

# Air conditioning wind guide motor power generation

Can a wind turbine generator be integrated above an exhaust air system?

The feasibility of integrating the designed energy recovery wind turbine generator above an exhaust air system was evaluated by performing a series of tests on a fabricated small scaled model of cooling tower, followed by an actual unit of cooling tower provided by the manufacturer.

What is exhaust air wind energy recovery turbine generator?

Installing this exhaust air wind energy recovery turbine generator is highly recommended for energy conservation in commercial buildings. It is not only capable of generating electricity constantly when an exhaust system is in operation but also reduce the power consumption by the exhaust air system.

What is a wind power generator project?

The main purpose of the project is to generate clean energy from the exhaust air system without producing any negative impacts on the performance of the original exhaust air system. At the same time, this system is capable of recovering a portion of the power consumption by the cooling tower fan motor. 2. Wind power generator improvement

How much energy will a wind turbine generator generate in a year?

With 1 kW of power generation by this exhaust air energy recovery wind turbine generator, a total of 17.5 GWh (for 3000 units of cooling tower) is expected to be recovered by the system in a year which is equivalent to 13% of the energy consumption of the cooling tower.

Which motor is used for wind turbine emulation?

A separately excited DC motor is used for wind turbine emulation in this work. The armature current control method is used for generating the torque-speed characteristic of a wind turbine.

Why is a DC motor used for emulating wind turbines?

This improves power quality in the source side and has a low DC voltage ripple in the output. A DC motor is used for emulating wind turbines, which is coupled with a SEIG. This paper is organized as follows: The circuit description, operation, design, and analysis are collated in Section 2.

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