

FARR[®]

PERFORMANCE PREDICTION



**DESIGN #446
First 36.7-Cruising Keel
for
Chantiers Beneteau S.A.**

Farr Yacht Design, Ltd.
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DESCRIPTION OF SYMBOLS IN VPP OUTPUT

The accompanying document contains a large amount information about the predicted performance of your boat. To allow this document to be used as a valuable racing tool we have prepared the following explanation of the important terms it contains.

General Terms:

Vt or TWS	True Wind Speed
Bt or TWA	True Wind Angle
V or Vs	Boat Speed
VMG	Boat Velocity Made Good
HEEL	Heel Angle
REEF	Measure of Reduction in Sail Area
FLAT	Measure of Reduction in Sail Lift
Va, AWS	Apparent Wind Speed
Ba, AWA	Apparent Wind Angle
Lee	Leeway Angle
Sail	Sail Combination Designator (Upwind or Downwind)
Flot	Flotation Designator (Varies Only For Water Ballasted Boats)

VPP Polar diagram

This is a graphical representation of the boats performance across a range of windspeeds and true wind directions. Optimal upwind and downwind conditions are marked as small rectangles on the boat speed contours for each windspeed.

Best Boatspeeds

The upper portion of this page gives a numerical representation of the polar diagram. Boatspeeds in knots are given for a series of true windspeeds at masthead height, across a range of true wind angles. All boatspeeds and windspeeds are given in knots. The shaded cells lie beyond the upwind and downwind optimum points. The two tables on the lower portion of the page provide a ready reference of useful details about the optimum upwind and downwind sailing conditions as a function of the true windspeeds (Vt's) across the top of the page. In addition to indicating the optimum upwind and downwind boat speeds in knots, they are also expressed in seconds/mile and in seconds/boat length. VMG is also expressed in seconds/mile.

Course Times

This page shows the predicted boat performance over a series of 1.0 nautical mile courses in various windspeeds. Times around the course are expressed as seconds. The courses reflect five different course conditions:- LEEWARD, LINEAR RANDOM (LR), WINDWARD-LEEWARD (WL), WINDWARD and CIRCULAR-RANDOM (CR).

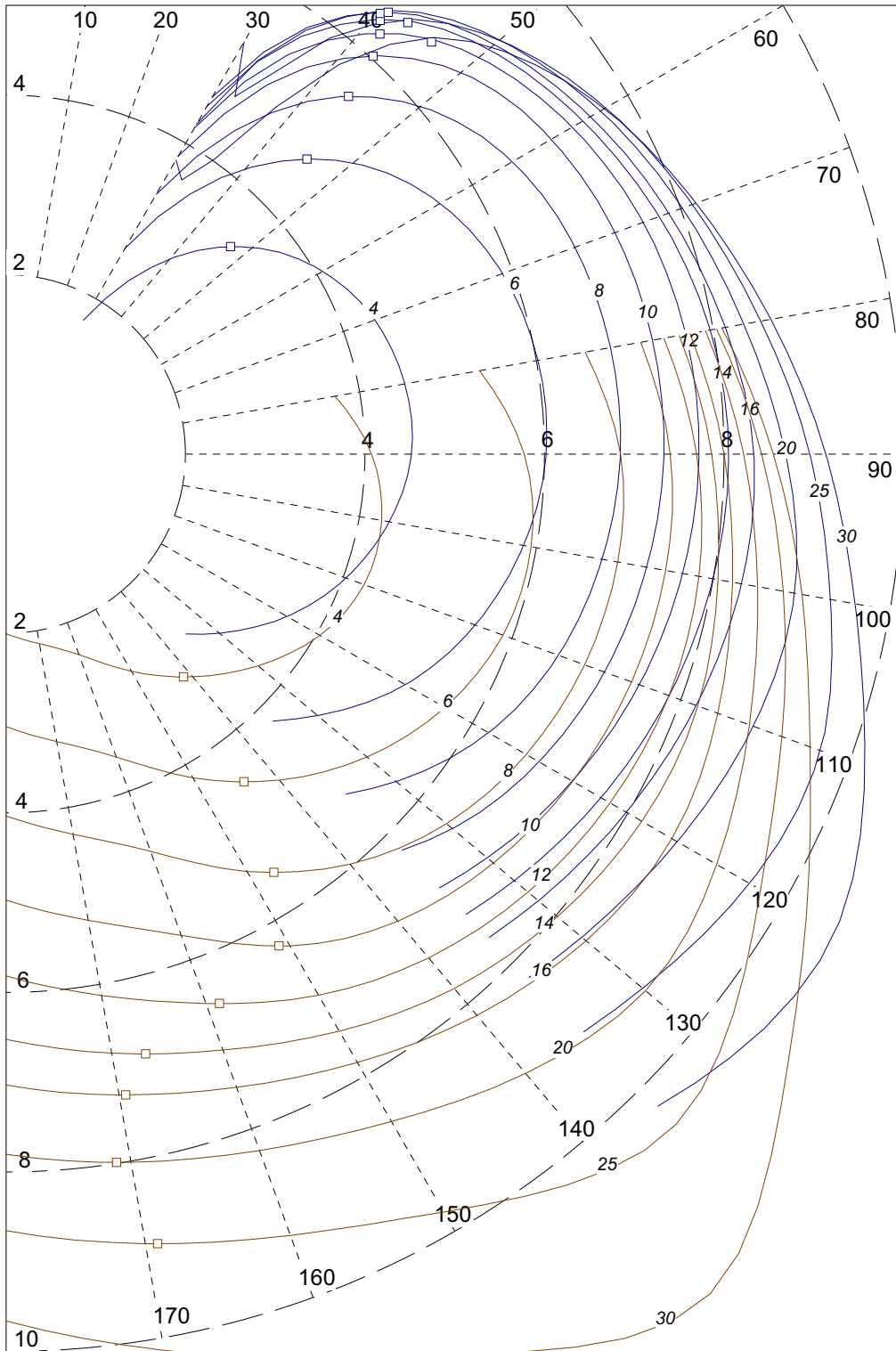
Times for 1 nm (secs)

