

Medium Voltage

Our energy, your power.
Always on.



AUSONIA

MEDIUM VOLTAGE

Nowadays, in any country and in any market, it's clearly evident that everyone looks for more power for satisfying his own needs.

People activities are strictly dependant on the availability of electricity, so the demand for energy continues to grow, as well as the need to design larger back-up generation systems to guarantee energy supply continuity.

In different application, this energy seek phenomena leads to a natural transition from low voltage to medium voltage energy production systems, for which several technical and economic considerations about the relevant right design must be necessarily taken.

Indeed, most advanced power plants use MV feeding lines in order to increase distance of loads from electrical distribution and also decrease costs in cable laying on the plant network surface.

Within this scenario, the proven field experience of Ausonia in designing, manufacturing, supplying, installing and maintaining power generators, are key when it comes to Medium Voltage generators.

Thanks to its high technological know-how, Ausonia has perfected its own skills in engineering and manufacturing a wide range of MV Diesel Generators with output voltage from 3,3 kV up to 13,8 kV for all kind of application, offering solutions covering the basic power generation need up to a complete MV power substation.

Ausonia offers a complete product lifecycle support to its Customers, as well as Total Project Management:

- **CONSULTING ON DESIGN AND SPECIFICATIONS**
- **SYSTEM INTEGRATION & ENGINEERING**
- **INSTALLATION AND COMMISSIONING ACTIVITIES**
- **FIELD TECHNOLOGY MAINTENANCE PROGRAMS**
- **EMERGENCY SUPPORT 24/7**



CASE STUDY

The Government of Turkmenistan has launched the project called TGF for the construction of a large-scale fertilizer plant in Turkmenistan in Garabogaz, northwest of the country along the Caspian Sea, as the largest urea fertilizer plant in the country. The compound will consist of an ammonia plant as well as other related infrastructure and delivery facilities.

The emergency Diesel Generator was foreseen at first as one single slow speed unit of 5 MVA at 6.9 kV operating under extreme environmental conditions (range of temperature at site from -28°C to +46°C).

After the analysis of the entire project requirements,

Ausonia, along with the EPC contractor, worked around the solution by reducing cost impact of the supply by proposing 2 x 2.5 MVA installed in container for parallel operation, including also Switchgear Panel considering the final output (after derating) as required under the operational extreme environmental conditions.

With this solution, EPC contractor was able to reduce by half the previously estimated costs for the delivery, installation and maintenance of the power solution.

After the success of this job, Ausonia has become official supplier for EPCs for similar projects all around the world.

MAIN BENEFITS AND ADVANTAGES:

Extreme Environmental Conditions

- Design temperature from -28 to +46°C
- Winterization for container and all accessories (fuel tank and heat trace for piping)
- Specially designed for Ammonia atmosphere

Higher Efficiency

- Modular Parallel configuration
- Perfect fit with MV feeding line of loads
- Back synchro for no bumps at Mains return

Reliability

- IP54 container for full protection of internal items
- Full redundancy of Diesel Generators in case of failure
- Standalone protection of Power Plant without any external SWGR

Monitoring

- User friendly interface
- Supervision, monitoring and internet access
- Remote command/control integrated in Switchgear room
- Event log history for all operation of plant

Operation & Maintenance

- Easier recovery and intervention on site
- Lower fuel consumption
- Long lifetime up to 30 years without downtime

Footprint

- PLUG & PLAY connection of Generators + Switchgear
- Easy installation on site without special tools for handling
- No extra footprint for heat exchangers





Anti-sand filters



MV alternator



Overall controller for plant

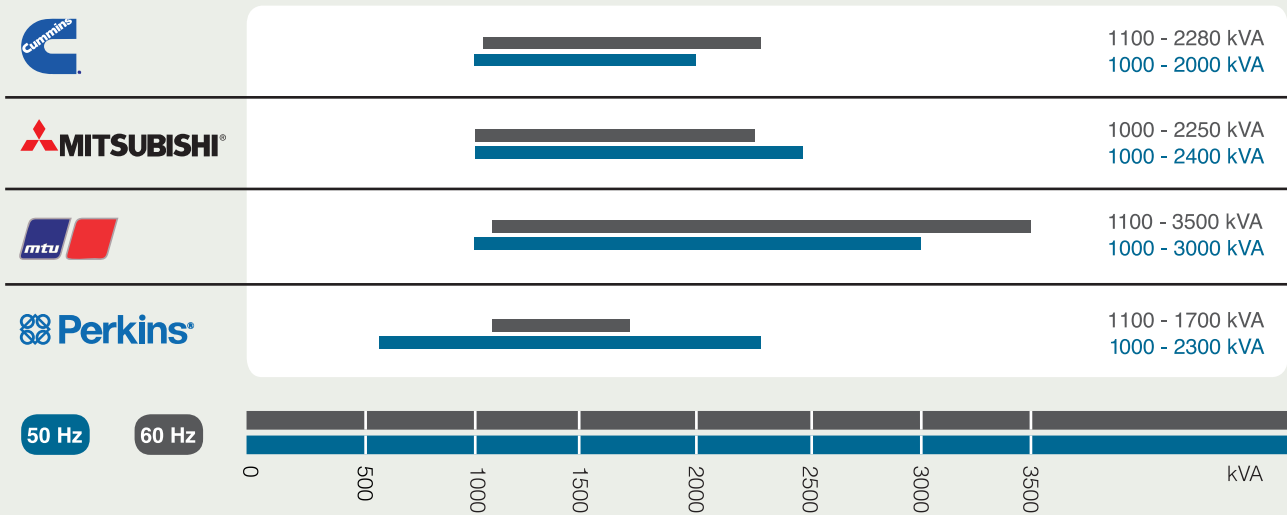


Container environment heaters



Direct Medium Voltage Output Lower Installation & Maintenance Costs Suitable for Long-Distance Carry

The entire Ausonia portfolio of emergency solutions for MV plant is designed according to the highest market standards and requirements, satisfying any level of requests coming from the most demanding applications, including all the most advanced technologies in the market.





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