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 < 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
• 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 Increasers
  – 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>4570 kW (6130 hp)</td>
</tr>
<tr>
<td>Heat Rate</td>
<td>12 030 kJ/kW-hr (8500 Btu/hp-hr)</td>
</tr>
<tr>
<td>Exhaust Flow</td>
<td>67 760 kg/hr (149,380 lb/hr)</td>
</tr>
<tr>
<td>Exhaust Temp.</td>
<td>515°C (960°F)</td>
</tr>
</tbody>
</table>

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/nm³ (940 Btu/scf)
Optimum power turbine speed
AC-driven accessories
Engine efficiency: 29.9%

Available Power

<table>
<thead>
<tr>
<th>OUTPUT POWER, kW (hp)</th>
<th>HEAT RATE, MJ/kW-hr (Btu/hp-hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4500</td>
<td>13.0 (9189)</td>
</tr>
<tr>
<td>5000</td>
<td>13.5 (9542)</td>
</tr>
<tr>
<td>5500</td>
<td>14.0 (9964)</td>
</tr>
</tbody>
</table>

INLET AIR TEMPERATURE, °C (°F)

<table>
<thead>
<tr>
<th>DS50MD-002M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
</tr>
<tr>
<td>Heat Rate</td>
</tr>
</tbody>
</table>

Package Dimensions*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>6.0 m (19' 9&quot;)</td>
</tr>
<tr>
<td>Width</td>
<td>2.5 m (8' 1&quot;)</td>
</tr>
<tr>
<td>Height</td>
<td>2.7 m (8' 11&quot;)</td>
</tr>
<tr>
<td>Typical Weight</td>
<td>16 330 kg (36,000 lb)</td>
</tr>
</tbody>
</table>

*Driver package only, dry weight, unenclosed height