This page is similar to the Best Boatspeeds page in that it represents the boatspeeds for a series of true windspeeds and true wind angles. Boatspeeds are expressed as seconds/nautical mile. Shaded areas again depict the off optimum conditions. Optimum upwind and downwind values, in terms of VMG, are presented underneath the table.

Best Performance

This page is a detailed representation of the polar diagram showing a list of predicted performance variables for each windspeed over the range of true wind angles. All of those items listed in the "General Terms" section are listed and optimum upwind and downwind settings are included in bold type.

**D446 - Beneteau First 36.7 - Cruising Version
For Chantiers Beneteau**



Best Boatspeeds (kt)										
	4	6	8	10	12	14	16	20	25	30
30.0	1.72	2.64	3.35	3.83	4.20	4.47	4.59	4.25	5.31	3.79
33.0	2.11	3.20	4.01	4.58	5.02	5.28	5.41	5.32	4.73	3.64
36.0	2.45	3.66	4.54	5.17	5.57	5.81	5.93	5.90	5.45	4.24
39.0	2.75	4.04	4.98	5.61	5.99	6.21	6.32	6.33	6.06	5.29
42.0	3.01	4.36	5.34	5.97	6.31	6.52	6.62	6.65	6.51	6.04
45.0	3.25	4.65	5.64	6.26	6.57	6.74	6.83	6.88	6.82	6.55
50.0	3.59	5.05	6.03	6.62	6.88	7.02	7.10	7.18	7.18	7.06
60.0	4.07	5.59	6.52	7.02	7.28	7.42	7.52	7.65	7.72	7.70
70.0	4.37	5.89	6.74	7.22	7.55	7.74	7.86	8.02	8.14	8.18
80.0	4.51	6.02	6.84	7.31	7.69	7.97	8.14	8.35	8.54	8.65
90.0	4.52	6.02	6.85	7.40	7.72	8.05	8.33	8.69	8.96	9.13
100.0	4.34	5.94	6.92	7.46	7.84	8.05	8.32	8.92	9.32	9.60
110.0	4.24	5.89	6.86	7.42	7.86	8.20	8.44	8.86	9.65	10.18
120.0	4.04	5.64	6.69	7.29	7.77	8.18	8.57	9.14	9.71	10.66
130.0	3.67	5.25	6.40	7.09	7.59	8.02	8.43	9.30	10.38	11.27
135.0	3.45	5.01	6.20	6.95	7.47	7.90	8.31	9.19	10.56	11.85
140.0	3.24	4.74	5.96	6.79	7.32	7.77	8.16	9.01	10.41	12.21
150.0	2.79	4.16	5.37	6.33	6.96	7.42	7.83	8.58	9.75	11.55
160.0	2.38	3.59	4.71	5.70	6.51	7.07	7.51	8.26	9.26	10.74
170.0	2.14	3.25	4.30	5.27	6.12	6.78	7.25	8.01	8.93	10.14
180.0	2.00	3.04	4.03	4.97	5.81	6.52	7.03	7.80	8.65	9.66
Up.Vs(kts)	3.41	4.70	5.52	6.03	6.27	6.38	6.44	6.51	6.57	6.60
Up.Vs(s/m)	1056.7	766.6	652.4	596.9	574.5	563.9	558.9	553.2	548.1	545.6
Up.Vs(s/L)	6.1	4.4	3.7	3.4	3.3	3.2	3.2	3.2	3.1	3.1
Up.Bt	47.3	45.6	43.8	42.7	41.7	40.8	40.3	40.9	43.0	45.9
Up.Vmg(kts)	2.31	3.29	3.98	4.43	4.68	4.83	4.91	4.92	4.81	4.59
Up.Vmg(s/m)	1557.1	1095.2	903.8	812.3	769.0	745.0	733.1	731.6	749.1	784.1
Up.Heel	2.5	5.5	9.4	14.5	17.4	19.4	21.0	22.2	22.4	22.8
Up.Reef	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.78	0.67
Up.Flat	1.00	1.00	1.00	0.98	0.84	0.72	0.62	0.58	0.64	0.71
Up.Va	6.79	9.87	12.54	14.90	17.03	19.05	21.00	24.79	29.43	33.90
Up.Ba	25.6	25.6	25.8	26.1	26.6	26.9	27.4	29.2	32.4	35.9
Up.Leewy	3.29	3.59	4.16	4.90	5.12	5.34	5.59	6.14	6.82	7.57
Dn.Vs(kts)	3.17	4.51	5.53	6.27	6.57	6.86	7.26	7.99	8.96	10.80
Dn.Vs(s/m)	1134.1	798.3	650.4	574.4	548.3	524.7	495.7	450.8	401.9	333.2
Dn.Vs(s/L)	6.5	4.6	3.7	3.3	3.1	3.0	2.8	2.6	2.3	1.9
Dn.Bt	141.4	144.0	147.4	151.0	158.7	166.9	169.4	171.1	169.1	159.1
Dn.Vmg(kts)	2.48	3.65	4.66	5.48	6.12	6.68	7.14	7.89	8.80	10.10
Dn.Vmg(s/m)	1451.4	986.4	772.5	657.0	588.3	538.7	504.3	456.2	409.2	356.6
Dn.Heel	0.4	0.8	1.0	1.1	0.9	0.7	0.7	1.0	2.1	6.8
Dn.Reef	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Dn.Flat	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Dn.Va	2.50	3.54	4.48	5.45	6.34	7.48	8.96	12.17	16.29	20.23
Dn.Ba	88.9	95.6	105.6	117.0	136.7	154.9	160.8	165.3	163.2	148.3
Dn.Leewy	0.55	0.49	0.42	0.35	0.24	0.17	0.15	0.17	0.26	0.50

