TITAN 130
Gas Turbine Generator Set

General Specifications

Gas Turbine
- Titan™ 130 Industrial, Single-Shaft
- Axial Compressor
  - 14 Stages
  - Variable Geometry
  - Vertically Split Case
  - Compression Ratio: 16:1
  - Speed: 11,197/11,170 rpm (50/60 Hz)
- Annular Combustion Chamber
  - Conventional or Lean-Premixed, Dry, Low Emission (SoLoNOx)
  - 21 Fuel Injectors (Conventional)
  - 14 Fuel Injectors (SoLoNOx)
- Proximity Probe Vibration Transducers
- Turbine
  - 3 Stage, Axial Flow
  - Speed: 11,197/11,170 rpm (50/60 Hz)

Main Reduction Drive
- Epicyclic
  - 1500 or 1800 rpm (50 or 60 Hz)
- Acceleration Vibration Transducer

Generator
- Continuous Duty Rating
- Salient Pole, 3 Phase, 6 Wire, Wye Connected, Synchronous with Brushless Exciter
- Open Drip-Proof Construction
- Sleeve Bearings
- Velocity Vibration Transducers
- Permanent Magnet Generator
- NEMA Class F Insulation with F Rise

Package
- Steel Base Frame with Drip Pans
- Direct-Drive AC Start System
- Natural Gas Fuel System
- Turbotronic® 4 Control System
  - ControlLogix Controller
  - Standard Display with Discrete Event Log, Strip Chart, Historical Trend, Maintenance Screen
  - Gas Turbine and Generator Control
  - Vibration and Temperature Monitoring
  - CGCM (Combination Generator Control Module) with Load Share, Auto Synchronization, Voltage Control, Reactive Power Control, kW Control
- Integrated Lube Oil System
  - Turbine-Driven Lube Pump
  - Pre/Post Lube Pump
  - Backup Lube Pump
  - Air/Oil Cooler
  - Integral Lube Oil Tank
  - Lube Oil Tank Heater
  - Oil Mist Eliminator
  - Simplex Lube Oil Filter
- Documentation
  - Drawings
  - Quality Control Data Book
  - Inspection and Test Plan
  - Test Reports
  - Operation and Maintenance Manuals
- Factory Testing of Turbine and Package

Optional Equipment

- Generator Options:
  - Standard Voltages: 11,000 V (50 Hz); 12,470, 13,200 or 13,800 V (60 Hz)
- Fuel Systems
  - Liquid
  - Dual (Gas/Liquid)
  - Alternate Fuels (such as naphtha, propane, low Btu gas)
- Lube Oil System
  - Water/Oil Lube Oil Cooler
  - Duplex Lube Oil Filters
  - Vent Flame Trap
- Control System
  - Auxiliary and Remote Display/Control Terminal
  - Heat Recovery Application Interface
  - Serial Link Supervisory Interface
  - Turbine Performance Map
  - Printer/Logger
  - Field Programming Terminal
  - Unfired Waste Heat Recovery System Control (Stand-Alone Panel)
  - Multi-Unit Applications: Load Shed Control (Stand-Alone Panel), Import/Export, kW/KVAR Control (Stand-Alone Panel)
- Accessory Equipment
  - 120-VDC Battery/Charger System
  - Turbine Cleaning System: On-Crank and On-Line
- Weatherproof Acoustic Enclosure
- Ancillary Equipment
  - Inlet and Exhaust Silencers
  - Self-Cleaning or Prefilter/Barrier Air Inlet Filter
  - Inlet Evaporative Cooler
  - Inlet Chiller Coils
**Nominal Performance**

**Output Power, kWe**  
ISO: 15°C (59°F), sea level  14,905  
Heat Rate, kJ/kWe-hr (Btu/kWe-hr)  10,203 (395,118)

Exhaust Flow, kg/sec (lbs/hr)  179.600 (395,118)

Exhaust Temperature, °C (°F)  496 (925)

* No inlet or exhaust losses  
Relative humidity 60%  
Natural gas fuel with  
LHV = 31.5 to 43.3 MJ/m³ (800 to 1100 Btu/scf)

**Available Power**

**Typical Service Connections**

**Package Dimensions**

- **Length:** 14,021 mm (46’ 0”)
- **Width:** 3,327 mm (10’ 11”)
- **Height:** 3,302 mm (10’ 10”)
- **Approx. Weight:** 73,668 kg (162,409 lb)

* Unenclosed Dry Weight

**Left Side**
- Lube Oil: Vent, Drain, Cooler
- Generator Control Box, Power
- Drip Pan Drain
- Package Ground
- DC Power - Electronic Actuator
- Generator Monitor Box
- AC Power - Starter Motor
- Generator Terminal Box (line)
- Turbine Control Box

**Right Side**
- Combustor and Exhaust Diffuser Drain
- Fuel: Inlet, Filter Drain, Vent
- Package Air Supply  
  - Liquid Fuel Atomizing  
  - Self-Cleaning Filter  
  - Solenoid Actuation
- Turbine Cleaning Fluid Inlet
- AC Power  
  - Liquid Fuel Primary Pump  
  - Lube Oil Tank Heater  
  - Pre/Post Lube Oil Pump  
  - Air Inlet Duct Drain  
  - Package Ground

FOR MORE INFORMATION

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