



SIEMENS



Reach your maximum  
energy yield faster

Siemens industrial generators to address every application

[siemens.com/industrial-generators](https://www.siemens.com/industrial-generators)

# Shorter project execution times, higher plant and system availability, better efficiency

## Siemens industrial generators for a fast energy yield

Irrespective of whether ship, oil rig, diesel, gas or steam power plant: wherever the objective is to generate lots of electric power very quickly, Siemens can offer you the perfect solution based on its comprehensive portfolio of industrial generators. From the planning up to integration in the overall system, you save a lot of time and secure the highest system availability as well as maximum energy yield – thanks to the exceptional reliability and high efficiency.

### Know-how from the number 1 in the market for the most powerful electrical machinery

There are many reasons for the unique quality of Siemens industrial generators. One of these is the synergy with other high-rating Siemens electrical machinery.

When it comes to high-voltage motors, for decades now, Siemens has been setting the pace technically, and is the undisputed number 1 in the global market. On a global scale, our wind turbine generators also enjoy a top position in the market. Over 20,000 wind turbine generators are operating worldwide to reliably convert wind into electric power. Based on this experience and expertise, we are continually developing and rounding off our portfolio of industrial generators. This means that we can provide a tailored and customized solution for every location and every application.

### At every location. For every application. Up to 70 MVA and higher.

Our solutions are just as flexible as your challenges are individual: with low- or high-voltage, diesel or turbine generators, whether installed in electrical rooms or outdoors, in tropical heat, arctic cold, extreme humidity or salt-laden sea air – our industrial generators can be quickly and simply integrated into the overall plant or system, and ensure the maximum energy yield – reliably and efficiently. The seamless range of power ratings is also attractive extending from 300 kVA up to 70 MVA – depending on the requirement, even higher power ratings are possible.

### Designed for use in the following sectors

- Oil and gas (oil rigs, etc.)
- Shipbuilding
- Stand-alone diesel power plants (onshore and offshore)
- Gas-fired power plants
- Steam power plants

### Your advantages at a glance

- Seamless range from 300 kVA up to over 70 MVA and more
- Maximum reliability even under extreme conditions
- Maximum energy yield as a result of the high efficiency
- Straightforward system integration
- Highest degree of flexibility when planning and configuring
- Short delivery times and fast commissioning
- Low maintenance and service-friendly







# Quality, reliability and efficiency for disturbance-free operation. Even under the toughest of conditions.

The high energy yield depends on the system availability – and here, the reliability of the power generator itself is decisive. You secure this reliability with the high-quality industrial generators from Siemens – and this applies in any situation.

When using Siemens industrial generators, you profit from shorter project execution times. This is achieved through higher flexibility and planning, shorter delivery times, a more efficient engineering workflow and significantly simplified integration into the plant or system. You benefit as the system is more quickly commissioned – therefore generating power earlier.





### Significantly faster – from planning through to integration

Already in the planning phase, these generators set themselves apart as a result of the highest flexibility thanks to the modular platform concept, a seamless range of power ratings, various types of construction, different cooling types and a comprehensive range of options.

Efficient engineering in 3D using the finite element method (FEM), which allows a link to be established to the data of the prime mover, e.g. a diesel engine or turbine. The 3D-FEM data can be used in subsequent project steps.

Compact, space-saving designs for simple installation, customer-friendly interfaces and a low noise level – which makes additional protective measures superfluous – ensure quick and simple integration into the plant or system. Also when it comes to commissioning, you can save a significant amount of time for the particular application based on preset options.



### Flexible planning and configuration, simple system integration

- Various cooling methods
- 50 and 60 Hz
- One shaft height for all power ratings from 25 to 70 MVA
- 4 preset options: onshore, offshore, island operation (stand-alone), grid operation
- Reduced number of variants regarding anchor bolts, pipe flanges, line/grid connections
- Customer-friendly interface concept
- Compact, space-saving mechanical design
- Lower noise levels reduce costs for noise dampening measures
- Modular system for simpler interface engineering



### Rugged in operation, high-efficiency power generation

The massive design of our industrial generators and low-maintenance components ensure disturbance-free operation and a long service life – even under the most extreme of conditions. The overall concept is designed to achieve maximum mechanical stability and durability. This is based on a rugged design with the appropriate base frames and a compact rotor, whose winding insulation is not adversely affected even after repeated overload situations.

This is where MICALASTIC® comes into play – the insulation system that has proven itself worldwide for high-voltage motors. An important component is the insulation that has been designed for the VPI technique (Vacuum Pressure Impregnation). This insulation technique ensures high switching and reversing strength as a result of the high stiffness of the winding overhangs and outstanding corona protection.

