3 DESCRIPTION

The power curve of the G132-3.465 MW has been calculated on the basis of Gamesa Infusion blade.

Unless specified otherwise, the parameters used in the calculation are those in table 1.

Rated Power	3.465 MW
Rotor Diameter	132 m
Hub height	84m; 97m; 101.5m; 114m; 134m; 154m; 165m
Frequency	50-60 Hz
Rotor Speed	Variable speed
Blade tip angle	Pitch control regulation
Turbulence intensity	10 %

Table 1 Parameter values for the power curve calculation of the G132-3.465 MW wind turbine.

All power curve and annual energy production values in this document are subject to the validity ranges presented in Table 2.

Wind Shear (10min average)	≤ 0.3
Turbulence intensity TI [%] for bin i	$5\%\frac{(0.75v_i + 5.6)}{v_i} < TI_i < 12\%\frac{(0.75v_i + 5.6)}{v_i}$
Terrain	Not complex according to IEC 61400-12-1
Upflow β [º]	$-2^o \leq \beta \leq +2^o$
Grid frequency [Hz]	± 0.5 Hz

Table 2. Validity ranges of Power Curves for the G132-3.465MW wind turbine power curve.

4 RESULTS

4.1 POWER CURVE

Table 3 shows the electrical power [kW] as a function of the wind speed [m/s] horizontal referred to the hub height, averaged in ten minutes, for different air densities [kg/m^3]. The power curve does not include losses in the transformer and high voltage cables. The power curve is for the standard version of the turbine.

P [kW] / Ws [m/s]	Air Density [kg/m3]								
	1.225	1.06	1.09	1.12	1.15	1.18	1.21	1.24	1.27
3	37	29	30	32	33	35	36	38	39
4	169	139	144	150	155	161	167	172	178
5	434	363	376	389	402	415	428	441	454
6	816	697	719	740	762	784	805	826	848
7	1327	1142	1176	1209	1243	1277	1311	1344	1378
8	1994	1724	1774	1823	1873	1922	1970	2019	2067
9	2718	2410	2471	2530	2586	2641	2693	2742	2789
10	3208	3004	3050	3092	3129	3164	3194	3222	3247
11	3402	3321	3341	3359	3373	3386	3397	3406	3414
12	3452	3430	3436	3441	3445	3448	3451	3453	3455
13	3463	3458	3459	3460	3461	3462	3462	3463	3463
14	3465	3464	3464	3464	3464	3464	3465	3465	3465
15	3465	3465	3465	3465	3465	3465	3465	3465	3465
16	3465	3465	3465	3465	3465	3465	3465	3465	3465
17	3463	3463	3463	3463	3463	3463	3463	3463	3463
18	3452	3452	3452	3452	3452	3452	3452	3452	3452
19	3413	3413	3413	3413	3413	3413	3413	3413	3413
20	3325	3325	3325	3325	3325	3325	3325	3325	3325
21	3176	3176	3176	3176	3176	3176	3176	3176	3176
22	2982	2982	2982	2982	2982	2982	2982	2982	2982
23	2771	2771	2771	2771	2771	2771	2771	2771	2771
24	2576	2576	2576	2576	2576	2576	2576	2576	2576
25	2418	2418	2418	2418	2418	2418	2418	2418	2418

Table 3 Power curve for G132-3.465 MW wind turbine as a function of wind speed for STD FULL POWER at different air densities [kg/m^3].