



# SGT-100

## Industrial gas turbine

The SGT-100 industrial gas turbine is a proven unit for all electrical power generation and mechanical drive applications. The compact arrangement, on-site or off-site maintainability, and inherent reliability make it an ideal gas turbine for the demanding oil and gas industry.

The gas turbine has a rugged industrial design that enables high efficiency and excellent emissions performance on a wide range of gaseous and liquid fuels.

More than 420 units have been sold with over 25 million operating hours. The lead package has more than 180,000 equivalent hours of operation.

### References

#### ■ Girvan, Scotland, UK

Combined heat and power  
Customer: William Grant & Sons  
distillery  
Scope: 1 x SGT-100 gas turbine  
cogeneration package

Able to provide its production process  
with steam and electricity, and also to  
supply electricity for the region



The SGT-100 combines advanced technology with robust construction



Robust, reliable, maintainable single-shaft version for power generation applications



Common modular package design for power generation



Common modular package design for mechanical drive applications

**Power generation: 5.05 / 5.4 MW(e)**  
**Mechanical drive: 5.7 MW**

- Robust and reliable product
- Wide range of gaseous and liquid fuels
- Single-shaft version for power generation or twin-shaft version for mechanical drive applications

	Simple cycle power generation		Mechanical drive applications
	5.1 MW version	5.4 MW version	
Power output	5.05 MW(e)	5.4 MW(e)	5.7 MW
Fuel	Natural gas, liquid fuel, dual fuel; other fuels on request; automatic changeover from primary to secondary fuel at any load		
Frequency	50/60 Hz	50/60 Hz	
Gross efficiency	30.2%	31.0%	33.2%
Heat rate	11,914 kJ/kWh	11,613 kJ/kWh	10,832 kJ/kWh
Turbine speed	17,384 rpm	17,384 rpm	6,500 – 13,000 – 13,650 rpm*
Pressure ratio	14.0 : 1	15.6 : 1	14.9 : 1
Exhaust mass flow	19.5 kg/s	20.9 kg/s	19.7 kg/s
Exhaust temperature	545 °C (1,013 °F)	541 °C (1006 °F)	543 °C (1,009 °F)
NO <sub>x</sub> emissions	≤ 15 ppmvd at 15% O <sub>2</sub> on fuel gas (with DLE)		≤ 25 ppmvd at 15% O <sub>2</sub> on fuel gas (with DLE)

Note: 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

	Physical dimensions	
	Power generation package	Mechanical drive package
Approx. weight	34,927 kg (77,000 lb)	26,944 kg (59,400 lb)
Length	11.0 m (36.0 ft)	6.1 m (20.0 ft)
Width	2.9 m (9.4 ft)	2.7 m (9.0 ft)
Height	4.0 m (13.0 ft)	4.9 m (16.0 ft)



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