Sound Power Level

MM92 Evolution

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1.1 Sound Power Level according to IEC for different Hub Heights

HH	V_{10}[1] [m/s]	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0
68,5m	L_{WA}[2] [dB(A)]	101.4	103.4	104.3	105.0	105.0	105.0	105.0	105.0
78,5m	L_{WA}[2] [dB(A)]	101.6	103.5	104.4	105.0	105.0	105.0	105.0	105.0
80m	L_{WA}[2] [dB(A)]	101.6	103.6	104.4	105.0	105:0	105.0	105.0	105.0
100m	L_{WA}[2] [dB(A)]	102.2	103.8	104.5	105.0	105.0	105.0	105.0	105.0

All sound power levels above are based on wind speeds of V_{10} at 10 m height. The data of the noise level are based on the requirements of the IEC 61400-11: Wind turbine generator systems – part 11.
The calculation of the wind speed in 10m height is based on a roughness length of 0.05m, equivalent to a vertical wind shear coefficient of 0.14.

1.2 Sound Power Level according to FGW Guideline at 95% of rated power

The sound power level measured according to the Technical Guideline "Fördergesellschaft Windenergie e.V. (FGW)" at 95% of the rated power is independent of the hub height:

$$\mathbf{L_{WA,\,95\%} = 105.0\ dB(A)}$$

[1] Wind speed in 10 meters height

[2] Sound power level of the turbine in hub height