

TECNNICAL SPECIFICATIONS



Airrush Urban Windmill

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General Specification

General	Durability	>15 years	
	Operating temperature	-200C/750C	
	Weight	110 kg	
	Protection degree	IP 65 outside	
	Software version	3.05	
Output	Nominal Power (W)	1750	
	Maximum Power (W)	2250	
	Maximum Output (rpm)	1800	
	Output wind speed (m/s)	14	
	Output (rpm)	1150	
	Starting speed (m/s)	2,9	
	“Cut-out” speed (m/s)	20	
Turbine MK3	Material	ABS with stainless Constructions	
	Turbine type	Diffuser augmented wind turbine	
	Diameter turbine max.(mm)	2000	
	Length turbine (mm)	1000	
	Color Standard	RAL 9010	
	Number of blades	3	
	Blade type	3D CFD Optimized	
	Rotor diameter (mm)	1500	
	Rotor surface (m2)	1,77	
	Tip speed ratio	4,2	
	Noise level (db)	4,5 m/s: 40 –9 m/s: 50	
	Blade material	Nylon, glass fiber reinforcedwith perforated stainless steel	
	Construction	Mast	Galvanized St-235
		Length (min/max)	3,5/11,5
Electrical contact		Anti-twist by trapedozial screw mechanism	
Damping mastfoot		Rubber dampening	
Earthing		Via hoisting eye	
Guarantee (min-max)		2 years standard, can be extended up to 5 years.	

Generator Specification

Standards

- EN-50438
- EN-61400-2
- EN61558-1/EN61558-2-4
- UL506/ROHS

Electro-technical

- Nominal 1.75 kW and 2.5 kW peak output
- Voltage 0 to 425 V DC after rectification or 600VAC at maximum rpm, 1250 rpm
- Cogging: <2% or maximum cogging 0 Nm
- Output / RPM (see graph)
- requirement startup speed 2.5 m / s speed range 0-1250 RPM
- Cable length 3 m (spec's cable AWG, shielded 3 x 1.5 mm² + 1 x 2 mm² and two x1 mm², 400 V, 10 A continuous, 16 A peak, five cores, more than 2 million turns by 3 meters in length and angle of 1,080 degrees)
- Breakdown voltage 2500 VAC
- Isolation voltage 1000VAC
- Winding according spec's Magnetic Innovations

Mechanical

- Climate class C5 (climate)
- Mechanical loads: torque 60 Nm load, maximum axial load 1200N and maximum radial load 500 Nm
- Operating Temperature -20 ° C to +70 ° C maximum sun irradiation 1800 W / m²
- Brake condition 30 Nm, IP65, 24 / 48V, failsafe (centrifugal brake at 2000 RPM?) And electronic on / off switch
- Structural properties (see drawing)
- Resonance: no vibrations can be transmitted to frame in which generator is suspended, due to durability and noise.

Environment

- Noise: < 1 dB above ambient noise
- ROHS

