

# SANO *pro*

# BIEGGA

ANOTHER ENERGY

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DESIGNED AND  
MADE IN ITALY

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ENG

# TECHNICAL DATA

Turbine and generator manufacturer	ROPATEC
Model	SA-70 proS
Power	15 kW
Swept area	70,2 m <sup>2</sup>
Wind speed	ca. 3 m/s
Wind class according to IEC61400-2	Class III
Generator	Permanent magnet
Transmission system	Direct drive
Blade material	Fiberglass
Rotor diameter	7,8 m
Blade length	9 m
Overspeed control	Safety PLC Controller SIL-3 (electrical and hydraulic brake)
Noisiness	42 dB
Value	8 m/s
Wind speed	30 m
Distance from mast	
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

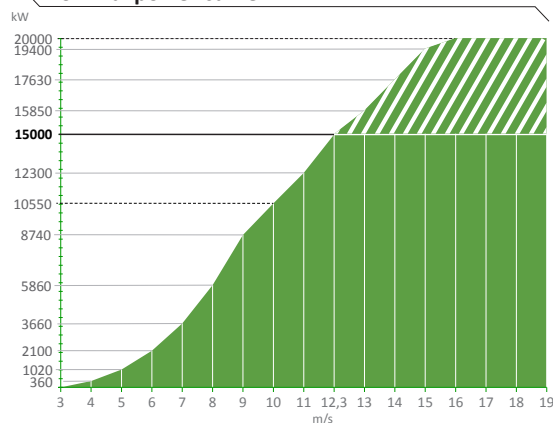
## AEP - Annual Energy Production\*

Average annual wind speed [m/s]	[kWh] per year	Self-consumption coverage per household	CO <sub>2</sub> 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




CO<sub>2</sub> EMISSION ANNUAL SAVING\*\*\*

## 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) CO<sub>2</sub> benchmark of 0,45 t/MWh. This value may vary from country to country.