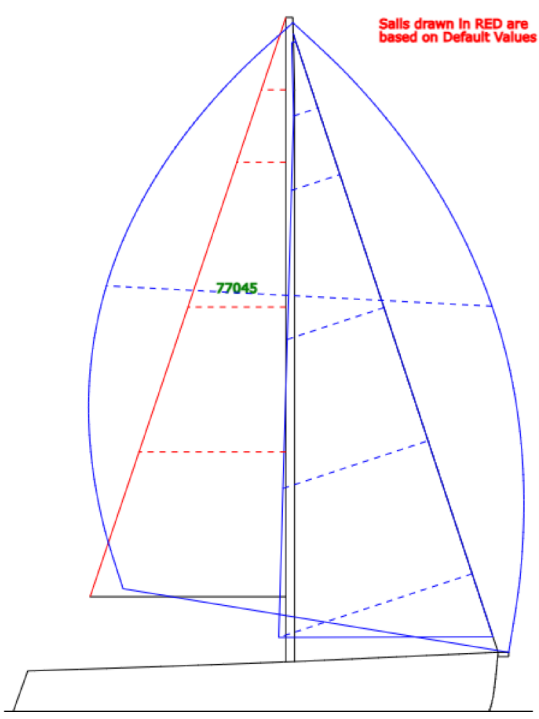


Force 77 - 77045
Beneteau Oceanis 45

Spinnaker	GPH: 0.863 / 611.5	IR#: 0.868 / 614.6	PHRF BM: 81.1
Non-Spin	GPH: 0.783 / 674.3	IR#: 0.814 / 655.3	PHRF BM: 121.8

Class: Beneteau Oceanis 45 Configuration: 77045 Sail Number: 77045 Year Built: 2015 Builder: BENETEAU Owner(s): Reece, Joshua		Sails drawn in RED are based on Default Values 	
Certificate #: EZ12197 Valid Year: 2025 Type: New Cert Issue Date: 2025-09-03 Exp.Date: 2025-12-31 Offsets_file: OCEAN45.off Cert Group: ORR-Ez SOCAL Comment:			
Rig Type: Sloop Keel Type: Fin with Bulb Prop Type: Folding Prop Install: Strut Drive Prop Blades: 3			
LOA: 44.29 ft LWL: 42.00 ft Rated Length: 44.28 ft Beam Max: 14.74 ft Draft: 7.17 ft Disp Empty: 23274 lbs Disp Sailing: 26175 lbs Crew: 1601 lbs Water Ballast: 0 lbs Wetted Area: 488.4 ft² LPS: 109.5 ° RM20: 2383.6 ft-lbs Stab Index: 113 °			
Spinnaker: Asym only on centerline Large Roach Headsail: No Narrow Asym 75-85%: No Jib Furler: Yes Above Deck Main Roller Furling: Yes In Mast			
Rig Dimensions I: 57.19 ft IG: 57.19 ft ISP: 58.19 ft J: 18.54 ft JG: 18.54 ft P: 52.76 ft E: 17.81 ft TPS: 19.50 ft	Mainsail Meas. Desc: MHB: 0.00 ft MUW: 2.22 ft MTW: 4.45 ft MHW: 8.90 ft MQW: 13.36 ft Area: 469.7 ft²	Jib/Genoa Meas. Desc: HLP: 18.54 ft LP%: 100.0 % HLU: 57.12 ft HHB: 0.000 ft HUW: 2.316 ft HTW: 4.633 ft HHW: 9.268 ft HQW: 13.904 ft HLE: 54.331 ft Area: 530.6 ft²	Asymmetric Spin. Meas. Desc: SLU: 64.34 ft SLE: 57.84 ft SHW: 35.10 ft SFL: 35.10 ft Area: 1786.9 ft²



Force 77 - 77045
Beneteau Oceanis 45

Spinnaker

Polar Time Allowances

True Wind Speed	4 kts	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
Opt Beat Angle	47.1	46.1	45.0	44.0	43.3	40.0	38.3	37.8
Beat VMG	1,777.08	1,233.72	965.23	825.04	731.71	655.03	622.45	608.84
52°	1,092.60	768.71	610.30	522.73	479.11	446.06	432.39	425.74
60°	971.32	692.21	557.62	486.13	453.43	425.10	413.73	407.94
75°	840.00	599.22	483.25	438.92	419.14	396.05	382.62	374.47
90°	745.94	546.80	455.43	419.12	400.49	376.10	359.27	347.63
110°	738.95	544.58	456.59	419.75	394.79	358.96	336.55	317.88
120°	787.92	573.65	473.88	434.36	408.58	368.64	330.41	305.58
135°	1,043.87	722.32	563.11	483.15	445.69	398.98	362.20	323.86
150°	1,278.48	884.65	689.66	583.01	511.43	434.21	392.84	358.54
165°	1,425.95	986.70	769.22	650.26	570.43	473.29	421.27	386.05
Run VMG	1,476.26	1,021.51	796.35	673.20	590.55	489.98	436.00	399.34
Opt Run Angle	125.2	129.3	135.0	139.9	147.5	160.9	166.5	167.6

