



## SIA Kinematics Go LTD

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# Low-speed axial generator

## Technical description

Low-speed synchronous axial permanent magnets generator. The function of the device is single-phase AC generation at low speed of rotation of the rotor, with a minimum starting torque.

The stator and rotor are coaxial discs arranged on the stationary shaft. The excitation system is based on permanent magnets.

## Application

Wind power, water wheels, small hydro turbines and other renewable energy sources that require low-cost and low-speed generator.

## Advantages

The generator provides generation of power suitable for conveying to the consumer at low rotational speed. Brushless design has excellent durability and eliminates the spark that allows you to place this generator in fire or explosive environments. The generator has all-weather and low noise design.

It does not require an external power supply to start-up. It does not require maintenance.

Design of the generator makes it easy to place and fix it and to fasten the source of rotation.

Service life is at least 5 years (bearing replacement).

## Specification

|   |              |
|---|--------------|
| Nominal power ( at $n_{\text{nominal}}$ ) | 1.0 kW       |
| Rotor speed, $n_{\text{nominal}}$         | 600 rpm      |
| Stator diameter                           | 152 mm       |
| Height (with shaft)                       | 94 mm        |
| Electrical power                          | 0.4–1.0 kW   |
| Current                                   | 220 V, 50 Hz |
| Weight                                    | 4.9 kg       |

## Ownership and rights

EAPO patent application is listed on the design of axial generator. Axial generator is a joint development of “Tatneftekhinvest holding” JSC and “SIA Kinematics” Go Ltd.

## Options

The generator can be optionally equipped with a wind wheel and a set of necessary electronic components (voltage regulator, bridge rectifier, inverter) and accumulator to be a ready-to-install wind power unit. Breakaway speed is about 3 m/s.