



501-K Gas Turbines for oil & gas applications

energy

Proven power enhanced by technology

More than 2,500 501-K gas turbines have been supplied for industrial use, accumulating 65 million hours of operating experience with 500 customers in 40 countries. This compact design delivers high efficiency, easy maintenance and outstanding reliability.

The rugged, modular construction and dependable performance, as well as the capability to operate on a broad range of fuels under demanding environmental conditions, makes the 501-K gas turbine well suited for a variety of power generation and mechanical drive applications. Our proven Dry Low Emissions (DLE) technology lowers emissions throughout a wide operating range.



		Power (ISO)	PT Speed	Fuel Rate	Thermal Efficiency %	Overall Weight (GG & GT)	GG Compression Ratio	GG Compressor Stages	GG Turbine Stages	Exhaust Mass Flow	Stack Temp
		bhp kw	rpm	Btu/hph kJ/kWh		lb kg				lb/sec kg/sec	°F °C
Mechanical Drive	501-KC5	5,500 4,100	13,600	8,495 12,170	29.6	25,000 11,400	9.4:1	14	2	31.2 15.5	1060 571
	501-KC7	7,400 5,500	13,600	7,902 11,340	31.7	26,000 11,800	13.5:1	1+14	2	46.2 20.9	968 520
Electrical Generation	501-KB5	– 3,938(e)	14,600	11,626 12,266		35,000 15,875	9.4:1	14	2	33.9 15.4	1040 560
	501-KB7	– 5,300(e)	14,600	10,787 11,380		36,000 16,329	13.5:1	1+14	2	46.6 21.1	934 501
	501-KH5*	– 6,420(e)	14,600	8,559 9,037		36,000 16,329	9.4:1	14	2	40.5 18.3	986 530

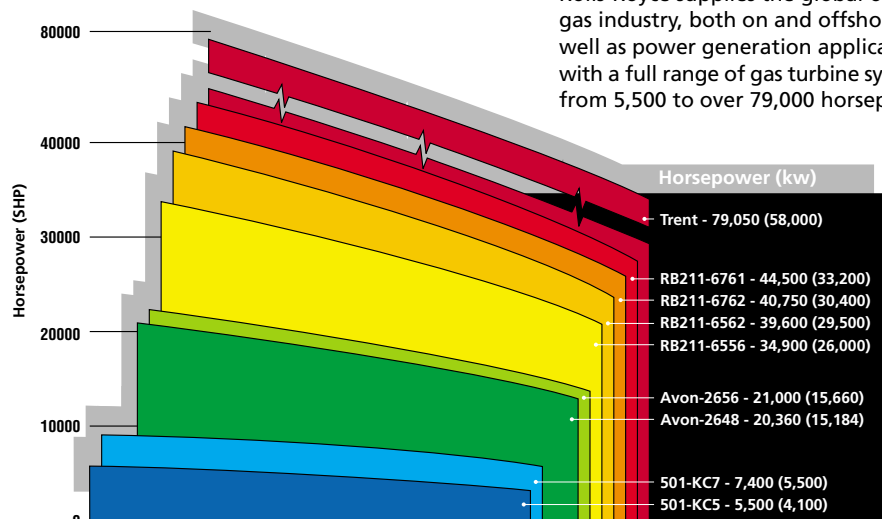
*steam injected

Nominal performance at ISO conditions assuming no losses, gaseous fuel, and base load
Overall weight excludes intake and exhaust system

Fact sheet

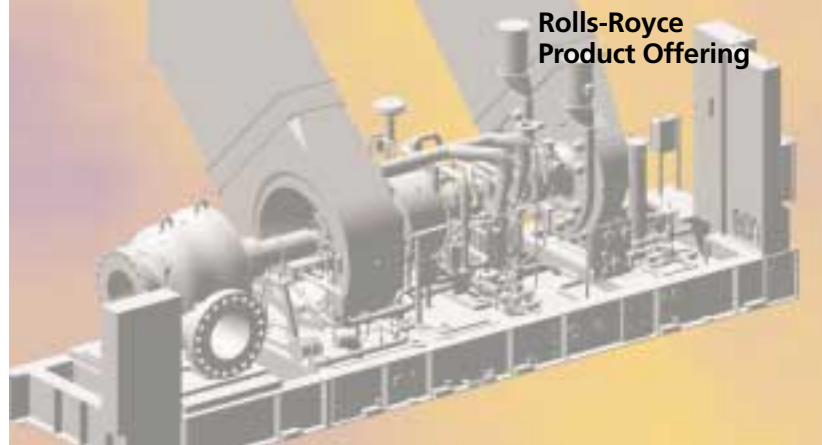
501-K Gas Turbines Capabilities

- The gas turbine industry leader with a proven record of reliability serving customers in over 40 countries
- Based on proven aeroderivative design, this line uses the core 501-K gas generator/turbine to form five variants.
- All models available with the DLE combustion system limiting emissions to less than 25ppm NOx and 50 ppm CO at full and part load
- Lightweight, aero-derivative, industrial design. Easy, economical to transport/install
- Core engine commonality of all 501-K variants
- Package designs suitable for easy upgrade in the field
- Compact design, High horsepower-to-space/weight ratios
- Applications include:
Gas Compression
Oil pumping
Water flood
Petrochemical plants
Cogeneration
Power generation
Marine propulsion
- Simple, inexpensive to maintain
- Gas generator changeout in as little as 8 hours; simple repairs at site.
- Rugged, reliable performance. Up to five years baseload duty between overhauls
- Over 98% demonstrated reliability
- Ideal for remote, inaccessible locations



Full range of power from a single, trusted source.

Rolls-Royce supplies the global oil and gas industry, both on and offshore, as well as power generation applications, with a full range of gas turbine systems, from 5,500 to over 79,000 horsepower.



**Rolls-Royce
Product Offering**

- Performance proven in many environments
Arctic
Desert
Mountain
Equator
Offshore
- Anti-corrosion features for marine service
- Gas, liquid, dual-fuel capability Low and medium Btu gases
- Simple and combined cycle units
- Multi-national manufacturing sources
United States
United Kingdom
Japan

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