

Designed for industrial power generation and mechanical drive applications, the SGT-A65 (Industrial Trent 60) is a proven benchmark for power output, fuel economy, and cost savings. Based on Rolls-Royce Aero Engine technology, it also offers outstanding operating flexibility for a variety of demanding applications.

High flexibility

- Available with WLE and DLE combustion systems
- Fast start up (5 mins) and fast ramp rate
- · High cycling capability

Important features

- Low emissions maintained on different fuels
- Maximized uptime
- Robust industrial design
- Small environmental footprint

Customer service and maintenance

- 24-hour gas generator swap
- Maximized serviceability on-site maintenance or gas generator removal for off-site maintenance
- Modular design allows for exchange of entire modules for repairs
- Minimized load-to-load downtime
- Tailored service options, from installation and commissioning to upgrades and retrofits
- 24-hour global help desk

Key benefits

- 60 to 71 MW(e)/58 to 62 MW gas turbine
- 41.3 to 43.8% simple cycle efficiency
- Highest simple cycle efficiency
- Designed for high operational flexibility including fast start and stop
- Modular and single-lift design for ease of maintenance
- Robust, reliable technology
- Well-proven dry low emission (DLE) combustion system
 25 ppmvd
- On-load fuel changeover (gas to liquid fuel and liquid fuel to gas) with wet low emission (WLE) version
- Low lifecycle costs
- Minimal efficiency drop-off at part-load and reduce speed conditions



The SGT-A65 can cold-start to full power in under 5 minutes and is the most powerful, proven aero-derivative gas turbine in its class

Compressor

Multi-shaft design requires minimal variable guide vanes.

DLE combustion system

WLE or DLE combustion systems to suit your applications that meet or exceed your permitting requirements.

Power turbine

Integrated low pressure turbine and compressor tailored to match your speed requirements in industrial power generation or mechanical drive applications.



The SGT-A65 package is built from fully

assembled and tested modules to allow

quick installation, reliable operation,

and ease of maintenance in the field.

Fast installation and commissioning

Modular and flexible package design

Single-lift capability

Power generation package Mechanical drive package

The SGT-A65 is ideally suited to meet the high power and variable-speed demands of natural gas liquefaction, gas transportation, and gas induction for oil recovery applications.

- Variable power turbine speed: 70 to 105%
- Full train starting with power as low as 350 kW
- Direct drive or gearbox operation

X	
100	

	SGT5-9000HL														567 MW
2	SGT5-8000HL	481 MW							1W						
50 Hz	SGT5-8000H	450								0 MV	V				
2	SGT5-4000F		329 MW												
	SGT5-2000E	187 MW													
	SGT6-9000HL											381	8 M	w	
													O 141		
꿒	SGT6-8000H										310	MW			
9	SGT6-5000F		250 MW												
	SGT6-2000E	117 MW													
	SGT-A65	60 to 71 / 58 to 62													
	5G1-A65		_	_		bu t	10 /	1 / 58	to	02					
SGT-800 48 to 57 MW						MW									
	SGT-A45		41 to 44 MW												
	SGT-750		40 / 41 MW												
or 60 Hz	SGT-700		33 / 34 MW												
ı 6	SGT-A35		27 to 38 MW												
20 c	SGT-600	24 / 25 MW													
	SGT-400		1.	3 to	14 /	13	to 1	5 MW							
	SGT-300		8/	B to	9 M	W									
	SGT-100		5 / 6 MW4												
	SGT-A05	4 to 7 MW													

Gas turbines from 4 to 567 MW

	Simple cycle power	Simple cycle power generation						
	50 Hz DLE with ISI	60 Hz DLE with ISI	50 Hz WLE with ISI	60 Hz WLE with ISI				
Power output	65.9 MW(e)	64.9 MW(e)	67.4 MW(e)	70.8 MW(e)				
Fuel	Natural gas only; oth	er fuels on request	Natural gas, liquid fuel, dual fuel; other fuels on request					
Frequency	50 Hz	60 Hz	50 Hz	60 Hz				
Gross efficiency	43.8%	43.3%	41.3%	41.4%				
Heat rate	8,228 kJ/kWh	8,311 kJ/kWh	8,724 kJ/kWh	8,696 kJ/kWh				
Turbine speed	3,000 rpm	3,600 rpm	3,000 rpm	3,600 rpm				
Pressure ratio	39.6 : 1	38.0 : 1	39.9 : 1	39.3 : 1				
Exhaust gas flow	178 kg/s	171 kg/s	178 kg/s	176 kg/s				
Exhaust temperature	431° C (808° F)	437° C (819° F)	431° C (808° F)	447° C (837° F)				
NO _x emissions	≤ 25 ppmvd at 15% C	≤ 25 ppmvd at 15% O ₂ on fuel gas (with WLE and DLE)						

	Combined cycle p	Combined cycle power generation						
50/60 Hz	DLE 1x1	DLE 2x1	DLE with ISI 1x1	DLE with ISI 2x1				
Net power output	73.0 MW(e)	147.0 MW(e)	83.0 MW(e)	166.8 MW(e)				
Net plant efficiency	54.6%	55.0%	54.2%	54.4%				
Net plant heat rate	6,593 kJ/kWh	6,546 kJ/kWh	6,648 kJ/kWh	6,617 kJ/kWh				
Pressure/reheat	Dual/No							

	Mechanical drive application						
	DLE	DLE with ISI					
Power output	57.9 MW	62.3 MW					
Fuel	Natural gas only; other fuels on reque	Natural gas only; other fuels on request					
Efficiency	43.6%	43.4%					
Heat rate	8,250 kJ/kWh	8,290 kJ/kWh					
Drive shaft speed	2,380 – 3,400 – 3,570 rpm	2,380 – 3,400 – 3,570 rpm					
Pressure ratio	34.3 : 1	34.3 : 1					
Exhaust mass flow	157.7 kg/s	162.8 kg/s					
Exhaust temperature	447° C (837° F)	441° C (826° F)					
NO _x emmission	\leq 25 ppmvd at 15% O ₂ on fuel gas						

	Physical dimensions					
	Power generation package Mechanical drive package					
Approx. weight	190,512 kg (420,007 lb)	106,000 kg (233,690 lb)				
Length	26.0 m (87 ft)	12.4 m (40.7 ft)				
Width	4.6 m (15 ft)	4.7 m (15.4 ft)				
Height	5.0 m (17 ft)	6.4 m (21.0 ft)				

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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:

For power generation, AC generator is included, dimensions include inlet filter housing, exclude exhaust stack. For mechanical drive, driven equipment is excluded, dimensions exclude inlet filter housing and exhaust stack.

All performance is at ISO ambient conditions, natural gas fuel.

ISI – Inlet Spray Intercooling
(wet compression water to the compressor inlet)
WLE performance for power generation
(without ISI) and Mechanical drive
(with and without ISI) available upon request.