Shaded cells lie outside upwind and downwind optimum sailing angles.

Course Times

	Leeward <u>1.00 nm.</u>	WL <u>1.00 nm.</u>	LR <u>1.00 nm.</u>	Windward <u>1.00 nm.</u>	OLYMPIC <u>1.00 nm.</u>	CR <u>1.00 nm.</u>
4.0	1451.4	1504.2	1053.9	1557.1	1403.0	1114.8
6.0	986.4	1040.8	751.7	1095.2	976.9	786.5
8.0	772.5	838.1	627.4	903.8	795.1	649.6
10.0	657.0	734.6	566.4	812.3	706.7	582.8
12.0	588.3	678.7	531.8	769.0	660.7	546.5
14.0	538.7	641.8	508.6	745.0	631.3	523.1
16.0	504.3	618.7	491.8	733.1	612.6	507.1
20.0	456.2	593.9	467.1	731.6	592.0	486.5
25.0	409.2	579.1	442.0	749.1	579.7	469.9
30.0	356.6	570.3	417.1	784.1	579.7	459.2

Times for 1 nm (secs)

	4	6	8	10	12	14	16	20	25	30
30.0	2088.7	1363.8	1076.2	938.9	857.7	804.5	784.3	847.8	678.5	951.1
33.0	1705.6	1124.3	897.1	785.3	717.2	681.6	665.6	676.9	760.8	988.6
36.0	1469.5	984.7	792.9	696.3	645.8	619.4	606.7	610.4	660.0	848.1
39.0	1309.8	892.1	722.6	641.2	601.1	580.1	569.4	568.8	593.9	680.8
42.0	1194.2	825.1	673.8	603.2	570.1	552.5	544.2	541.4	553.3	595.6
45.0	1107.3	774.3	638.7	575.5	547.8	533.9	527.1	523.0	528.2	549.4
50.0	1004.1	713.1	597.2	544.0	523.5	512.8	507.0	501.3	501.7	510.1
60.0	883.4	644.5	552.5	513.1	494.2	485.0	478.8	470.7	466.5	467.6
70.0	823.4	611.6	533.8	498.8	476.6	464.9	458.2	448.9	442.4	440.1
80.0	798.3	598.3	526.5	492.3	468.2	451.8	442.5	431.4	421.7	416.1
90.0	797.0	598.5	525.9	486.5	466.3	447.2	432.2	414.5	402.0	394.1
100.0	830.3	606.2	520.3	482.5	459.3	447.1	432.7	403.6	386.1	374.8
110.0	848.1	611.1	524.9	485.5	458.0	439.0	426.6	406.4	372.9	353.7
120.0	892.0	637.9	538.1	493.9	463.4	440.1	420.3	393.8	370.9	337.7
130.0	982.1	686.1	562.2	508.0	474.3	449.0	427.0	387.1	347.0	319.4
135.0	1042.1	719.0	580.5	517.8	482.1	455.4	433.4	391.8	340.9	303.9
140.0	1112.4	759.9	603.9	530.2	491.6	463.4	441.1	399.7	345.7	294.9
150.0	1289.7	865.1	670.8	569.1	517.3	485.0	460.0	419.3	369.3	311.8
160.0	1515.2	1003.0	764.5	631.1	552.9	509.5	479.6	436.1	388.7	335.1
170.0	1678.9	1107.9	837.6	682.7	588.0	531.3	496.7	449.4	403.1	355.1
180.0	1799.9	1186.0	893.1	724.6	619.4	552.3	512.2	461.4	416.1	372.8
Up	1557.1	1095.2	903.8	812.3	769.0	745.0	733.1	731.6	749.1	784.1
Dn	1451.4	986.4	772.5	657.0	588.3	538.7	504.3	456.2	409.2	356.6

Equivalent ILC Average (using IMS formula): 715.15

Shaded cells lie outside upwind and downwind optimum sailing angles.

