

THE ADVANTAGES OF PERMANENT MAGNET ROTOR PMG generators technology for a future of energy!

Economical scenery has never been as complex as at present. We are acting in a context made of uncertainty in which the only route seems to be based on new ideas and research.

This is why, focusing our attention on the energy sector, through this edition of SogaNews we want to inform our customers that, despite such a vague economical context, Soga keeps believing in the force of innovation by addressing a large part of its investments on SOGAENERGIES line for the energy special projects, in particular on the PMG series of permanent magnet generators.

We believe that future is energy. An energy that, even compared to the recent past, should now aim to reduce pollution and CO2 emissions; a cleaner energy that can and must get on well with all naturally occurring energies: wind, tides, the force of the water...

That's why our PMG generators with high polarities (8-12-18 poles) are particularly suitable to be coupled with wind and water turbines and for all other low speed applications.

The advantages of the generators based on permanent magnet rotors are many:

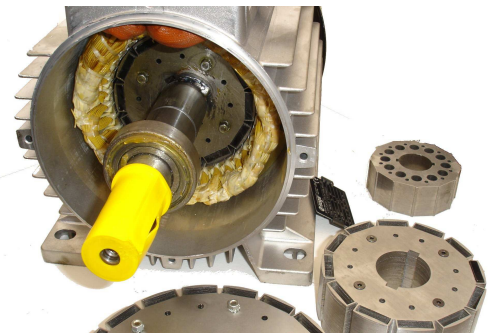
1) High efficiency. In 2 or 4 poles version, with direct coupling to endothermic diesel or gasoline engines they permit a significant fuel saving with the consequent reduction of emissions, compared to machines of different type (synchronous and asynchronous generators etc.).

2) Compactness. At the same output power, our PMG generators are more compact than standard type alternators. Therefore transportation and stocking expenses are lighter.

3) Simplicity in maintenance. As they are brushless, the maintenance of these generators results simple with a longer product life cycle than others.

4) They are particularly suitable for variable speed applications. As PMG generators are three-phase machines with voltage and frequency proportional to their output rotating speed, they are generally put in operation together with electronic devices such as:

- rectifier bridges for the AC/DC conversion and eventually chopper for the DC/DC regulation in applications such as battery chargers;
- rectifier bridges for the AC/DC conversion and inverter for the DC/AC conversion.



sion and inverter for the DC/AC re-conversion at domestic voltage and frequency.

PMG generators are manufactured by using the aluminium IP54 (IEC 600034 standards) housings normally used for Soga asynchronous motors, B3, B5, B14, B3/B5 and B3/B14 building forms, frame size 90-112-160, power ratings up to 70 kW and speed up to 4500 r.p.m. Modules (from 1 up to 7 maximum) allow the generator's power to rise in proportion to the modules increasing.

Follow us in a future of energy!

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