

Indar Electric, S.L.  
Poligono Industrial Txara, s/n  
20200 BEASAIN - SPAIN  
Tel.: 34 943 02 82 00  
Fax.: 34 943 02 82 12  
sgt@indar.ingeteam.com

**Indar**  
An **Ingeteam** brand



Your driving force

Indar Electric, S.L.  
[www.indar.net](http://www.indar.net)



INDAR GENERATORS FOR STEAM TURBINES  
GEOTHERMAL APPLICATIONS

**Indar**





## Your one-stop shop partner in power generation



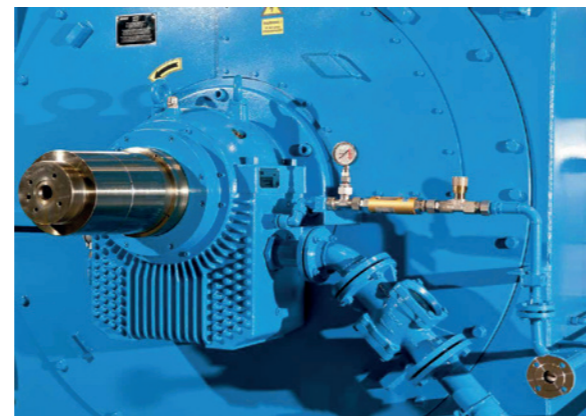
When it comes to research, INDAR has carried out an extensive policy of being at the forefront of innovation in all sectors served by us. As a result, state-of-the-art facilities around our main factories in Beasain (SPA) and Milwaukee (USA) allow us to offer the most reliable equipment to the specific requirements, offering the best of both worlds to serve power generation sectors where we are present today: Biomass, Thermal Solar Plant, Waste to Energy Plant, Cogeneration, Geothermal and Combined Cycle Power Plant.

Our track record with more than 25 GW power installed is the best guarantee of our technical capabilities to adapt our electric machines to the specific requirement. Technical expertise and the spirit of adaptability have been and remain being our main strength, with a sole vocation: to be your partner in power generation.

## Geothermal Generator

INDAR Geothermal generators are designed as to comply with the demanding requirements of corrosive and / or explosive atmospheres such as the ones present in geothermal plants. By means of specific material selection, appropriate coatings and additional secondary protections, INDAR designs and manufactures robust and resistant generators for harsh environments.

Likewise, INDAR generators are conceived under the same characteristics of all products served by the company, being those their utmost efficiency, high reliability, low maintenance, stiffness and flexible design to adapt the design to the specific requirements of each project.



## World class testing facilities

This allows INDAR to fully test its designs for all kind of environmental conditions and to guarantee the best quality on its products, thus developing products and services adapted to the characteristics of each project and client. For this purpose the R+D+i support unit is made up of highly qualified personnel, and counts with the most advanced computer resources for the design and development of generators. The main philosophy of INDAR is to guarantee the quality and reliability with in-house fully proven solutions.



### Our outstanding testing capabilities include:

- On load tests up to 8 MW
- Back to back configuration testing up to 65 MW
- LVRT (low voltage ride through) testing capability
- Self generated grid of 50/60 Hz 20 MVAs
- Combined tests of electrical and thermal insulation ageing
- Climatic chamber (-30 °C to 80 °C) extreme ambient conditions

In generators for geothermal application, INDAR covers the range up to 50MWe in 4-pole synchronous design. Equipment can be designed to withstand harsh environments in either **binary** or **flash** plants. Additionally, **ATEX** specifications can be met, if plant requires so.

Application	Geothermal
Product type	4-poles synchronous generators driven by steam turbines
Output	Up to 50 M We
IP	Up to IP65
IC	IC81, IC616
Voltage	Up to 15 kV
Others	Protection, Synchronization and Control Panels



INDAR counts with a wide experience in supplying static and dynamic grid code compliant generators. The combination of INDAR's technology and knowledge, together with a close cooperation with the customer, is the only way of ensuring that the complete installation complies with these grid code regulations.