Dragon – wind installation

Perfect complement of photovoltaic inst!

It generates electricity at any time throughout the year

The DRAGON wind installation works individually and as a complement to the photovoltaic installation - it allows for an efficient increase in energy independence and a noticeable reduction in electricity bills.

Easily reduce your electricity bills with a Dragon installation

Installing the turbine is not difficult. The device can be used directly on the roof, on the wall of a building, or on an independent mast. Dragon will work equally well when mounted on farm buildings or gazebos.

The aim of reducing the weight of the device was, among other things, the possibility of mounting it directly on the roof in order to avoid the costs of masts. For supporters of installations on masts: good news! Masts up to a height of 12 m do not require a permit; a notification to the Commune Office is sufficient. DRAGON home wind turbines are recommended in a package of 3 x DRAGON 500W or a multiple of the package, depending on your needs. The minimum recommended distance between turbines is 1 m. The batteries to which we connect the turbines can be connected to energy banks in series or parallel.

TECHNICAL DATA	
Power:	>500W
Rated voltage:	12 AC - 48 AC
Generator:	three-phase (3f) with neodymium magnets
Starting speed:	from 1,2m/s
Rated speed:	11m/s
Brake:	electric
Noise level according to Standard PN-EN 61400-11:	<44dB by 8m/s in distance of 3m
Working temperature:	from -25°C up to 45°C
Compliance with the standard:	CE, IEC 61400

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Regain power, even when it's night

Wind turbine – power generator

Dragon with power of 3 x 500W = 1,5kW

- Off-grid / on-grid / 230V installation
- Payback 3-5 years
- Weight: just 50kg
- Generates power at a wind speed of 1,2m/s
- Electric brake included
- Compact dimensions: 120x80cm
- 8 years warranty
- At a favorable price
- Perfect complement of photovoltaic installation

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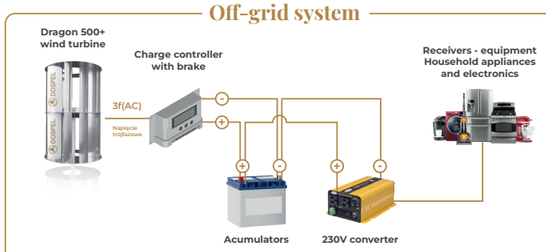
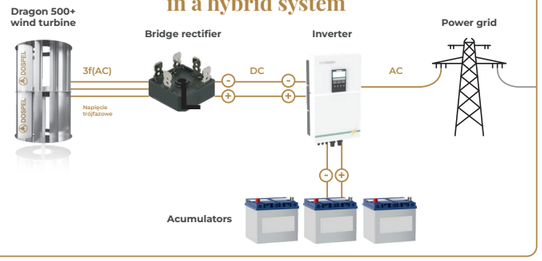
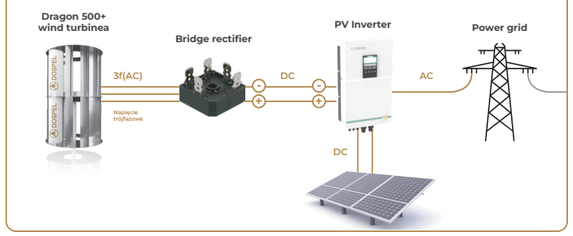
Off-grid system



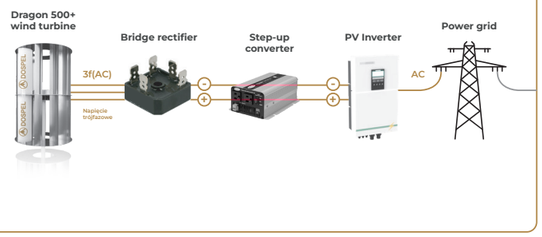
Example connection in a hybrid system



Example on-grid connection with PV installation without step-up converter



Example on-grid connection in a hybrid system



Maximum optimisation to specific location

For efficient operation of a wind turbine, it is necessary to determine the wind strength in a given location. DRAGON is a universal device because it can be equipped with a diversified control system, and thus adapt its operating characteristics to a specific location.

It is possible to install a 12, 24 or 48 V controller in this device. In areas with very little wind, a 12V controller will be suitable. In areas with medium wind, 24V. In high windy locations, a 48V controller will be appropriate. To determine what controller we need, check the average wind strength in the place where we plan to install DRAGON. It is easy to check this using available platforms, for example Meteoblue, and select the appropriate driver on this basis.

