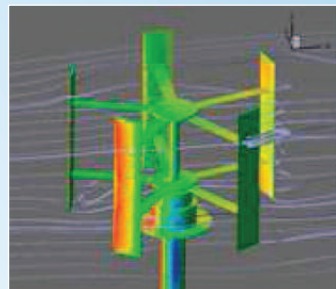


# Whisper Silent 1MW Wind Giro Mill



This new technology vertical axis, high energy 1MW wind giro mill, mounted upon its tall, free-standing tower is almost silent in operation and is visible and safe to migratory birds.



Specifically designed with wind farms in mind, The A-axis wind giro will outperform nearly any wind turbine in its class due to its powerful generator and large, multi-blade rotary mill.

The hydraulic technology used within this turbine gathers maximum power from the wind, whilst maintaining a steady 1MW of power at the rated speed\*.

It is highly efficient - with the giro mill able to rotate at low wind speeds - and, accepting wind from any direction. (Unlike the traditional, much noisier horizontal turbines that must face into the wind and can be slow to react to constant changes in wind directions).

\*at a rated wind speed of 13 m/s.

## Performance

Rated power	1MW
Rated wind speed	13 m/s
Self start up speed	2 m/s
Operating range	3 - 30 m/s
Maximum wind speed	60 m/s
Nominal RPM	10

## Noise levels at 3m distance

Less than 7 m/s	27 dB
Between 7 -10 m/s	32 dB
Between 10 -13 m/s	37 dB

## Physical parameters

Mill size	50m diameter
Blade length	38m
Platform height	25m
Overall height	58m
Total weight	100t [metric]
[includes tower, generator and mill]	

## Lightning Protection

Standard	On blade tips
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## Over Speed Protection

Electronic
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## Generator

Type	Permanent magnet direct drive DC generator
Nominal output/ Rated VAC	1MW/600

## Controller

Output	280-800vdc
Input (DC)	280-800vdc
Rated Voltage	690vac/50Hz

## Gearbox

Type	Planetary/helical stages
Gear Ratio	1:10

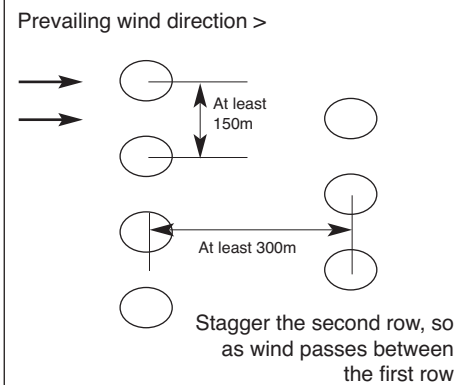
## Standby Braking

Auto disc
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## Monitoring

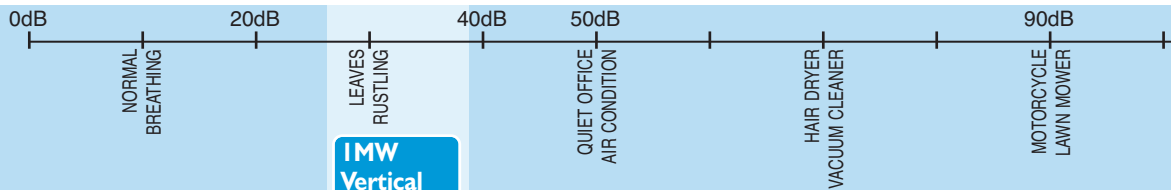
Computer based control (CPU bus mastering) of all vertical axis turbine functions with standard remote pass-code monitoring. Output regulation and optimisation is via the Vari-Pitch. Thermal and vibration sensors throughout.

## Suggested Wind Farm Layout



The information contained within this leaflet is correct at the time of going to press, but may be subject to change.

## A sound comparison



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