Benchmark Ratings

	TOT (Spin)	TOD (Spin)
GPH	0.863	611.5
IR#	0.868	614.6

Performance Metrics

SA/D Dnwind:	40.960
SA/D Average:	29.55
SA/D Upwind:	18.140
D/Length:	134.5
Ave Perf Screen:	22.000
DnWind Perf Screen:	30.5

PCS Ratings

	4 kts	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
RANDOM LEG	1,251.3	876.8	693.0	592.6	531.5	466.9	434.0	413.9
W50/L50	1,648.9	1,144.8	895.6	757.9	670.5	578.9	534.6	509.2
W60/L40	1,679.4	1,166.4	912.9	773.3	685.1	595.5	553.5	530.4
MOSTLY VW	1,748.0	1,214.3	950.6	805.9	716.7	626.5	587.9	571.6
MOSTLY LW	1,323.0	923.6	727.1	617.6	547.9	466.5	419.1	388.9
MOSTLY REACH	1,126.8	792.9	629.6	541.7	489.8	435.9	407.5	387.7

Non-Spinnaker

Polar Time Allowances

True Wind Speed	4 kts	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
Opt Beat Angle	47.1	46.1	45.0	44.0	43.3	40.0	38.3	37.8
Beat VMG	1,777.08	1,233.72	965.23	825.04	731.71	655.03	622.45	608.84
52°	1,092.60	768.71	610.30	522.73	479.11	446.06	432.39	425.74
60°	971.32	692.21	557.62	486.13	453.43	425.10	413.73	407.94
75°	867.93	624.21	508.19	456.72	429.22	399.12	388.37	382.36
90°	863.85	622.09	507.26	456.45	429.47	393.99	371.61	362.76
110°	998.42	713.72	576.99	497.28	458.56	415.44	385.28	358.13
120°	1,185.93	825.56	647.78	553.08	488.79	432.90	398.79	370.83
135°	1,571.23	1,051.37	791.45	650.55	563.27	461.70	416.96	385.18
150°	1,819.84	1,201.04	891.84	722.80	614.66	487.09	430.76	395.44
165°	1,934.34	1,272.89	942.51	759.29	641.64	501.54	435.95	397.28
Run VMG	1,961.43	1,290.37	955.16	769.18	649.83	507.74	441.07	402.17
Opt Run Angle	171.4	171.5	171.6	171.7	171.7	171.9	173.0	173.2

Benchmark Ratings

	TOT (Non-Spin)	TOD (Non-Spin)
GPH	0.783	674.3
IR#	0.814	655.3

Performance Metrics

SA/D:	18.14
D/Length:	134.5
Perf Screen:	13.5

PCS Ratings

	4 kts	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
RANDOM LEG	1,442.2	996.0	774.9	651.3	575.0	493.6	454.8	433.7
W50/L50	1,881.6	1,276.7	974.9	806.4	700.3	588.3	537.3	510.7
W60/L40	1,865.1	1,272.0	976.5	812.1	709.0	603.1	555.7	531.6
MOSTLY VW	1,798.5	1,244.7	970.5	819.4	725.8	630.8	590.2	573.9
MOSTLY LW	1,669.0	1,132.7	865.1	712.3	614.9	505.9	449.9	416.4
MOSTLY REACH	1,316.3	914.3	715.6	604.7	537.6	466.4	432.2	411.6



Force 77 - 77045
Beneteau Oceanis 45

Spinnaker

Standard 5 Winds

	TOT (Spin)					TOD (Spin)				
	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15
RANDOM LEG	0.414	0.551	0.719	0.895	1.183	1,251.3	940.4	720.8	579.1	438.3
W50/L50	0.383	0.514	0.678	0.858	1.169	1,649.0	1,229.8	932.7	737.2	540.9
W60/L40	0.384	0.515	0.679	0.857	1.153	1,679.3	1,252.9	950.9	752.9	559.8
MOSTLY WW	0.392	0.525	0.691	0.871	1.150	1,748.0	1,304.3	990.3	786.2	595.3
MOSTLY LW	0.398	0.531	0.697	0.878	1.240	1,323.0	991.2	756.1	599.9	424.8
MOSTLY REACH	0.429	0.569	0.738	0.910	1.177	1,126.8	849.8	654.7	531.0	410.4

