**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

* Option
**Performance**

Output Power: 23 100 kWe

Heat Rate: 9150 kJ/kWe-hr
(8670 Btu/kWe-hr)

Exhaust Flow: 253 440 kg/hr
(568,740 lb/hr)

Exhaust Temp.: 460°C
(865°F)

**Application Performance**

Steam (Unfired): 35.2 tonnes/hr
(77,600 lb/hr)

Steam (Fired): 190.5 tonnes/hr
1536°C (2800°F)
(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)

**Enclosure Access and Maintenance Space**

- Package Height: 3.9 m (12’ 9”)
- Package Weight: 141 150 kg (311,100 lb)

*Dry weight, unenclosed height*