Best Performance

	TWS	TWA	V	VMG	Heel	Reef	Flat	AWS	AWA	Lee	Sail	Flot
	4.0	30.0	1.724	1.493	1.5	1.000	1.000	5.56	21.1	8.14	Up	44se
	4.0	33.0	2.111	1.770	1.8	1.000	1.000	5.88	21.7	6.17	Up	44se
	4.0	36.0	2.450	1.982	2.0	1.000	1.000	6.15	22.5	5.08	Up	44se
	4.0	39.0	2.749	2.136	2.2	1.000	1.000	6.37	23.2	4.37	Up	44se
	4.0	42.0	3.014	2.240	2.3	1.000	1.000	6.56	24.1	3.88	Up	44se
	4.0	45.0	3.251	2.299	2.5	1.000	1.000	6.70	24.9	3.51	Up	44se
OptUp >	4.0	47.3	3.407	2.312	2.5	1.000	1.000	6.79	25.6	3.29	Up	44se
	4.0	50.0	3.585	2.305	2.6	1.000	1.000	6.88	26.4	3.06	Up	44se
	4.0	60.0	4.075	2.037	2.7	1.000	1.000	6.99	29.7	2.45	Up	44se
	4.0	70.0	4.372	1.495	2.6	1.000	1.000	6.86	33.2	2.03	Up	44se
	4.0	80.0	4.510	0.783	2.3	1.000	1.000	6.52	37.1	1.70	Up	44se
	4.0	90.0	4.517	-0.000	1.8	1.000	1.000	6.03	41.5	1.42	Up	44se
	4.0	100.0	4.336	-0.753	1.4	1.000	1.000	5.36	47.3	1.18	Up	44se
	4.0	110.0	4.245	-1.452	1.7	1.000	1.000	4.73	52.6	1.25	Dn	44se
	4.0	120.0	4.036	-2.018	1.3	1.000	1.000	4.02	59.6	1.05	Dn	44se
	4.0	130.0	3.666	-2.356	0.8	1.000	1.000	3.25	70.3	0.82	Dn	44se
	4.0	135.0	3.455	-2.443	0.6	1.000	1.000	2.90	77.5	0.70	Dn	44se
	4.0	140.0	3.236	-2.479	0.4	1.000	1.000	2.58	86.2	0.59	Dn	44se
OptDn >	4.0	141.4	3.174	2.480	0.4	1.000	1.000	2.50	88.9	0.55	Dn	44se
	4.0	150.0	2.791	-2.417	0.2	1.000	1.000	2.11	108.6	0.36	Dn	44se
	4.0	160.0	2.376	-2.233	0.1	1.000	1.000	1.95	135.3	0.20	Dn	44se
	4.0	170.0	2.144	-2.112	0.0	1.000	1.000	1.92	158.8	0.10	Dn	44se
	4.0	180.0	2.000	-2.000	-0.0	1.000	1.000	2.00	180.0	-0.00	Dn	44se
	6.0	30.0	2.640	2.286	3.4	1.000	0.936	8.39	20.9	7.36	Up	44se
	6.0	33.0	3.202	2.686	4.2	1.000	1.000	8.86	21.6	6.05	Up	44se
	6.0	36.0	3.656	2.958	4.6	1.000	1.000	9.21	22.4	5.07	Up	44se
	6.0	39.0	4.035	3.136	4.9	1.000	1.000	9.48	23.4	4.44	Up	44se
	6.0	42.0	4.363	3.243	5.2	1.000	1.000	9.69	24.4	3.99	Up	44se
	6.0	45.0	4.650	3.288	5.5	1.000	1.000	9.84	25.4	3.64	Up	44se
OptUp >	6.0	45.6	4.696	3.287	5.5	1.000	1.000	9.87	25.6	3.59	Up	44se
	6.0	50.0	5.049	3.245	5.7	1.000	1.000	10.01	27.2	3.20	Up	44se
	6.0	60.0	5.586	2.793	5.7	1.000	1.000	10.02	31.1	2.58	Up	44se
	6.0	70.0	5.886	2.013	5.3	1.000	1.000	9.72	35.3	2.14	Up	44se
	6.0	80.0	6.017	1.045	4.6	1.000	1.000	9.19	39.8	1.79	Up	44se
	6.0	90.0	6.015	-0.000	3.8	1.000	1.000	8.49	44.9	1.48	Up	44se
	6.0	100.0	5.939	-1.031	4.6	1.000	1.000	7.66	50.3	1.55	Dn	44se
	6.0	110.0	5.891	-2.015	3.9	1.000	1.000	6.81	55.7	1.33	Dn	44se
	6.0	120.0	5.644	-2.822	2.9	1.000	1.000	5.82	63.0	1.08	Dn	44se
	6.0	130.0	5.247	-3.373	1.9	1.000	1.000	4.80	73.2	0.83	Dn	44se
	6.0	135.0	5.007	-3.540	1.3	1.000	1.000	4.31	79.8	0.70	Dn	44se
	6.0	140.0	4.738	-3.629	1.0	1.000	1.000	3.86	87.9	0.58	Dn	44se
OptDn >	6.0	144.0	4.510	3.649	0.8	1.000	1.000	3.54	95.6	0.49	Dn	44se
	6.0	150.0	4.162	-3.604	0.4	1.000	1.000	3.17	109.0	0.35	Dn	44se
	6.0	160.0	3.589	-3.373	0.2	1.000	1.000	2.90	135.0	0.19	Dn	44se
	6.0	170.0	3.249	-3.200	0.1	1.000	1.000	2.86	158.6	0.10	Dn	44se
	6.0	180.0	3.035	-3.035	-0.0	1.000	1.000	2.96	180.0	-0.00	Dn	44se

Best Performance (cont)