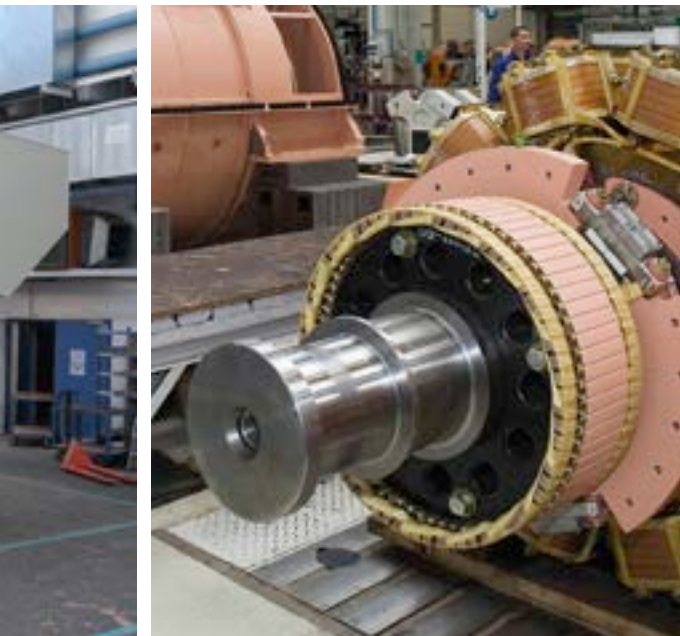
Minimized shaft vibration levels reduce the stress on the complete mechanical system – this is also reflected in the high overload capability and long bearing service life. Long maintenance intervals and low maintenance costs secure reliable, safe operation just the same as comprehensive monitoring equipment. These can be perfectly integrated into higher-level condition monitoring systems. And last but not least, our global service and support network is there locally to support you around the clock – achieving maximum availability of your system.

Maximum energy yield faster – this is achieved through higher plant availability, and above all, a high efficiency. Our industrial generators are attractive as a result of their high efficiency that is frequently above 98%. This is achieved through high-quality, low-loss materials as well as efficient excitation and optimized cooling.

### Long service life with a high efficiency

- High efficiency of over 98 %
- Minimum shaft vibration levels
- High mechanical strength and endurance as a result of the compact and rugged design
- A rugged base frame for a high mechanical stability
- Brushless excitation
- Minimum component failure rate
- Disturbance-free generator operation secures the availability of the complete system
- Minimum maintenance costs
- Self-healing varistors for a longer diode service life
- Design measures against oil leaks
- Well-proven MICALASTIC® insulation system for windings with an extremely long service life
- High overload capability
- Comprehensive monitoring systems
- Long bearing service life





# Technical data

	SIGENTICS HV series S-Modyn	Diesel generators High-Voltage	Diesel generators Low-Voltage	Turbine-driven generators
Technology	High-voltage synchronous	High-voltage synchronous	Low-voltage synchronous	High-voltage synchronous
Power rating	25 – 70 MVA	1.1 – 20 MVA	0.29 – 5 MVA	4 – 25 MVA
Type of construction	4-pole salient pole rotor	4- to 14-pole cylindrical or salient pole rotor; steel enclosure	4- to 12-pole cylindrical or salient pole rotor; steel enclosure	4-pole cylindrical rotor; steel enclosure
Speed	1,500 / 1,800 rpm	600 – 1,800 rpm	500 – 1,800 rpm	1,500 – 1,800 rpm
Cooling method	Water/air cooling	Water/air cooling	Water/air cooling	Water/air cooling
Degree of protection	IP44, IP54, IP55	IP23, IP44, IP54	IP23, IP44, IP54	IP23 – IP54
				

Experience more:

[siemens.com/ids](http://siemens.com/ids)

Experience how  
Integrated Drive  
Systems can boost  
the competitiveness  
of production plants  
and complete  
companies in each  
and every sector.

An overview of  
the advantages  
of Integrated  
Drive Systems



Subject to change without prior notice  
Article No.: E20001-A550-P500-X-7600  
Dispo 21503  
D&M/62995 WS 12141.5  
Printed in Germany  
© Siemens AG 2014

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners.

Follow us on:  
[twitter.com/siemensindustry](https://twitter.com/siemensindustry)  
[youtube.com/siemens](https://youtube.com/siemens)

Siemens AG  
Process Industries and Drives  
Large Drives  
P. O. Box 47 43  
90025 NUREMBERG  
GERMANY