Standard Single Wind

	TOT (Spin) Single	TOD (Spin) Single
RANDOM LEG	0.865	599.2
W50/L50	0.828	763.7
W60/L40	0.826	781.1
MOSTLY WW	0.838	817.0
MOSTLY LW	0.854	617.0
MOSTLY REACH	0.879	549.6

Legacy 4 Winds

	TOT (Spin)				TOD (Spin)			
	V.Light	Light	Medium	Heavy	V.Light	Light	Medium	Heavy
RANDOM LEG	0.382	0.630	0.888	1.094	1,251.3	759.8	538.7	437.2
W50/L50	0.355	0.594	0.860	1.085	1,649.0	985.8	680.9	539.3
W60/L40	0.356	0.595	0.859	1.071	1,679.3	1,004.7	695.9	558.2
MOSTLY WW	0.359	0.599	0.861	1.056	1,748.0	1,046.3	727.7	593.5
MOSTLY LW	0.366	0.606	0.872	1.143	1,323.0	798.0	555.2	423.4
MOSTLY REACH	0.397	0.650	0.903	1.094	1,126.8	689.3	496.1	409.6

Non-Spinnaker

Standard 5 Winds

	TOT (Non-Spin)					TOD (Non-Spin)				
	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15
RANDOM LEG	0.359	0.484	0.642	0.818	1.125	1,442.2	1,071.0	807.4	633.9	460.7
W50/L50	0.336	0.459	0.620	0.809	1.159	1,881.6	1,377.8	1,019.4	781.5	545.5
W60/L40	0.346	0.471	0.633	0.819	1.145	1,865.1	1,371.2	1,020.2	788.4	563.5
MOSTLY WW	0.381	0.512	0.677	0.857	1.144	1,798.6	1,337.9	1,011.5	798.5	598.3
MOSTLY LW	0.316	0.431	0.583	0.765	1.152	1,669.0	1,222.2	903.4	688.2	457.4
MOSTLY REACH	0.367	0.492	0.649	0.819	1.106	1,316.4	982.1	744.9	590.0	436.7

Standard Single Wind

	TOT (Non-Spin) Single	TOD (Non-Spin) Single
RANDOM LEG	0.788	657.6
W50/L50	0.777	814.0
W60/L40	0.786	821.4
MOSTLY WW	0.825	830.2
MOSTLY LW	0.738	713.5
MOSTLY REACH	0.790	611.8

Legacy 4 Winds

	TOT (Non-Spin)				TOD (Non-Spin)			
	V.Light	Light	Medium	Heavy	V.Light	Light	Medium	Heavy
RANDOM LEG	0.332	0.560	0.819	1.042	1,442.2	854.6	583.9	459.2
W50/L50	0.311	0.540	0.821	1.077	1,881.6	1,083.7	712.8	543.4
W60/L40	0.320	0.552	0.828	1.064	1,865.1	1,083.1	721.5	561.5
MOSTLY WW	0.348	0.586	0.850	1.051	1,798.6	1,069.8	737.3	596.2
MOSTLY LW	0.290	0.504	0.773	1.062	1,669.0	960.7	625.6	455.5
MOSTLY REACH	0.340	0.569	0.821	1.028	1,316.4	787.2	545.5	435.6

Force 77 - 77045
Beneteau Oceanis 45

Spinnaker

PHRF Benchmark

81.1
Aligned Ratings are based on the Farr 40 MH as Scratch Boat.

PHRF Single Wind

RANDOM LEG	80.8
W50/L50	131.4
W60/L40	135.7
MOSTLY WW	132.3
MOSTLY LW	90.2
MOSTLY REACH	66.4

PHRF 5 Winds

	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15
RANDOM LEG	260.7	178.1	117.2	73.6	38.8
W50/L50	432.5	298.4	197.8	120.5	57.1
W60/L40	452.2	312.2	207.0	124.9	53.6
MOSTLY WW	441.1	303.2	201.4	124.6	44.2
MOSTLY LW	257.1	178.7	122.0	82.8	58.2
MOSTLY REACH	219.4	148.2	95.6	59.1	32.5

Non-Spinnaker

PHRF Benchmark

121.8
Aligned Ratings are based on the Farr 40 MH as Scratch Boat.

PHRF Single Wind

RANDOM LEG	139.2
W50/L50	181.7
W60/L40	176.0
MOSTLY WW	145.5
MOSTLY LW	186.7
MOSTLY REACH	128.6

PHRF 5 Winds

	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15
RANDOM LEG	451.6	308.7	203.8	128.4	61.2
W50/L50	665.1	446.4	284.5	164.8	61.7
W60/L40	638.0	430.5	276.3	160.4	57.3
MOSTLY WW	491.7	336.8	222.6	136.9	47.2
MOSTLY LW	603.1	409.7	269.3	171.1	90.8
MOSTLY REACH	409.0	280.5	185.8	118.1	58.8