General Specifications

**Titan™ 130 Gas Turbine**
- Industrial, Two-Shaft
- Axial Compressor
  - 14-Stage
  - Variable Inlet Guide Vanes and Stators
  - Pressure Ratio: 17.5:1
  - Inlet Airflow: 56.1 kg/sec (123.8 lb/sec)
  - Vertically Split Case
- Combustion Chamber
  - Annular-Type, Conventional or Lean-Premixed, Dry, Low Emission (SoLoNOx™)
  - 21 Fuel Injectors (Conventional)
  - 14 Fuel Injectors (SoLoNOx)
  - Torch Ignitor System
- Gas Generator Turbine
  - 2-Stage, Reaction
  - Max. Speed: 11,220 rpm
  - Thrust Bearing, Active: Tilting-Pad
  - Thrust Bearing, Inactive: Fixed Tapered Land
- Power Turbine
  - 2-Stage, Reaction
  - Max. Speed: 8820 rpm
  - Full Tilting-Pad Thrust Bearing
- Journal Bearings
  - Tilting-Pad
- Coatings
  - Compressor: Inorganic Aluminum
  - Turbine and Nozzle Blades: Precious Metal Diffusion Aluminide
- Vibration Transducer Type
  - Proximity Probes

**Key Package Features**
- Driver Skid with Drip Pans
- Driven Equipment Skid
  - Multi-Stage Compressor Options, Single-Body or Tandem Compressor Configurations
  - Pipeline Compressor Options
  - Compressor Auxiliary Systems
- Compressors
  - 316L Stainless Steel Piping ≤4" dia.
  - Compression-Type Tube Fittings
- Electrical System Options
  - NEC, Class I, Group D, Div 1, or Div 2
  - ATEX, Zone 2
  - CENELEC, Zone 1
- Turbotronic™ Microprocessor Control System
  - Onskid Control System (Div 2 or ATEX, Zone 2)
  - Freestanding Control Console
  - Color Video Display
  - Vibration Monitoring
- Control Options
  - 120-VDC Accessory Battery/Charger System
  - Gas Turbine and Package Temperature Monitoring
  - Serial Link Supervisory Interface
  - Turbine Performance Map
  - Compressor Performance Map
  - Historical Displays
  - Printer/Logger
  - Remote Monitoring and Diagnostics Option
  - Process Controls
  - Compressor Anti-Surge Control
  - Field Programming
- Start Systems
  - Pneumatic
  - Direct-Drive AC
- Natural Gas Fuel System
- Integrated Lube Oil System
  - Turbine-Driven Accessories
  - AC Motor-Driven Accessories
- Oil System Options
  - Oil Cooler
  - Oil Heater
  - Tank Vent Separator
  - Flame Trap
- Package Skid Design
  - Accommodates Mars® and Titan Turbines
- Optional Modifications for Floating Production Applications
  - Drop-In Lube Oil Tank
  - Modularized System Design
- Axial Compressor Cleaning Systems
  - On-Crank
  - On-Crank/On-Line
  - Portable Cleaning Tank
- Gearbox (if applicable)
  - Speed Increaser
  - Speed Decreasers
- Air Inlet and Exhaust System Options (Carbon or Stainless Steel)
- 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>Output Power</th>
<th>17 500 kW (23,470 hp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Rate</td>
<td>9620 kJ/kW-hr (6800 Btu/hp-hr)</td>
</tr>
<tr>
<td>Exhaust Flow</td>
<td>202 140 kg/hr (445,640 lb/hr)</td>
</tr>
<tr>
<td>Exhaust Temp.</td>
<td>480°C (895°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 = 35 MJ/m³ (940 Btu/scf)
Optimum power turbine speed
AC-driven accessories
Engine efficiency: 37.4%

Available Power*

<table>
<thead>
<tr>
<th>Output Power</th>
<th>Heat Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,500 kW (26,150 hp)</td>
<td>10.3 (7280)</td>
</tr>
<tr>
<td>18,000 kW (24,140 hp)</td>
<td>10.1 (7140)</td>
</tr>
<tr>
<td>16,500 kW (22,130 hp)</td>
<td>9.9 (7000)</td>
</tr>
<tr>
<td>15,000 kW (20,120 hp)</td>
<td>9.7 (6860)</td>
</tr>
<tr>
<td>13,500 kW (18,100 hp)</td>
<td>9.5 (6710)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INLET AIR TEMPERATURE, °C (°F)</th>
<th>OUTPUT POWER, kW (hp)</th>
<th>HEAT RATE, MJ/kW-hr (Btu/hp-hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45.0 (113)</td>
<td>-30.0 (-22)</td>
<td>10.3 (7280)</td>
</tr>
<tr>
<td>40.0 (104)</td>
<td>-15.0 (5)</td>
<td>10.1 (7140)</td>
</tr>
<tr>
<td>35.0 (95)</td>
<td>0.0 (32)</td>
<td>9.9 (7000)</td>
</tr>
<tr>
<td>30.0 (86)</td>
<td>15.0 (59)</td>
<td>9.7 (6860)</td>
</tr>
<tr>
<td>25.0 (77)</td>
<td>30.0 (86)</td>
<td>9.5 (6710)</td>
</tr>
</tbody>
</table>

DS130CSMD-002M

Package Dimensions*

Length: 9.8 m (32' 0")
Width: 3 m (10’)
Height: 3.7 m (12’ 3")
Typical Weight: 36 540 kg (80,560 lb)

*Driver package only, dry weight, unenclosed height