	TWS	TWA	V	VMG	Heel	Reef	Flat	AWS	AWA	Lee	Sail	Flot
	8.0	30.0	3.345	2.897	5.8	1.000	0.901	11.02	21.2	7.62	Up	44se
	8.0	33.0	4.013	3.366	7.1	1.000	0.968	11.56	22.0	6.36	Up	44se
	8.0	36.0	4.540	3.673	8.1	1.000	1.000	11.96	22.9	5.55	Up	44se
	8.0	39.0	4.982	3.872	8.7	1.000	1.000	12.25	24.0	4.86	Up	44se
	8.0	42.0	5.343	3.971	9.2	1.000	1.000	12.46	25.1	4.38	Up	44se
OptUp >	8.0	43.8	5.518	3.983	9.4	1.000	1.000	12.54	25.8	4.16	Up	44se
	8.0	45.0	5.636	3.986	9.5	1.000	1.000	12.60	26.3	4.02	Up	44se
	8.0	50.0	6.028	3.875	9.7	1.000	1.000	12.70	28.4	3.55	Up	44se
	8.0	60.0	6.516	3.258	9.3	1.000	1.000	12.54	33.0	2.89	Up	44se
	8.0	70.0	6.744	2.307	8.3	1.000	1.000	12.05	38.1	2.40	Up	44se
	8.0	80.0	6.837	1.187	6.9	1.000	1.000	11.35	43.6	1.99	Up	44se
	8.0	90.0	6.845	-0.000	9.0	1.000	1.000	10.45	49.1	2.08	Dn	44se
	8.0	100.0	6.919	-1.201	8.0	1.000	1.000	9.56	54.7	1.83	Dn	44se
	8.0	110.0	6.858	-2.346	6.4	1.000	1.000	8.53	61.1	1.51	Dn	44se
	8.0	120.0	6.690	-3.345	4.6	1.000	1.000	7.41	68.7	1.18	Dn	44se
	8.0	130.0	6.403	-4.116	3.1	1.000	1.000	6.25	78.4	0.87	Dn	44se
	8.0	135.0	6.201	-4.385	2.4	1.000	1.000	5.68	84.5	0.73	Dn	44se
	8.0	140.0	5.961	-4.566	1.6	1.000	1.000	5.15	91.9	0.60	Dn	44se
OptDn >	8.0	147.4	5.535	4.660	1.0	1.000	1.000	4.48	105.6	0.42	Dn	44se
	8.0	150.0	5.367	-4.648	0.8	1.000	1.000	4.29	111.3	0.36	Dn	44se
	8.0	160.0	4.709	-4.425	0.3	1.000	1.000	3.92	135.7	0.20	Dn	44se
	8.0	170.0	4.298	-4.233	0.1	1.000	1.000	3.84	158.8	0.10	Dn	44se
	8.0	180.0	4.031	-4.031	-0.0	1.000	1.000	3.97	180.0	-0.00	Dn	44se
	10.0	30.0	3.834	3.321	8.3	1.000	0.838	13.44	21.6	8.08	Up	44se
	10.0	33.0	4.584	3.845	10.5	1.000	0.913	14.03	22.4	6.82	Up	44se
	10.0	36.0	5.170	4.183	12.1	1.000	0.944	14.45	23.4	5.96	Up	44se
	10.0	39.0	5.615	4.363	13.3	1.000	0.961	14.72	24.6	5.38	Up	44se
	10.0	42.0	5.968	4.435	14.4	1.000	0.976	14.89	25.8	4.96	Up	44se
OptUp >	10.0	42.7	6.032	4.432	14.5	1.000	0.979	14.90	26.1	4.90	Up	44se
	10.0	45.0	6.255	4.423	15.2	1.000	0.991	14.97	27.1	4.66	Up	44se
	10.0	50.0	6.617	4.254	15.5	1.000	1.000	14.99	29.5	4.17	Up	44se
	10.0	60.0	7.016	3.508	14.0	1.000	1.000	14.66	35.0	3.39	Up	44se
	10.0	70.0	7.218	2.469	11.7	1.000	1.000	14.06	40.9	2.79	Up	44se
	10.0	80.0	7.312	1.270	9.5	1.000	1.000	13.27	47.0	2.28	Up	44se
	10.0	90.0	7.399	-0.000	14.8	1.000	1.000	12.17	52.6	2.61	Dn	44se
	10.0	100.0	7.462	-1.296	12.2	1.000	1.000	11.20	59.3	2.20	Dn	44se
	10.0	110.0	7.415	-2.536	9.2	1.000	1.000	10.10	66.7	1.76	Dn	44se
	10.0	120.0	7.290	-3.645	6.5	1.000	1.000	8.90	75.1	1.35	Dn	44se
	10.0	130.0	7.087	-4.555	4.3	1.000	1.000	7.67	85.1	0.97	Dn	44se
	10.0	135.0	6.953	-4.916	3.4	1.000	1.000	7.06	91.0	0.80	Dn	44se
	10.0	140.0	6.790	-5.201	2.5	1.000	1.000	6.48	97.7	0.64	Dn	44se
	10.0	150.0	6.326	-5.478	1.1	1.000	1.000	5.52	115.0	0.37	Dn	44se
OptDn >	10.0	151.0	6.268	5.480	1.1	1.000	1.000	5.45	117.0	0.35	Dn	44se
	10.0	160.0	5.705	-5.361	0.5	1.000	1.000	5.03	137.2	0.20	Dn	44se
	10.0	170.0	5.273	-5.193	0.2	1.000	1.000	4.89	159.2	0.10	Dn	44se
	10.0	180.0	4.968	-4.968	-0.0	1.000	1.000	5.03	180.0	-0.00	Dn	44se

Best Performance (cont)

