The EOX M-21

M-21 turbines have the capability of active power curtailment and can be equipped with integrated energy storage to allow for maximizing wind power in your system and on-site consumption.

These turbines are meant to cope with the most extreme climates in the most remote locations - from the strong, wet gales in northern Scotland, the humid trade winds in the Pacific, the icy winds in Alaska and the hot thunderstorms in Singapore. The tilt-up tower makes these turbines 100% hurricane-proof.

eocycle

	CHARACTERISTIC	SPECIFICATION
Main Data	Model	EOX M-21
	Design class	IEC Class IA wind turbine
	Design life	30 years without major component replacement
	Rated power	100kW
	Rated wind speed	Average annual wind speed: 10m/s (36 km/h) (22 mph)
	Cut-in | Cut-out wind speed	2.75 m/s (9.9 km/h) (6 mph) | 20 m/s (72 km/h) (45 mph)
	Extreme wind speed	70m/s (252 km/h) (157 mph), 3-second average
	Operating temperature	-20 °C to 40 °C (-4 °F to 104 °F)
	Lightning protection	Lightning rod, surge protection devices, grounding system
Rotor	Rotor diameter	21m (69 ft)
	Swept area	346.4m² (3727 ft²)
	Rotor speed	Variable, up to 57 rpm
Generator	Type	PM Generator
	Model	3-phase
	Generator	100 kW, 400 V, 42.4 Hz, 1.25 service factor
	Drivetrain	Direct drive (no gearbox)
	Generator enclosure and insulation	Totally enclosed, weather-proof, class F insulation, IP55, maintenance free
Power Converter	Type	Grid-tied / utility-interactive
	Converter output	3-phase, 380 V to 500 V, 50/60 Hz, 144A, Power Factor 0.99
Control System	Controller model	Siemens PLC
	Advanced features	Data logging and direct integration with safety system
	SCADA/Monitoring system	EOX SCADA, web and mobile application
	Control strategy	Maintenance free active stall-regulated
	Weather sensors	Wind speed, wind direction, temperature
Yaw System	Type	Electric auto-yaw
Materials	Steel components	High quality, as per ASTM standards
	Corrosion protection	Hot-dip galvanized or zinc-coated, as per ASTM standards
Braking System	Normal operation	Combination: 1) generator 2) stall blade design 3) yaw-assist
	Emergency rotor brake	Fail-safe hydraulic disk brake
Blade	Model	Eocycle
	Design	Fixed-pitch (no moving parts)
	Length	10 m (33 ft)
Tower	Tower - hub height	32m (105 ft) free-standing and tilt-up
	Finish	White paint

AVERAGE WIND SPEED (M/S)	GROSS OUTPUT (MWH/YEAR)	AVERAGE WIND SPEED (M/S)	GROSS OUTPUT (MWH/YEAR)
4.5	120.5	7.0	332.0
5.0	161.1	7.5	369.9
5.5	204.2	8.0	404.2
6.0	248.0	8.5	434.2
6.5	291.0	9.0	459.8

Note: Measured and certified per IEC 61400-12 standard.