

SANO *pro*



DESIGNED AND
MADE IN ITALY



TECHNICAL DATA

Turbine and generator manufacturer	ROPATEC
Model	SA-70 proS
Power	15 kW
Swept area	70,2 m ²
Wind speed	ca. 3 m/s
Cut-in	19 m/s
Cut-out	Class III
Wind class according to IEC61400-2	Permanent magnet
Generator	Direct drive
Transmission system	Fiberglass
Blade material	7,8 m
Rotor diameter	9 m
Blade length	Safety PLC Controller SIL-3 (electrical and hydraulic brake)
Overspeed control	Noisiness
Value	42 dB
Wind speed	8 m/s
Distance from mast	30 m
Mast	Height
18 m	Weights
Turbine	2100 kg
Mast	2350 kg
Monitoring system	SDMR based on SCADA
Operating temperature	-20°C/+55°C (can be adapted to extreme temperatures upon request)



SILENT



INDEPENDENT OF WIND DIRECTION



APAS
ACTIVE PERFORMANCE ADAPTING SYSTEM



PRODUCTION AT HIGH WIND SPEED



HIGH EFFICIENCY AND RELIABILITY



LOW MAINTENANCE



MONITORING AND REMOTE CONTROL



PLUG AND PLAY









VERSATILE APPLICATIONS

APAS

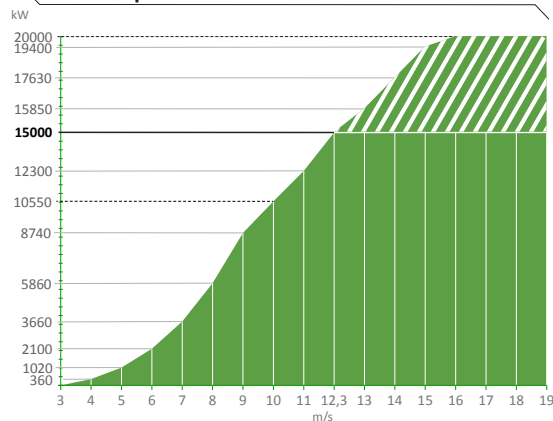
ACTIVE
PERFORMANCE
ADAPTING
SYSTEM

The power curve is constantly trimmed to maximize efficiency in accordance with local wind conditions


AEP - Annual Energy Production*

Average annual wind speed [m/s]	[kWh] per year	Self-consumption coverage per household	CO ₂ EMISSION ANNUAL SAVING***
4,5	14500		6,5 t
5	19850		8,9 t
5,5	25650		11,5 t
6	31700		14,3 t
6,5	37700		17,0 t
7	43450		19,5 t

Nominal power curve**



The data reported reflect ideal work conditions and are subject to change due to external factors such as temperature, altitude, atmospheric pressure, turbulence level, humidity and presence of obstructions.

 3500 kWh correspond to average annual consumption of a family of four.

* Production at sea level with laminar wind speed and Weibull distribution shape parameter k=2.

** The power curve is indicative and not explicative. It is set in accordance with site characteristics. The data correspond to laminar wind.

*** Calculated approximately on the basis of average European (EU-27) CO₂ benchmark of 0,45 t/MWh. This value may vary from country to country.