General Specifications

Taurus™ 60 Gas Turbine

- Industrial, Single-Shaft
- Axial Compressor
  - 12 Stage
  - Variable Inlet Guide Vanes
  - Pressure Ratio: 12.2:1
  - Inlet Airflow:
    - 21.5 kg/sec (47.3 lb/sec)
  - Vertically Split Case
- Combustion Chamber
  - Annular Type
  - Conventional or Lean-Premixed, Dry, Low Emission (SoLoNOx™)
  - 12 Fuel Injectors
  - Torch Ignitor System
- Turbine
  - 3 Stage, Reaction
  - Max. Speed: 14,950
- Bearings
  - Journal: Tilting Pad
  - Thrust, Active: Tilting Pad
  - Thrust, Inactive: Fixed Tapered Land
- Vibration Transducer Type
  - Velocity
  - Proximity Probes

Main Reduction Drive

- Epicyclic Type
- 1500 or 1800 rpm
- Acceleration Vibration Transducer

Generator

- Salient Pole, 3 Phase, 6 Wire, Wye Connected, Synchronous, with PMG Exciter
- Construction Options
  - Open Drip Proof
  - Totally Enclosed Water or Air Cooled
- Sleeve Bearings
- Solid-State Voltage Regulation with Permanent Magnet Generator (Exciter)
- Insulation/Rise Option
  - NEMA Class F with B Rise
- Voltages: 3300 to 13,800 Volts
- Frequency: 50 or 60 Hz
- Vibration Transducer Type
  - Velocity
  - Proximity Probes

Key Package Features

- Base Frame with Drip Pans
- 316L Stainless Steel Piping
- Compression-Type Tube Fittings
- Digital Display Panel
- Electrical System Options
  - NEC Class I, Group D, Div. 1
  - CENELEC Zone 2
- Turbotronic™ Control System
  - ControlLogix Processor
  - Onskid or Freestanding Control Console
  - Color Video Display
  - Gas Turbine and Package Temperature Monitoring
  - CGCM Module
  - Vibration Monitoring
  - Auto Synchronizing
  - Historical Displays
- Control Options
  - 120-VDC Control Battery/Charger
  - Serial Link Supervisory Interface
  - Turbine Performance Map
  - Printer/Logger
  - Field Programming
- Start Systems
  - Direct Drive AC
- Fuel Systems
  - Natural Gas
  - Dual (Gas/Liquid)
  - Electric Fuel Control
- Integrated Lube Oil System
  - Turbine-Driven Accessories
  - Tank Vent Separator
  - Flame Trap
  - Oil Cooler (Optional)
  - Oil Heater (Optional)
- Axial Compressor Cleaning Systems
  - On-Crank
  - On-Crank/On-Line (Optional)
  - Cleaning Tank
- Air Inlet and Exhaust System Options
- 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

Output Power Continuous Duty: 5670 kWe

Heat Rate: 11 430 kJ/kWe·hr (10,830 Btu/kWe·hr)

Exhaust Flow: 78 370 kg/hr (172,770 lb/hr)

Exhaust Temp.: 510°C (950°F)

Nominal Rating – ISO
At 15°C (59°F), sea level
No inlet/exhaust losses
Relative humidity 60%
Natural gas fuel with LHV = 35 MJ/nm³ (940 Btu/scf)
No accessory losses
Engine efficiency: 31.5% (measured at generator terminals)

Available Power

Output Power vs. Heat Rate

-30.0 (-22) -15.0 (5) 0.0 (32) 15.0 (59) 30.0 (86) 45.0 (113)
12.5 (11,850)
12.0 (11,370)
11.5 (10,900)
11.0 (10,430)
10.5 (9950)

Package Dimensions

Length: 9.8 m (32’ 2”)
Width: 2.6 m (8’ 6”)
Height: 3.2 m (10’ 5”)
Typical Weight: 37 920 kg (83,600 lb)

*Dry weight, enclosed height