	TWS	TWA	V	VMG	Heel	Reef	Flat	AWS	AWA	Lee	Sail	Flot
	12.0	30.0	4.197	3.635	11.4	1.000	0.787	15.73	22.0	8.79	Up	44se
	12.0	33.0	5.020	4.210	13.6	1.000	0.811	16.37	22.8	6.95	Up	44se
	12.0	36.0	5.574	4.510	15.0	1.000	0.813	16.73	24.0	5.97	Up	44se
	12.0	39.0	5.989	4.654	16.5	1.000	0.827	16.94	25.3	5.44	Up	44se
OptUp >	12.0	41.7	6.267	4.681	17.4	1.000	0.838	17.03	26.6	5.12	Up	44se
	12.0	42.0	6.315	4.693	17.5	1.000	0.839	17.05	26.7	5.06	Up	44se
	12.0	45.0	6.572	4.647	18.4	1.000	0.856	17.08	28.1	4.80	Up	44se
	12.0	50.0	6.877	4.420	19.4	1.000	0.893	16.97	30.7	4.52	Up	44se
	12.0	60.0	7.284	3.642	20.6	1.000	0.992	16.47	36.2	4.14	Up	44se
	12.0	70.0	7.554	2.583	16.9	1.000	1.000	15.88	42.8	3.29	Up	44se
	12.0	80.0	7.689	1.335	13.0	1.000	1.000	15.10	49.7	2.62	Up	44se
	12.0	90.0	7.720	-0.000	9.8	1.000	1.000	14.12	56.9	2.08	Up	44se
	12.0	100.0	7.838	-1.361	18.3	1.000	1.000	12.61	62.9	2.65	Dn	44se
	12.0	110.0	7.860	-2.688	12.9	1.000	1.000	11.61	71.1	2.04	Dn	44se
	12.0	120.0	7.769	-3.884	8.9	1.000	1.000	10.42	80.2	1.54	Dn	44se
	12.0	130.0	7.590	-4.878	5.8	1.000	1.000	9.15	90.8	1.10	Dn	44se
	12.0	135.0	7.468	-5.280	4.5	1.000	1.000	8.52	96.9	0.90	Dn	44se
	12.0	140.0	7.324	-5.610	3.4	1.000	1.000	7.92	103.6	0.71	Dn	44se
OptDn >	12.0	158.7	6.566	6.119	0.9	1.000	1.000	6.34	136.7	0.24	Dn	44se
	12.0	160.0	6.511	-6.118	0.7	1.000	1.000	6.29	139.3	0.23	Dn	44se
	12.0	170.0	6.122	-6.029	0.3	1.000	1.000	6.06	159.9	0.11	Dn	44se
	12.0	180.0	5.812	-5.812	-0.0	1.000	1.000	6.19	180.0	-0.00	Dn	44se
	14.0	30.0	4.475	3.875	13.9	1.000	0.695	17.94	22.3	9.00	Up	44se
	14.0	33.0	5.282	4.430	16.2	1.000	0.701	18.53	23.3	7.06	Up	44se
	14.0	36.0	5.812	4.702	17.7	1.000	0.704	18.85	24.6	6.13	Up	44se
	14.0	39.0	6.206	4.823	18.8	1.000	0.710	19.01	26.0	5.56	Up	44se
OptUp >	14.0	40.8	6.384	4.832	19.4	1.000	0.717	19.05	26.9	5.34	Up	44se
	14.0	42.0	6.515	4.842	19.9	1.000	0.724	19.08	27.5	5.20	Up	44se
	14.0	45.0	6.743	4.768	20.6	1.000	0.739	19.05	29.1	4.95	Up	44se
	14.0	50.0	7.020	4.512	21.4	1.000	0.772	18.88	31.9	4.67	Up	44se
	14.0	60.0	7.423	3.711	22.3	1.000	0.858	18.27	37.9	4.25	Up	44se
	14.0	70.0	7.743	2.648	22.5	1.000	0.974	17.46	44.1	3.88	Up	44se
	14.0	80.0	7.968	1.384	17.9	1.000	1.000	16.74	51.6	3.05	Up	44se
	14.0	90.0	8.050	-0.000	12.8	1.000	1.000	15.85	59.5	2.34	Up	44se
	14.0	100.0	8.052	-1.398	22.6	0.968	1.000	13.91	66.2	3.02	Dn	44se
	14.0	110.0	8.201	-2.805	18.4	1.000	1.000	12.94	74.7	2.39	Dn	44se
	14.0	120.0	8.179	-4.090	11.9	1.000	1.000	11.92	84.3	1.75	Dn	44se
	14.0	130.0	8.018	-5.154	7.5	1.000	1.000	10.68	95.3	1.23	Dn	44se
	14.0	135.0	7.904	-5.589	5.8	1.000	1.000	10.05	101.5	1.00	Dn	44se
	14.0	140.0	7.768	-5.951	4.3	1.000	1.000	9.45	108.2	0.79	Dn	44se
	14.0	150.0	7.423	-6.429	2.2	1.000	1.000	8.43	123.9	0.46	Dn	44se
	14.0	160.0	7.065	-6.639	1.1	1.000	1.000	7.75	141.8	0.26	Dn	44se
OptDn >	14.0	166.9	6.862	6.683	0.7	1.000	1.000	7.48	154.9	0.17	Dn	44se
	14.0	170.0	6.776	-6.673	0.5	1.000	1.000	7.42	160.9	0.12	Dn	44se
	14.0	180.0	6.518	-6.518	-0.0	1.000	1.000	7.48	180.0	-0.00	Dn	44se

Best Performance (cont)

