



Wind power



MecVel
actuators for
the renewable
energy field.

RENEWABLE ENERGY: ELECTRIC LINEAR ACTUATORS FOR WIND POWER SYSTEMS

MecVel has developed a range of products specific to the wind power sector, following the growth of interest around renewable energy. MecVel recognizes the importance of this industrial sector and applies itself to it with dedication, intending to make people's life better and easier.

The electric linear actuator works with clean technology, relying only on electricity and avoiding typical problems of hydraulic and pneumatic systems. Contaminants leaks, variations in the oil flow, or air pressure are then avoided in compliance with industry 4.0 concepts of energy efficiency and sustainable production. This ensures also great performances, with accurate positioning and a high level of control.

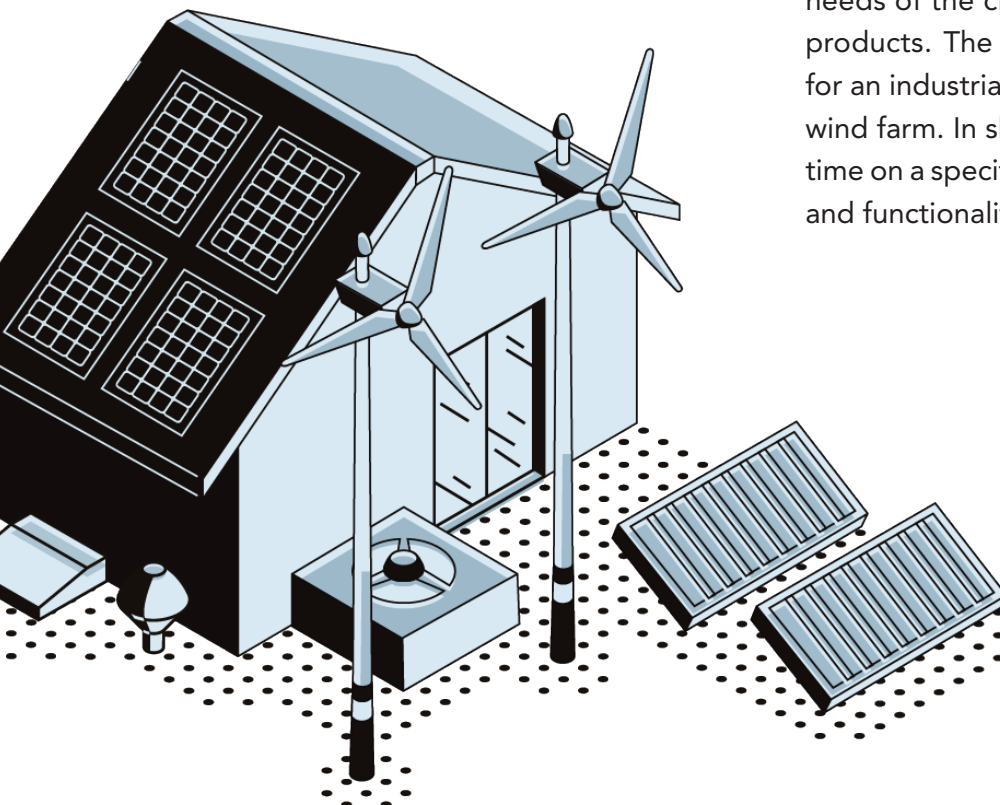
Besides the more intuitive use of actuators on the photovoltaic field, there is a range of *green* applications that benefit from adopting MecVel products as linear motion solutions. In the wind power field, for instance, actuators may be used to handle different tasks inside the single turbine, such as controlling the speed of rotation of the blades, opening and closing access doors to technical compartments, and locking the rotor.

MECVEL ELECTRIC SYSTEMS' BENEFITS

Actuators present many advantages when compared to the most common hydraulic systems, starting with ease of installation. Since there are no pipes, valves, or compressors involved, the actuator is set up for simple and safe installation, and also requires no maintenance of any kind.

Wind turbines represent an important source of renewable energy. In support of this sector, MecVel provides innovative, efficient, and environmentally sustainable products. It would not make sense to install non-eco-sustainable components on a machine that generates clean electricity.

The possibility of total customization according to needs of the client is a distinctive mark of MecVel's products. The actuators can be dimensioned either for an industrial wind turbine or for smaller domestic wind farm. In short, MecVel builds its product every time on a specific application, improving its efficiency and functionality.



