

### General Specifications

#### Titan™ 250 Gas Turbine

- Industrial, Two-Shaft
  - Axial Compressor
    - 16-Stage
    - Variable Inlet Guide Vane and 5 Variable Guide Vanes
    - Pressure Ratio: 24:1
    - Inlet Airflow: 67.3 kg/sec (148 lb/sec)
    - Vertically Split Case
  - Combustion Chamber
    - Annular-Type, Lean-Premixed, Dry, Low Emission (SoLoNOx™)
    - 14 Fuel Injectors (SoLoNOx)
    - Torch Ignitor System
  - Gas Generator Turbine
    - 2-Stage, Axial
    - Max. Speed: 10,500 rpm
    - Thrust Bearing, Active: Tilting-Pad
    - Thrust Bearing, Inactive: Fixed Tapered Land
  - Power Turbine
    - 3-Stage, Axial
    - Max. Speed: 7000 rpm
    - Full Tilting-Pad Thrust Bearing
  - Journal Bearings
    - Tilting-Pad
  - Turning Gear
  - Coatings
    - Compressor: Inorganic Aluminum
    - Turbine and Nozzle Blades: Precious Metal Diffusion Aluminide
  - Vibration Transducer Type
    - Proximity Probes
- #### Reduction Drive
- Epicyclic Type
    - 1500 rpm (50 Hz) or 1800 rpm (60 Hz)
    - Accessory Power Take-Off

#### Generator

- Salient Pole, 3 Phase, 6 Wire, Wye Connected, Synchronous, with Permanent Magnet Generator Exciter
- Available Construction Types:
  - Open Drip Proof
  - Totally Enclosed Air-to-Air Cooled
  - Totally Enclosed Water-to-Air Cooled
- Sleeve Bearings
- Oil Jacking System
- NEMA Class F Insulation
- Class B Temperature Rise
- Voltages: 6600 to 13,800 VAC
- Frequency: 50 or 60 Hz

#### Package

- Mechanical Construction
  - Steel Base Frame with Drip Pans
  - 316L Stainless Steel Piping ≤4" dia.
  - Compression-Type Tube Fittings
  - Suitable for 3-Point Mounting
  - FPSO Modifications (Option)
- Electrical System
  - NEC, Class 1, Group D, Div 2
  - CENELEC/ATEX Zone 2
  - Cable Tray Wiring
  - 120 VDC Battery/Charger System
- Direct-Drive AC Start System
- Fuel Systems
  - Dry Low Emission (SoLoNOx)
- Fuel Types
  - Natural Gas or Dual (Gas/Distillate)
- Integrated Lube Oil System
  - Turbine-Driven Main Pump
  - AC Motor-Driven Pre/Post Pump
  - DC (240 V) Motor-Driven Backup Pump
  - Oil Cooler and Oil Heater (Options)
  - Tank Vent Separator and Flame Trap
  - Lube Oil Filter
- DC (120 V) Turning Gear System

- On-Crank/On-Line Turbine Compressor Cleaning System (Options)
  - Portable Cleaning Tank (Option)
- Air Inlet and Exhaust System
  - Carbon Steel
  - Stainless Steel
  - Marine-Type Filters
- Enclosure (Driver Only or Complete)
  - Fire Detection and Suppression
- Factory Testing of Turbine and Package
- Documentation
  - Electrical Drawings
  - Mechanical Drawings
  - Quality Control Data Book
  - Inspection and Test Plan
  - Test Reports
  - Operation and Maintenance Manuals
- Digital Onskid Display Panel

#### Turbotronic™ Control System

- Onskid Control System (Optional Offskid System)
  - 24 VDC Control Power (120 VDC Input)
  - Serial Link Supervisory Interface
  - Field Programmable
- Vibration Monitoring
- Temperature Monitoring
- Generator Control
  - Selectable Control Modes
  - Solid-State Voltage Regulation
  - Automatic Synchronization
  - Metering Panel with Manual Synchronization (Option)
  - KW Control (Option)
- TT4000 Display and Monitoring System
  - Multiple Operator Display Screens
  - Data Collection and Playback
  - Turbine Performance Map (Option)
  - Printer/Logger (Option)

### Performance

Output Power	21 745 kW <sub>e</sub>
Heat Rate	9260 kJ/kWe-hr (8775 Btu/kWe-hr)
Exhaust Flow	245 660 kg/hr (541,590 lb/hr)
Exhaust Temp.	465°C (865°F)

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

No inlet/exhaust losses

Relative humidity 60%

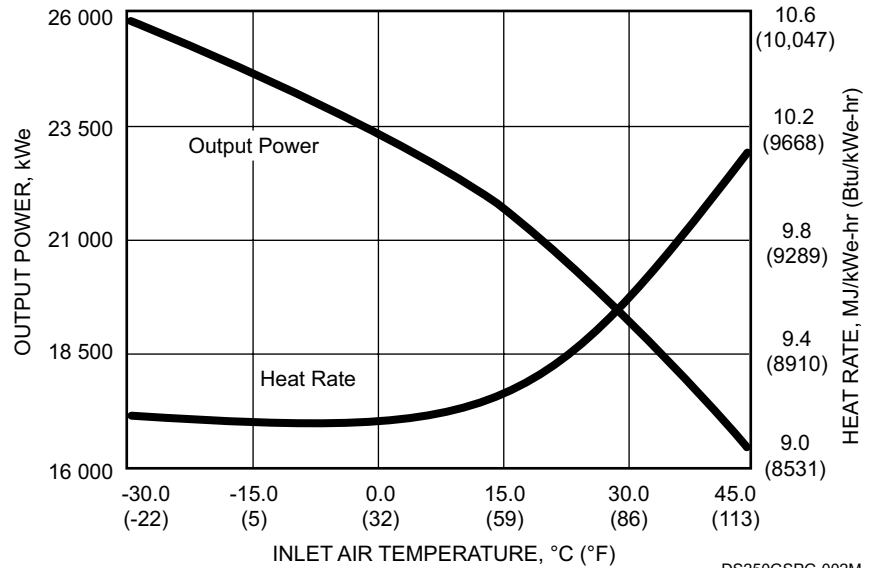
Natural gas fuel with  
LHV = 31.5 to 43.3 MJ/nm<sup>3</sup>  
(800 to 1100 Btu/scf)

Optimum power turbine speed

No accessory losses

Engine efficiency: 38.9% (measured at  
generator terminals)

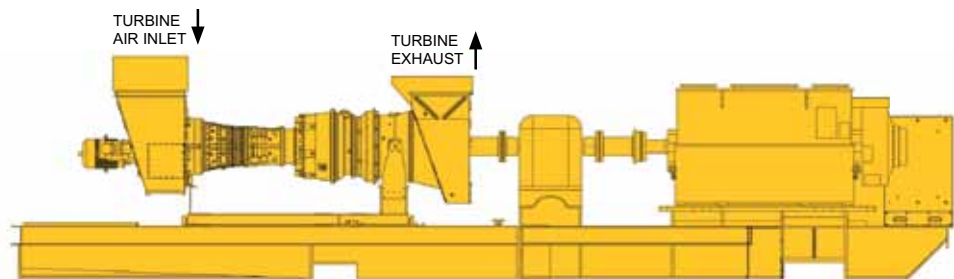
### Available Power



DS250GSPG-002M

### Package Dimensions

- Length: 18.1 m (59' 7")
- Width: 3.4 m (11' 1")
- Height: 3.6 m (11' 11")
- Typical Weight: 129 635 kg  
(285,800 lb)



DS250GS-003C