General Specifications
Centaur® 50 Gas Turbine
- Industrial, Two-Shaft
- Axial Compressor
  - 11-Stage
  - Variable Inlet Guide Vanes
  - Pressure Ratio: 10.5:1
  - Inlet Airflow: 18.5 kg/sec
    (40.9 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 ≤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
  - 120-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
  - Process Controls
  - Compressor Anti-Surge Control
  - Field Programming
- Start Systems
  - Pneumatic
  - Direct Drive AC
- Fuel System
  - Natural Gas
  - Electric Fuel Control
- 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
  - Cleaning Tank
- Gearbox (if applicable)
  - Speed Increaser
  - Speed Decreasre
- Air Inlet and Exhaust System Options
- Enclosure and Associated Options
  - Fire Detection and Suppression
  - Gas Detection
  - Ventilation
  - Lighting
- Factory Testing of Turbine and Package
- Documentation
  - Drawings
  - Quality Control Data Book
  - Inspection and Test Plan
  - Test Reports
  - Operation and Maintenance Instruction Manuals

Oil & Gas Applications
CENTAUR 50
Gas Turbine Compressor Set
### 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 = 35 MJ/m³ (940 Btu/scf)
- Optimum power turbine speed
- AC-driven accessories
- Engine efficiency: 29.9%

### Available Power

![Available Power Graph](image)

### 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)

*Driver package only, dry weight, unenclosed height

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Solar Turbines Incorporated
P.O. Box 85376
San Diego, CA 92186-5376

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FOR MORE INFORMATION
Telephone: (+1) 619-544-5352
Email: infocorp@solarturbines.com
Internet: www.solarturbines.com

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DS50CS-002M

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DS50CS-003M