Map of wind zones in Poland based on average wind speeds per year

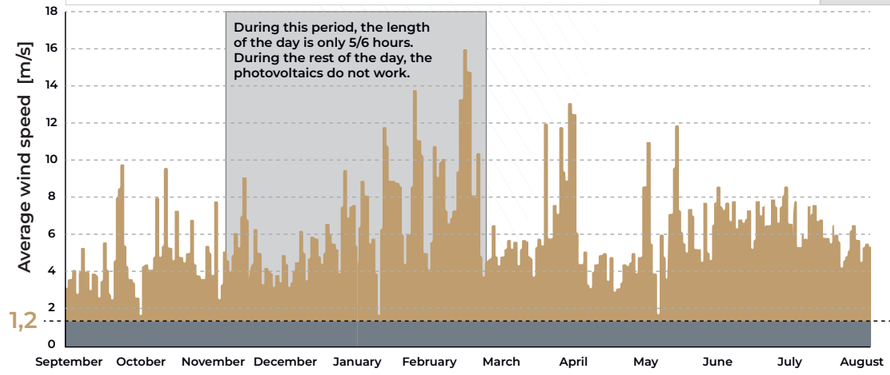
Strefa 3 Average wind speed: >6m/s
- **Recommended controller: 48V**

Strefa 2 Average wind speed: 1-4m/s
- **Recommended controller: 12V**

Strefa 1 Average wind speed: 4-6m/s
- **Recommended controller: 24V**

1. Average wind speed in Łeba in 2022

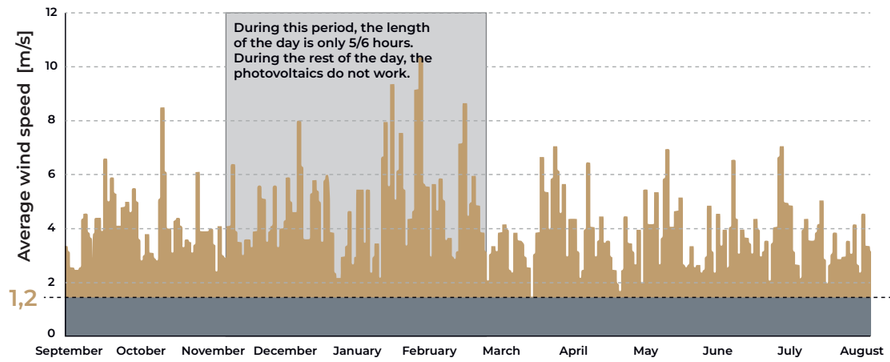
TYPICAL WIND TURBINE Number of hours in which a typical turbine generates electricity (average wind speed higher than 4m/s)	4776 hours (199 days)
DRAGON TURBINE Number of hours in which the Dragon turbine generates electricity (average wind speed higher than 1.5 m/s)	8424 hours (351 days)



1,2 m/s - Dragon turbine starts generating power

2. Average wind speed in Warszawie in 2022

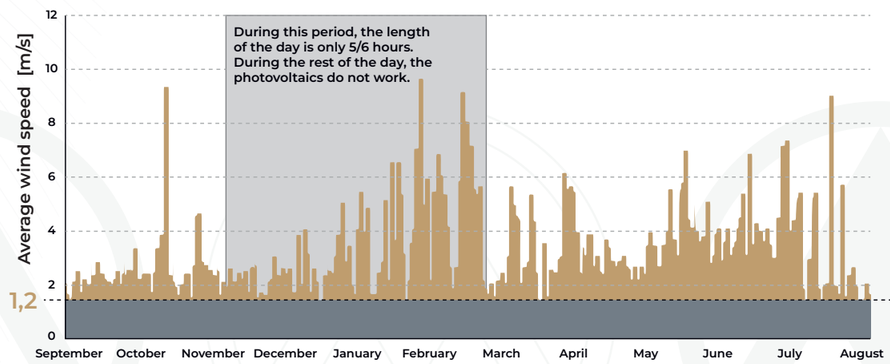
TYPICAL WIND TURBINE Number of hours in which a typical turbine generates electricity (average wind speed higher than 4m/s)	2400 hours (100 days)
DRAGON TURBINE Number of hours in which the Dragon turbine generates electricity (average wind speed higher than 1.5 m/s)	7680 hours (320 days)



1,2 m/s - Dragon turbine starts generating power

3. Average wind speed in Jeleniej Górze in 2022

TYPICAL WIND TURBINE Number of hours in which a typical turbine generates electricity (average wind speed higher than 4m/s)	1272 hours (53 days)
DRAGON TURBINE Number of hours in which the Dragon turbine generates electricity (average wind speed higher than 1.5 m/s)	4464 hours (186 days)



1,2 m/s - Dragon turbine starts generating power

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