



## HDTW Infinitec power

# Hybrid Diffusion Wind/Solar Turbine

This is the top of energy conversion from renewable sources.

The turbine provides energy obtained from the sun and wind. Moreover it provides the highest density of energy obtained from 1 m<sup>2</sup> of the surface on which it stands. This ensures the highest energy efficiency in its class. Turbines are manufactured in modular systems that allow increase of their power easily.

The turbines come with a power of 10 kW, 25 and 50 kW. Their power depends on the number of basic modules and the size of the generator installed.

**This vertical construction has many technological innovations, that includes:**

- A system of diffusers that allow you to simply increase the working surface, and thus the turbine power
- An unique magnetic stabilizer that allows the turbine to be started (soft start) already at a wind speed of 1.2 m / s
- A hybrid smart inverter that allows simultaneous operation of photovoltaic panels and a wind turbine
- Developed in our laboratories VAWT (Vertical Axis Wind Turbine) ensuring completely silent operation (24 dB), does not generate infrasound and allows operation in variable wind direction
- Contrary to the structure with a horizontal HWT axis, the hybrid turbine does not turn off in strong winds, but works at its full power
- The turbine is equipped with specialized generators developed in MRGen. Multi-layer generators with variable power and coaxial generators with increased power curve characteristics.
- The structure is easy to assemble, it does not require foundations.



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## Hybrid Diffusion Wind/Solar Turbine

### Technical specification:

**Model:** HTW - 10, HTW - 25, HTW - 50

**Nominal power:** 10 kW / 25 kW / 50 kW

**Construction (dimensions):** 2.10 m x 2.10 m x 3m

**Blade material:** galvanized steel sheet/ carbon fiber

**Construction material:** steel / composite

**Generator type:** multi-range low-speed generator

**Waterproof level:** IP56

**Working temperature:** from - 40 to + 80

**Generator protection:** mechanic and magnetic hold

**Mounting bearing:** magnetic field / thrust

**Controller system:** smart PLC

**Startup wind speed:** 1,2 m/s

**Rated wind speed:** 8 m/s

**Survival wind speed:** 40 m/s (no turbine cut-off with high speed velocity)

**Output voltage:** 230/400 V

**Noise level:** 24 dB

**Efficiency rated:** 4000 : 1

**System production and storage:** on-grid / off-grid

**Product qualification:** CE



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