



# SGT-700

## Industrial gas turbine

Thanks to its wide fuel range capability and design features, the SGT-700 is a perfect choice for several onshore applications: Industrial power generation, oil and gas power generation, and mechanical drive applications. It performs well in combined cycle plants and combined heat and power plants.

The SGT-700 gas turbine is an evolution of the proven SGT-600 and is specifically designed for higher power output. It offers easy on-site or off-site maintenance and

operates with a wide range of gaseous and liquid fuels on Dry Low Emission (DLE).

More than 85 units have been sold with over 2 million operating hours. The fleet-leading gas turbine has 100,000 operating hours.

### References

#### ■ Tianjin Bohai, China

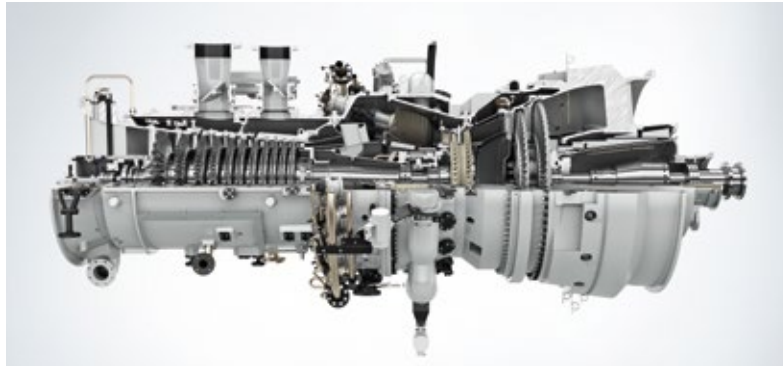
Onshore simple cycle propane dehydrogenation (PDH) plant  
Customer: Tianjin Bohai Chemical Industry Group  
Scope: 2 × SGT-700 gas turbines and 2 × axial flow compressors

#### ■ Pinghu/Satellite Energy 450 KTA, China

Onshore simple cycle propane dehydrogenation (PDH) plant  
Customer: Zhejiang Satellite Energy Co., Ltd  
Scope: 1 × SGT-700 gas turbine coupled with 1 × 25 MW compressor



Three SGT-700 packages for mechanical drive



Maintainable, reliable, and robust twin-shaft design for mechanical drive and power generation



For both power generation and mechanical drive package, the driver is the same

**Power generation: 32.8 MW(e)**  
**Mechanical drive: 33.7 MW**

- Robust, reliable design
- High fuel flexibility
- Low emissions

	Simple cycle power generation	Mechanical drive applications
Power output	32.8 MW(e)	33.7 MW
Fuel	Natural gas, liquid fuel, dual fuel	Natural gas, liquid fuel, dual fuel
Frequency	50/60 Hz	
Gross efficiency	37.2%	38.2%
Heat rate	9,675 kJ/kWh	9,424 kJ/kWh
Turbine speed	6,500 rpm	3,250 – 6,500 – 6,825 rpm*
Pressure ratio	18.7 : 1	18.7 : 1
Exhaust mass flow	95.0 kg/s	95.0 kg/s
Exhaust temperature	533 °C (991 °F)	533 °C (991 °F)
NO <sub>x</sub> emissions	≤ 15 ppmvd at 15% O <sub>2</sub> on fuel gas (with DLE)	≤ 15 ppmvd at 15% O <sub>2</sub> on fuel gas (with DLE)

Note: All combined cycle is based on 2 pressure, no reheat. Dimensions exclude inlet filter housing and exhaust stack. For power generation, AC generator is included. For mechanical drive, driven equipment is excluded.

\* Value shown indicates 100%-design speed of drive shaft

	Combined cycle power generation	
Siemens combined cycle power plant	SCC-700 1 × 1	SCC-700 2 × 1
Net power output	45.2 MW	91.6 MW
Net plant efficiency	52.3%	53.1%
Net heat rate	6,876 kJ/kWh	6,778 kJ/kWh
Number of gas turbines	1	2

	Physical dimensions	
	Power generation package	Mechanical drive package
Approx. weight	169,193 kg (373,000 lb)	63,050 kg (139,000 lb)
Length	18.8 m (61.68 ft)	11.7 m (38.38 ft)
Width	4.6 m (15.09 ft)	4.0 m (13.12 ft)
Height	4.0 m (13.12 ft)	4.0 m (13.12 ft)



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