	TWS	TWA	V	VMG	Heel	Reef	Flat	AWS	AWA	Lee	Sail	Flot
	16.0	30.0	4.590	3.975	15.7	1.000	0.603	19.99	22.7	9.35	Up	44se
	16.0	33.0	5.409	4.536	18.0	1.000	0.605	20.57	23.8	7.27	Up	44se
	16.0	36.0	5.934	4.801	19.6	1.000	0.611	20.85	25.1	6.36	Up	44se
	16.0	39.0	6.322	4.913	20.6	1.000	0.615	20.99	26.7	5.74	Up	44se
OptUp >	16.0	40.3	6.441	4.910	21.0	1.000	0.620	21.00	27.4	5.59	Up	44se
	16.0	42.0	6.616	4.916	21.4	1.000	0.625	21.02	28.3	5.36	Up	44se
	16.0	45.0	6.830	4.830	22.1	1.000	0.640	20.95	30.0	5.11	Up	44se
	16.0	50.0	7.100	4.564	22.4	0.970	0.717	20.75	33.1	4.85	Up	44se
	16.0	60.0	7.519	3.759	22.4	0.925	0.886	20.12	39.5	4.40	Up	44se
	16.0	70.0	7.857	2.687	22.5	0.927	1.000	19.25	46.2	3.99	Up	44se
	16.0	80.0	8.136	1.413	22.9	0.991	1.000	18.16	53.1	3.55	Up	44se
	16.0	90.0	8.330	-0.000	16.9	1.000	1.000	17.43	61.4	2.65	Up	44se
	16.0	100.0	8.320	-1.445	11.4	1.000	1.000	16.41	70.3	2.00	Up	44se
	16.0	110.0	8.438	-2.886	23.4	0.983	1.000	14.12	77.9	2.74	Dn	44se
	16.0	120.0	8.566	-4.283	16.2	1.000	1.000	13.32	87.6	1.96	Dn	44se
	16.0	130.0	8.432	-5.420	9.6	1.000	1.000	12.23	98.7	1.36	Dn	44se
	16.0	135.0	8.307	-5.874	7.3	1.000	1.000	11.62	105.0	1.10	Dn	44se
	16.0	140.0	8.161	-6.252	5.4	1.000	1.000	11.03	111.8	0.87	Dn	44se
	16.0	150.0	7.826	-6.777	2.8	1.000	1.000	10.01	127.0	0.52	Dn	44se
OptDn >	16.0	169.4	7.263	7.139	0.7	1.000	1.000	8.96	160.8	0.15	Dn	44se
	16.0	170.0	7.248	-7.138	0.6	1.000	1.000	8.95	161.9	0.14	Dn	44se
	16.0	180.0	7.028	-7.028	-0.0	1.000	1.000	8.97	180.0	-0.00	Dn	44se
	20.0	30.0	4.246	3.677	17.6	1.000	0.462	23.58	23.8	12.03	Up	44se
	20.0	33.0	5.318	4.460	20.6	1.000	0.467	24.33	24.8	8.44	Up	44se
	20.0	36.0	5.898	4.772	21.4	0.966	0.505	24.64	26.4	7.13	Up	44se
	20.0	39.0	6.329	4.919	21.9	0.932	0.554	24.79	28.1	6.37	Up	44se
OptUp >	20.0	40.9	6.508	4.921	22.2	0.916	0.585	24.79	29.2	6.14	Up	44se
	20.0	42.0	6.650	4.942	22.3	0.904	0.604	24.82	29.9	5.92	Up	44se
	20.0	45.0	6.883	4.867	22.5	0.879	0.659	24.76	31.9	5.62	Up	44se
	20.0	50.0	7.181	4.616	22.5	0.845	0.753	24.53	35.2	5.26	Up	44se
	20.0	60.0	7.648	3.824	22.7	0.812	0.916	23.81	42.2	4.71	Up	44se
	20.0	70.0	8.019	2.743	22.9	0.826	1.000	22.81	49.4	4.21	Up	44se
	20.0	80.0	8.346	1.449	23.2	0.884	1.000	21.61	56.9	3.71	Up	44se
	20.0	90.0	8.686	-0.000	23.6	0.963	1.000	20.28	64.6	3.22	Up	44se
	20.0	100.0	8.920	-1.549	18.6	1.000	1.000	19.45	73.7	2.43	Up	44se
	20.0	110.0	8.859	-3.030	11.9	1.000	1.000	18.50	83.7	1.79	Up	44se
	20.0	120.0	9.142	-4.571	25.0	0.976	1.000	15.73	93.1	2.42	Dn	44se
	20.0	130.0	9.301	-5.979	15.7	1.000	1.000	15.17	103.6	1.57	Dn	44se
	20.0	135.0	9.188	-6.497	11.2	1.000	1.000	14.73	109.7	1.26	Dn	44se
	20.0	140.0	9.006	-6.899	8.2	1.000	1.000	14.21	116.4	1.01	Dn	44se
	20.0	150.0	8.585	-7.435	4.5	1.000	1.000	13.26	131.2	0.65	Dn	44se
	20.0	160.0	8.255	-7.757	2.6	1.000	1.000	12.56	147.0	0.41	Dn	44se
	20.0	170.0	8.010	-7.888	1.1	1.000	1.000	12.19	163.4	0.19	Dn	44se
OptDn >	20.0	171.1	7.986	7.891	1.0	1.000	1.000	12.17	165.3	0.17	Dn	44se
	20.0	180.0	7.802	-7.802	-0.0	1.000	1.000	12.20	180.0	-0.00	Dn	44se

Best Performance (cont)

