

Beaufort Wind Scale

The Beaufort Wind Scale is a historical wind speed classification developed for use by sailors. It was originally based on the sea states.

Beaufort Number	Wind Speed at 10 meters Height		Description	Wind Turbine Effects	Land Effects	Sea Effects
	[m/s]	[knots]				
0	0.0 -0.4	0.0 -0.9	Calm	-	Smoke rises vertically	Mirror smooth
1	0.4 -1.8	0.9 -3.5	Light	-	Smoke drifts, vanes unaffected	Small ripples
2	1.8 -3.6	3.5 -7.0	Light	-	Tree leaves move slightly	Definite waves
3	3.6 -5.8	7.0 -11.0	Light	Small size turbines start	Tree leaves in motion, Flags extend	Occasional breaking crest
4	5.8 -8.5	11.0 -17.0	Moderate	Start up of electrical generation	Small branches move	Larger waves, white crests common
5	8.5 -11.0	17.0 -22.0	Fresh	Useful power generation at 1/3 of capacity	Small trees sway	Extensive white crests
6	11.0 -14.0	22.0 -28.0	Strong	Rated power range	Large branches move	Larger waves, foaming crests
7	14.0 -17.0	28.0 -34.0	Strong	Full capacity	Trees in motion	Foam breaks from crests
8	17.0 -21.0	34.0 -41.0	Gale	Shut down initiated	Walking difficult	Blown foam
9	21.0 -25.0	41.0 -48.0	Gale	All wind machines shut down	Slight structural damage	Extensive blown foam
10	25.0 -29.0	48.0 -56.0	Strong gale	Design criterion against damage	Trees uprooted; much structural damage	Large waves with long breaking crests
11	29.0 -34.0	56.0 -65.0	Strong gale	-	Widespread damage	-

12	>34.0	>65.0	Hurricane	Serious damage	Disaster conditions	Ships hidden in wave troughs
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