

## General Specifications

### **Centaur® 50 Gas Turbine**

- Industrial, Two-Shaft
- Axial Compressor
  - 11-Stage
  - Variable Inlet Guide Vanes
  - Pressure Ratio: 10.3:1
  - Inlet Airflow:
    - 18.4 kg/sec (40.6 lb/sec)
  - Vertically Split Case
- Combustion Chamber
  - Annular-Type
  - Conventional or Lean-Premixed, Dry, Low Emission (SoLoNOx™)
  - 12 Fuel Injectors
  - Torch Ignitor System
- Gas Producer Turbine
  - 2-Stage, Reaction
  - Max. Speed: 15,000 rpm
- Power Turbine
  - 1-Stage, Reaction
  - Max. Speed: 16,500 rpm
- Bearings
  - Journal: Tilting-Pad
  - Thrust, Active: Tilting-Pad
  - Thrust, Inactive: Fixed Tapered Land
- Coatings
  - Compressor: Inorganic Aluminum
  - Turbine and Nozzle Blades: Precious Metal Diffusion Aluminide
- Vibration Transducer Type
  - Velocity
  - Proximity Probes

## Key Package Features

- Driver Skid with Drip Pans
- Driven Equipment Skid
  - Compressor
  - Compressor Auxiliary Systems
- 316L Stainless Steel Piping  $\leq 4$ " dia
- Compression-Type Tube Fittings
- Electrical System Options
  - NEC, Class I, Group D, Div 1
  - CENELEC, Zone 1
- **Turbotronic™** Microprocessor Control System
  - Freestanding Control Console
  - Color Video Display
  - Vibration Monitoring
- Control Options
  - 24-VDC Control Battery/Charger System
  - Gas Turbine and Package Temperature Monitoring
  - Serial Link Supervisory Interface
  - Turbine Performance Map
  - Compressor Performance Map
  - Historical Displays
  - Printer/Logger
  - Predictive Emissions Monitoring
  - Process Controls
  - Compressor Anti-Surge Control
  - Field Programming
- Start Systems
  - Pneumatic
  - Direct Drive AC
- Fuel System
  - Natural Gas
- Integrated Lube Oil System
  - Turbine-Driven Accessories
- Oil System Options
  - Oil Cooler
  - Oil Heater
  - Tank Vent Separator
  - Flame Trap
- Axial Compressor Cleaning Systems
  - On-Crank
  - On-Crank/On-Line
  - Stationary Cleaning Tank
  - Portable Cleaning Tank
- Gearbox (if applicable)
  - Speed Increaseers
  - Speed Decreasers
- Air Inlet and Exhaust System Options
- Enclosure and Associated Options
- Factory Testing of Turbine and Package
- Documentation
  - Drawings
  - Quality Control Data Book
  - Inspection and Test Plan
  - Test Reports
  - Operation and Maintenance Manuals

### Performance

Output Power	4570 kW (6130 hp)
Heat Rate	12 030 kJ/kW-hr (8500 Btu/hp-hr)
Exhaust Flow	67 760 kg/hr (149,380 lb/hr)
Exhaust Temp.	515°C (960°F)

Nominal Rating – per ISO  
At 15°C (59°F), at sea level

No inlet/exhaust losses

Relative humidity 60%

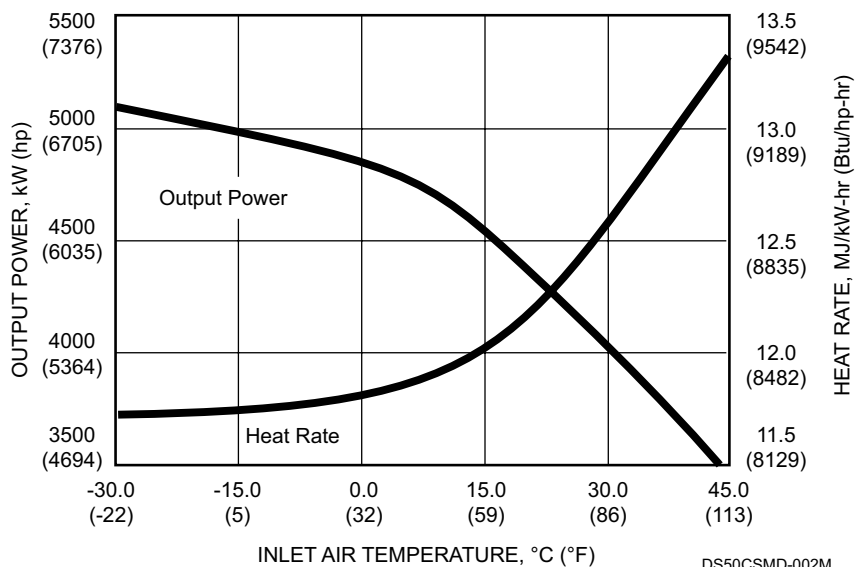
Natural gas fuel with  
LHV = 5 MJ/nm<sup>3</sup> (940 Btu/scf)

Optimum power turbine speed

AC-driven accessories

Engine efficiency: 29.9%

### Available Power



### Package Dimensions

- Length: 6.0 m (19' 9")
- Width: 2.5 m (8' 1")
- Height: 2.7 m (8' 11")
- Typical Weight: 16 330 kg (36,000 lb)

