

General Specifications

Titan™ 250 Gas Turbine

- Industrial, Two-Shaft
- 16 Stage Axial Compressor
 - Variable Inlet Guide Vanes
 - Pressure Ratio: 24:1
 - Inlet Airflow: 73.2 kg/sec (155.2 lb/sec)
 - Vertically Split Case
- Combustion Chamber Annular-Type
 - 14 Lean-Premixed, Dry Low Emissions Injectors
 - Torch Ignitor System
- Gas Generator Turbine
 - 2-Stage Reaction
 - Max. Speed: 10,690 rpm
- Power Turbine
 - 3-Stage Reaction
 - Max. Speed: 6500 rpm
- Bearings
 - 5 Radial Journal, Tilt-Pad
 - 2 Active Thrust, Tilt-Pad
 - 2 Inactive Thrust, Fixed Tapered Land
- Coatings
 - Compressor: Inorganic Aluminum
 - Turbine and Nozzle Blades: Precious Metal Diffusion Aluminide
- Vibration Transducer Type
 - Proximity Probes, 2 per Radial Bearing/2 per Thrust Bearing

Main 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:
 - Duct In/Duct Out
 - 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: 1100 to 13,800 VAC
- Frequency: 50 or 60 Hz

Package

- Mechanical Construction
 - Steel Base Frame with Drip Pans
 - 316L Stainless Steel Piping ≤8" dia.
 - Compression-Type Tube Fittings
- 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 System
 - Dry Low Emission (SoLoNOx™)
 - Conventional
- Fuel Types
 - Natural Gas or Dual (Gas/Distillate)
- Integrated Lube Oil System
 - Turbine-Driven Main Pump
 - AC Motor-Driven Pre/Post Pump
 - DC (120 V) Motor-Driven Backup Pump
 - Oil Cooler and Oil Heater*
 - Tank Vent Separator and Flame Trap
 - Lube Oil Filter
- Turbine Compressor Cleaning System
 - On-Crank/On-Line
 - Portable Cleaning Tank*

- Air Inlet and Exhaust System
 - Carbon Steel
 - Stainless Steel
 - Coastal Type Filters
- Enclosure
 - Driver Only
 - Fire Detection and Suppression
- Turbotronic™ Control System
 - Onskid Control System
 - Digital Onskid Display Panel
 - 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*
 - KW Control*
 - Heat Recovery Application Interface
 - Multiple Operator Display Screens
 - Data Collection and Playback
 - Turbine Performance Map*
 - InSight Platform™ Equipment Health Management*
 - Printer/Logger*
- Documentation
 - Electrical Drawings
 - Mechanical Drawings
 - Quality Control Data Book
 - Inspection and Test Plan
 - Test Reports
 - O&M Manuals
- Factory Testing of Turbine
- Factory Testing of Package
 - Non-Dynamic
 - Dynamic

Performance

Output Power	23 100 kWe
Heat Rate	9150 kJ/kWe-hr (8670 Btu/kWe-hr)
Exhaust Flow	253 440 kg/hr (558,740 lb/hr)
Exhaust Temp.	460°C (865°F)

Application Performance

Steam (Unfired)	35.2 tonnes/hr (77,600 lb/hr)
Steam (Fired) 1536°C (2800°F)	190.5 tonnes/hr (420,000 lb/hr)
Chilling (Absorp.)	30 340 kW (8620 refrigeration tons)

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

No inlet/exhaust losses

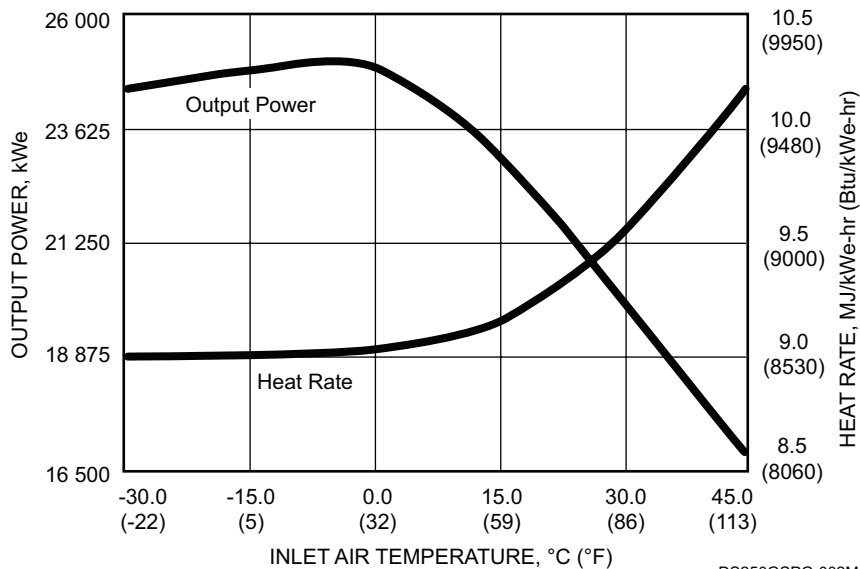
Relative humidity 60%

Natural gas fuel with
LHV = 31.5 to 43.3 MJ/Nm³ (940 Btu/scf)

No accessory losses

Engine efficiency: 38.6%
(measured at generator terminals)

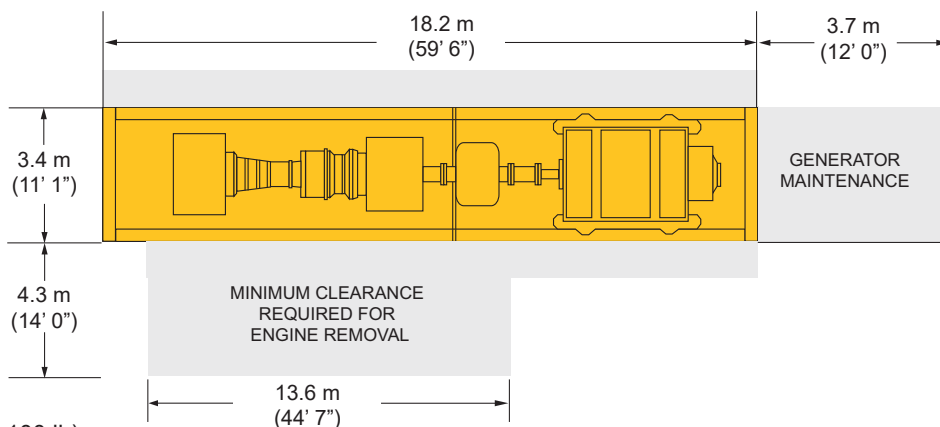
Available Power



DS250GSPG-002M

Enclosure Access and Maintenance Space*

MINIMUM SPACE CLEARANCE REQUIRED FOR ENCLOSURE ACCESS DOORS AND ROUTINE OPERATION AND MAINTENANCE



Package Height: 3.9 m (12' 9")
Package Weight: 141 150 kg (311,100 lb)

*Dry weight, unenclosed height

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