

SGen-2000P pressurized air-cooled generator series

for gas and steam power applications
from 370–560 MVA

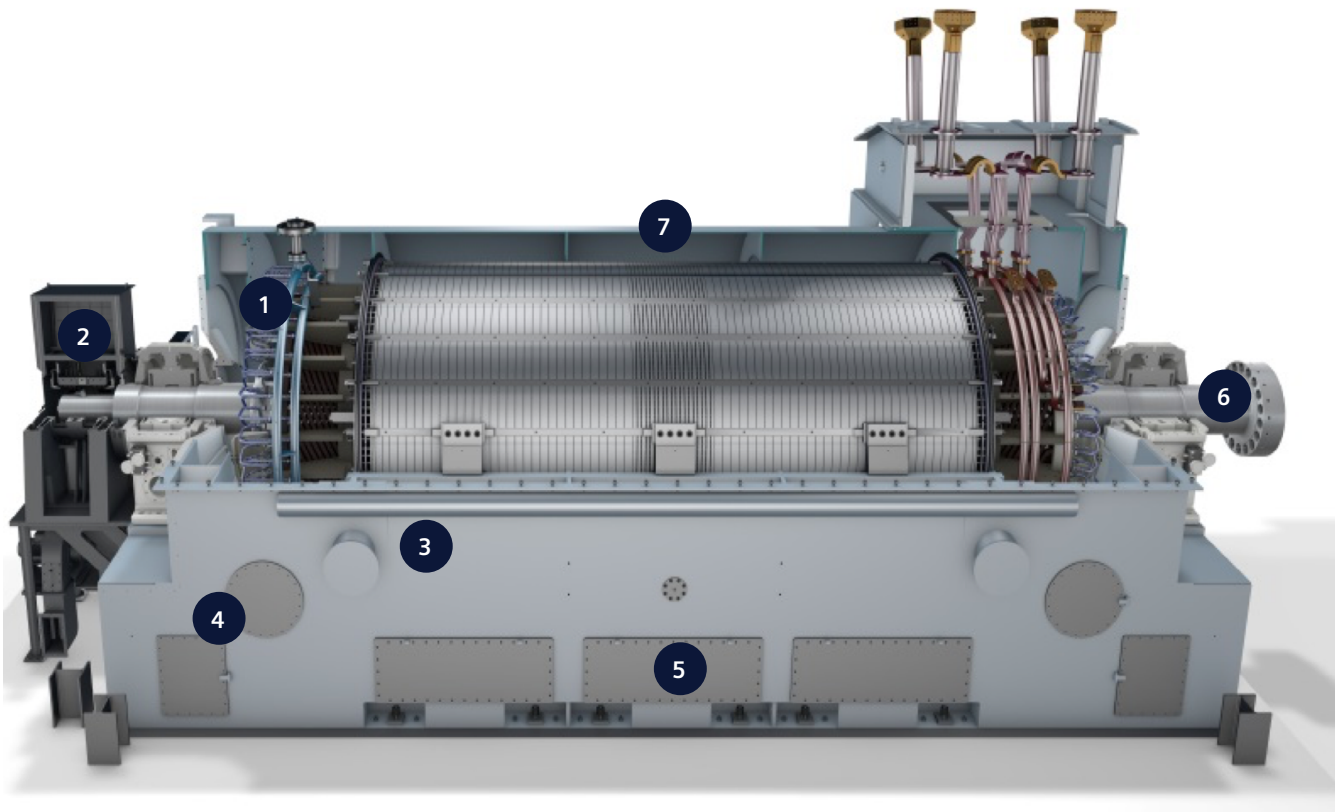
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The innovative SGen-2000P series combines proven Siemens Energy technologies and is an ideal fit for your requirements in flexible or base load power plant operation. Our modular “building block” approach allows Siemens Energy generators to share many features and components across the portfolio making them even more reliable, efficient and easy-to-maintain. The SGen-2000P series is an excellent solution for high-power applications as well as synchronous condensing applications where grid stability is needed.

Key Benefits

- Hydrogen eliminated
- Low CAPEX, low OPEX
- Proven technology
- High operational flexibility
- ISO class zone-A
- Reduced complexity
- Remote operation possible



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| <p>1 Stator: Fleet-proven design of water-cooled stator bars with hollow stainless steel conductors</p> <p>2 Static excitation: integral to the rotor shaft, without extra bearing or coupling interface</p> <p>3 Stator Frame: Robust design with simplified plant interfaces</p> <p>4 Access points: multiple locations for easy maintenance</p> | <p>5 Coolers: flexible based on operational needs; fully integrated into generator base</p> <p>6 Rotor: 10,000 start/stop cycles without rotor removal during operational life cycle</p> <p>7 Simple ventilation: up to 1 bar (gauge) for extended capability and performance optimization</p> |
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Applications



Gas & Steam Power Generation

- Flexible integration into combined cycle power plants or steam tailing applications.
- Large simple or combined cycle power plants, suitable for all duty cycles:
 - Peaker applications
 - Intermediate or base load applications
 - Cogeneration applications

Synchronous Condenser

- Grid stabilizer for increasing integration of renewable power sources into the transmission system
- Ancillary Services to the transmission system:
 - Reactive power compensation
 - Short circuit power
 - Added inertia to the transmission system
 - Short term overload capability

Technical Specifications SGen-2000P

	Frequency	Apparent power	Efficiency	Design power factor	Terminal voltage	Design insulation class	Approx. weight
SGen5-2000P	50Hz	370–545 MVA	Up to 99%	0,8	Up to 22kV	Class F	Up to 370t
SGen6-2000P	60Hz	370–560 MVA	Up to 99%	0,85	Up to 22kV	Class F	Up to 350t

Installation/Operation/Maintenance

Plug & Play installation:

- Easy on-site assembly
- Footprint requires minimal space
- Simple foundation interface

Easy maintenance:

- Fewer spare parts needed
- Elimination of hydrogen and related equipment in output ranges traditionally reserved for H₂
- Unstaffed operation possible

High operational flexibility:

- Efficiency level comparable to traditional hydrogen-cooled generators
- Water-cooled stator winding; high cycling capability
- Maximized rotor life through rotor winding temperature control
- Simple operation with improved safety and no risk for oil contamination (no hydrogen)



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