1054.7	786.9	671.2	621.3	591.8	569.5	549.0	514.2	499.8

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	743.3	0.8072
All purpose	602.8	0.9954

Data in meters/kilograms (Metric)

HULL AND APPENDAGES (Lightship Trim)

Class	Este 24	LOA	7.495	VCGD	-0.299
Measurement	16/01/2014	Max. Beam	2.448	VCGM	-0.220
HIN		Draft	1.692	RM Rated (kg·m)	24.0
Plan review		Displacement	1,146	Limit of positive stability(°)	N/A
Hull construction	Cored	Wetted area	10.53	Stability Index	N/A
Carbon rudder	No	IMS L	6.769	Default crew weight	170
Light stanchions	No	LSM0	6.446	Declared crew weight	170
Trim tab	No	Acc. length	7.495		
		Sink (kg/mm)	7.95		

PROPELLER

Propeller Type	No Propeller
Hydro generator	No

RIG

Forestay tension	Aft	P	9.450	E	3.380
Inner stay	None Fitted	IG	9.160	J	2.800
Mast material	Aluminum	ISP	9.280	BAS	1.260
Single headsail furler	No	MDT1	0.076	FSD	Foil
Mainsail furler	No	MDL1	0.115	SFJ	0.315
Articulated bowsprit	No	MDT2	0.063	SPL	2.910
Non-circular rigging	No	MDL2	0.075	WPL	
Fiber rigging	No	TL	1.700	TPS	4.630
Adjustable mast foot	No	MW	0.115	BD	0.115
Running backstays	0	GO	0.135	MWT	
Checkstays	0			MCG	
Spreaders	1				
Rotating mast	No				

FLOTATION AND STABILITY

Calculation method	RM entered directly
RM entered	24.0
Flotation Date	25/03/2025

MAINSAIL

<i>Id</i>	<i>MHB</i>	<i>MUW</i>	<i>MTW</i>	<i>MHW</i>	<i>MQW</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	0.14	0.75	1.30	2.23	3.09	19.83	25/03/2025	

HEADSAIL

<i>Id</i>	<i>HHB</i>	<i>HUW</i>	<i>HTW</i>	<i>HHW</i>	<i>HQW</i>	<i>HLP</i>	<i>HLU</i>	<i>Btn</i>	<i>Flying FT</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	0.08	0.43	0.82	1.53	2.17	2.80	9.20	No	No	13.60	11/04/2022	

SYMMETRIC SPINNAKER

<i>Id</i>	<i>SLU</i>	<i>SLE</i>	<i>SL</i>	<i>SHW</i>	<i>SFL</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	9.10	9.10	9.10	5.18	5.62	39.95	25/03/2025	

ASYMMETRIC SPINNAKER

<i>Id</i>	<i>SLU</i>	<i>SLE</i>	<i>SL</i>	<i>SHW</i>	<i>SFL</i>	<i>Ratio</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	11.21	9.94	10.58	6.08	6.64	92%	54.57	15/02/2014	