

Gas turbine SGT-750

Best in class performance for power generation and mechanical drive applications

With maximized uptime, top-class performance, and a low environmental footprint offering the customer high lifetime profitability, the SGT-750 is the perfect choice for the oil and gas industry as well as industrial power generation, onshore or offshore.

Flexible solutions

- Best on the market NO_x emission levels
- Wide fuel range with DLE
- Gaseous and liquid fuels on-load changeover
- Roll & Pitch Capability
- High lifetime profitability

Important features

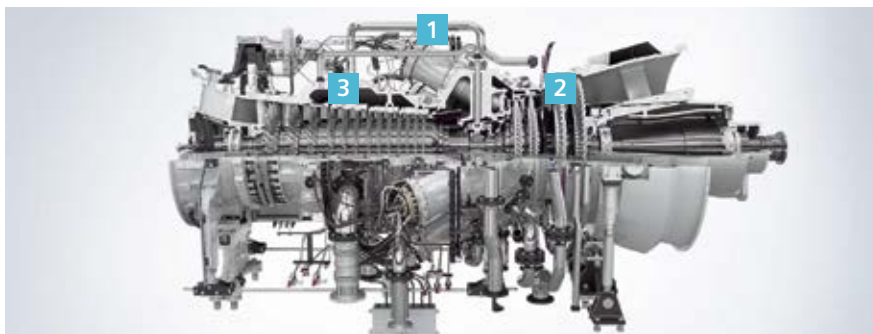
- SGT-750 meets specific customer demands for use in different applications. Operation on part load gives:
- Longer time between overhaul giving lower maintenance cost
 - Lowest emissions on the market
 - Highest efficiency

Customer service and maintenance

- Maximized uptime and serviceability
- 24-hour core engine swap
- Choose between on-site maintenance or gas generator removal for off-site maintenance
- Service plan with just 17 scheduled maintenance days over a 17-year service cycle
- 34,000 operating hours between hot parts inspection on full load
- Remote diagnostic service with online monitoring
- 24/7 global help desk

Key benefits

- High power 41 MW in mechanical drive or 40 MW in power generation
- 41.6% simple cycle efficiency MD
- Robust design with reliability above 99%
- High availability with only 17 scheduled maintenance days in 17 years
- Single digit NO_x capability over a wide load range
- Best in class performance also at part load
- Fast start capability, full load in less than 10 minutes
- Dual fuel capability
- Low lifecycle costs
- Twin shaft gas turbine with a free power turbine



Optimized for reliable power and performance: the SGT-750 core engine with a free high-speed power turbine

- 1 DLE combustion system**
The fourth generation Dry Low Emission (DLE) combustion system gives lowest emissions on the market over a wide load range.
- 2 Power turbine**
Two-stage free power turbine offers nominal shaft speed at 6,100 rpm. For mechanical drive, the power turbine speed envelope is 50 to 105 percent of the nominal speed.
- 3 Compressor**
The material in the compressor is suitable for ambient temperatures from -60° to +55° Celsius.



Power generation package using the same driver as the mechanical drive package



Offshore package with single lift capability and high availability

Frequency	Model	Power (MW)
50 Hz	SGT5-8000H	400 MW
	SGT5-4000F	307 MW
	SGT5-2000E	187 MW
60 Hz	SGT6-8000H	296 MW
	SGT6-5000F	242 MW
	SGT6-2000E	117 MW
50 or 60 Hz	Industrial Trent 60	53 to 66/54 to 62 MW
	SGT-800	48 to 54 MW
	SGT-750	36 to 40 MW/37 to 41 MW
	SGT-700	33/34 MW
	Industrial RB211	27 to 32/28 to 34 MW
	SGT-600	24/25 MW
50 or 60 Hz	SGT-400	13 to 14 MW/13 to 15 MW
	SGT-300	8/8 to 9 MW
	SGT-100	5/6 MW
	Industrial 501-K	4 to 6 MW

Gas turbines from 4 to 400 MW

Power generation package

The SGT-750's fast start-up and cycling capability support both intermediate and continuous operation with improved turndown capability. Its free power turbine is well suited where grid requirements call for maintained power in case of variations in frequency.

- Small footprint for easy fitting
- Modular and flexible package design
- Single-lift capability

Mechanical drive package

SGT-750 offers a full range of solutions for mechanical drive applications both onshore and offshore.

- Variable power turbine speed: 50 to 105%
- Low starting power, high starting torque
- High load on low power turbine speed

	Simple cycle power generation	Mechanical drive applications
Power output	39.8 MW(e)	41.0 MW
Fuel	Natural gas	
Frequency	50/60 Hz	
Gross efficiency	40.3%	41.6%
Heat rate	8,922 kJ/kWh	8,661 kJ/kWh
Turbine speed	6,100 rpm	3,050 – 6,405 rpm
Pressure ratio	24.3 : 1	
Exhaust gas flow	115.4 kg/s	
Exhaust temperature	468° C (875° F)	
NO _x emissions	< 15 ppmvd at 15% O ₂ on fuel gas (with DLE)	

	Physical dimensions	
	Power generation package	Mechanical drive package
Approx. weight	175,000 kg (385,809 lb)	76,000 kg (167,551 lb)
Length	20.3 m (66.6 ft)	12.3 m (40.35 ft)
Width	4.8 m (15.75 ft)	4.3 m (14.11 ft)
Height	4.1 m (13.45 ft)	4.1 m (13.45 ft)

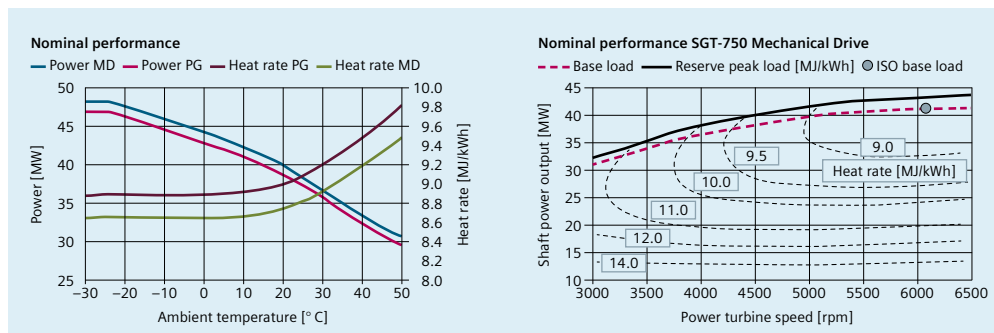
	Combined cycle power generation	
	SCC-750 1 × 1	SCC-750 2 × 1
Siemens combined cycle power plant		
Net power output	51.6 MW(e)	103.7 MW
Net plant efficiency	53.2%	53.6%
Net heat rate	6,760 kJ/kWh	6,718 kJ/kWh
Number of gas turbines	1	2

Published by
Siemens AG 2016

Power and Gas Division
Distributed Generation
Freyeslebenstrasse 1
91058 Erlangen, Germany

Article No. PGDG-T10033-00-7600
Printed in Germany
Dispo 34806
TH 566-161172 FS 1216

SGT-750 performance



Above performances at ISO conditions, gaseous fuel

Subject to changes and errors.
The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.
Note: All combined cycle performance is based on dual pressure, no reheat. Above dimensions exclude inlet filter housing and exhaust stack. For power generation, AC generator is included. For mechanical drive, driven equipment is excluded.