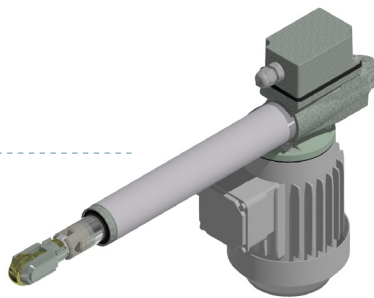
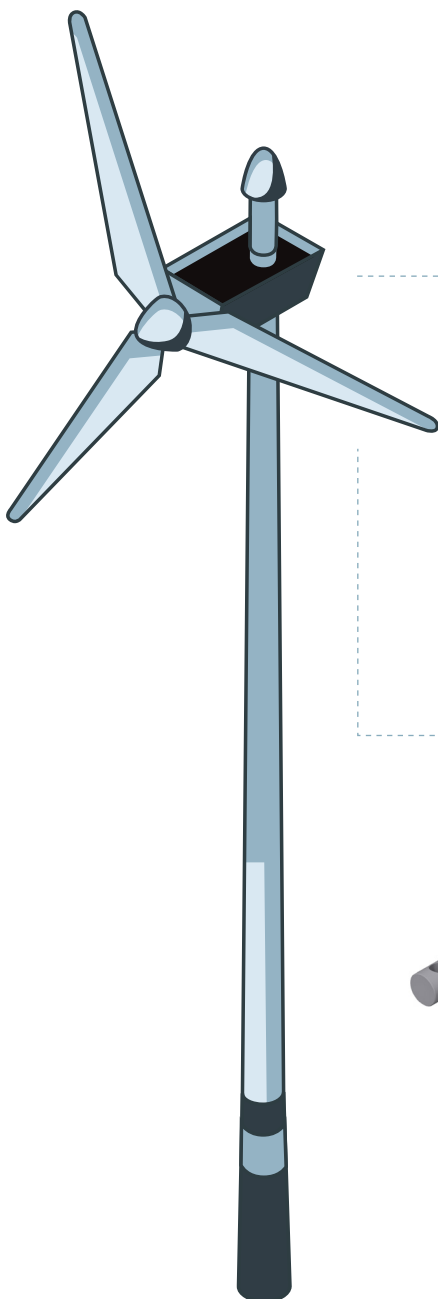
FOCUS ON WIND POWER

MecVel actuators can be used inside a wind turbine to perform the following tasks:

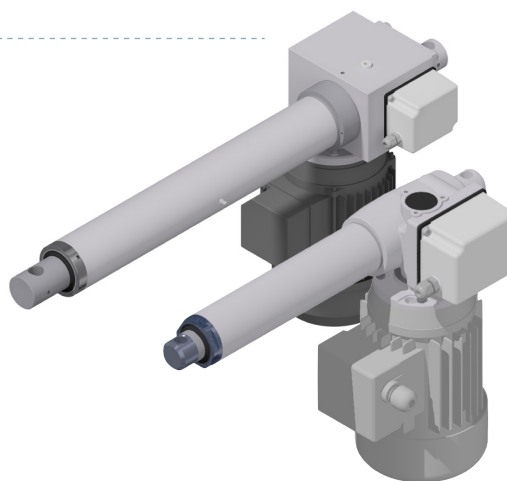
- Control and regulation of wind blade rotation speed.
- Handling of access doors and inspection hatches.

MecVel actuators may have IP65 and AT-EX certifications that allow working in safe and efficient conditions. They are designed and manufactured with high-quality materials, but these are not enough to guarantee efficiency even in the most hostile environments of use, such as offshore wind farms. In these cases, the products are likely to be equipped with options that make them even more robust and suitable for working environments with high salinity. In these cases, the actuators undergo anti-corrosion painting and get equipped with special moisture-resistant seals.

MECVEL PRODUCTS FOR WIND TURBINES



ALI2F - Handling of access doors and inspection hatches. The actuator performs as an automation system to open or close the doors to technical compartments. The remote control of opening and closure allow the maintenance and inspection of the turbine to be carried out safely.



AV3 / ALI4F - Control and regulation of wind blade rotation speed. The electric linear actuator can serve to disengage the blade from the structure in case of excess wind, to avoid damage to the turbine, preserve the efficiency of the application and allow the proper energy storage