	TWS	TWA	V	VMG	Heel	Reef	Flat	AWS	AWA	Lee	Sail	Flot
	25.0	30.0	5.306	4.595	31.6	0.977	0.973	28.98	21.6	15.00	Up	44se
	25.0	33.0	4.732	3.969	29.0	0.966	0.967	28.32	24.9	15.00	Up	44se
	25.0	36.0	5.454	4.413	21.4	0.851	0.510	29.10	28.0	9.31	Up	44se
	25.0	39.0	6.062	4.711	22.0	0.816	0.565	29.37	29.8	7.77	Up	44se
	25.0	42.0	6.506	4.835	22.3	0.787	0.623	29.47	31.7	6.90	Up	44se
OptUp >	25.0	43.0	6.568	4.806	22.4	0.779	0.642	29.43	32.4	6.82	Up	44se
	25.0	45.0	6.815	4.819	22.5	0.763	0.682	29.44	33.7	6.39	Up	44se
	25.0	50.0	7.176	4.613	22.8	0.734	0.780	29.19	37.2	5.90	Up	44se
	25.0	60.0	7.716	3.858	23.1	0.709	0.932	28.38	44.6	5.16	Up	44se
	25.0	70.0	8.137	2.783	23.5	0.728	1.000	27.25	52.2	4.56	Up	44se
	25.0	80.0	8.538	1.483	23.8	0.780	1.000	25.95	60.2	3.95	Up	44se
	25.0	90.0	8.956	-0.000	24.4	0.852	1.000	24.47	68.5	3.39	Up	44se
	25.0	100.0	9.325	-1.619	24.9	0.946	1.000	22.88	77.4	2.91	Up	44se
	25.0	110.0	9.654	-3.302	20.4	1.000	1.000	22.05	87.1	2.17	Up	44se
	25.0	120.0	9.706	-4.853	26.2	0.856	1.000	19.63	98.2	2.42	Dn	44se
	25.0	130.0	10.376	-6.670	27.1	1.000	1.000	17.98	108.5	1.82	Dn	44se
	25.0	135.0	10.559	-7.466	19.8	1.000	1.000	18.09	113.2	1.33	Dn	44se
	25.0	140.0	10.413	-7.977	13.6	1.000	1.000	17.90	119.2	1.05	Dn	44se
	25.0	150.0	9.748	-8.442	7.4	1.000	1.000	17.19	133.8	0.74	Dn	44se
OptDn >	25.0	169.1	8.958	8.798	2.1	1.000	1.000	16.29	163.2	0.26	Dn	44se
	25.0	170.0	8.931	-8.795	1.8	1.000	1.000	16.28	164.5	0.24	Dn	44se
	25.0	180.0	8.651	-8.651	-0.0	1.000	1.000	16.35	180.0	-0.00	Dn	44se
	30.0	30.0	3.785	3.278	18.1	0.776	0.354	33.01	25.6	14.49	Up	44se
	30.0	33.0	3.641	3.054	20.9	0.655	0.260	32.60	27.9	9.30	Up	44se
	30.0	36.0	4.245	3.434	20.7	0.698	0.360	32.94	30.0	10.21	Up	44se
	30.0	39.0	5.288	4.109	21.5	0.731	0.571	33.57	31.6	11.14	Up	44se
	30.0	42.0	6.045	4.492	22.6	0.714	0.612	33.86	33.2	8.83	Up	44se
	30.0	45.0	6.552	4.633	22.7	0.679	0.693	33.97	35.2	7.63	Up	44se
OptUp >	30.0	45.9	6.599	4.591	22.8	0.674	0.711	33.90	35.9	7.57	Up	44se
	30.0	50.0	7.057	4.536	23.0	0.652	0.789	33.78	38.8	6.70	Up	44se
	30.0	60.0	7.699	3.850	23.6	0.632	0.936	32.89	46.4	5.71	Up	44se
	30.0	70.0	8.180	2.798	24.0	0.649	1.000	31.67	54.4	4.98	Up	44se
	30.0	80.0	8.652	1.502	24.6	0.698	1.000	30.22	62.7	4.27	Up	44se
	30.0	90.0	9.135	-0.000	25.2	0.763	1.000	28.63	71.4	3.63	Up	44se
	30.0	100.0	9.605	-1.668	25.9	0.848	1.000	26.93	80.6	3.07	Up	44se
	30.0	110.0	10.179	-3.482	26.6	0.952	1.000	25.21	90.2	2.48	Up	44se
	30.0	120.0	10.659	-5.330	21.0	1.000	1.000	24.64	100.1	1.71	Up	44se
	30.0	130.0	11.272	-7.246	28.9	0.902	1.000	21.65	111.7	1.68	Dn	44se
	30.0	135.0	11.845	-8.376	29.8	0.993	1.000	20.65	117.0	1.37	Dn	44se
	30.0	140.0	12.208	-9.352	22.4	1.000	1.000	20.83	121.1	0.95	Dn	44se
	30.0	150.0	11.546	-9.999	11.3	1.000	1.000	20.61	134.5	0.66	Dn	44se
OptDn >	30.0	159.1	10.805	10.095	6.8	1.000	1.000	20.23	148.3	0.50	Dn	44se
	30.0	160.0	10.742	-10.094	6.4	1.000	1.000	20.21	149.7	0.49	Dn	44se
	30.0	170.0	10.138	-9.984	2.8	1.000	1.000	20.09	165.0	0.25	Dn	44se
	30.0	180.0	9.656	-9.656	-0.0	1.000	1.000	20.34	180.0	-0.00	Dn	44se

Best Performance (cont)
