General Specifications

**Taurus™ 65 Gas Turbine**

- Industrial, Single-Shaft
- 13 Stage Axial Compressor
  - Variable Inlet Guide Vanes and Stators
  - Pressure Ratio: 15:1
  - Inlet Airflow: 20.8 kg/sec (45.9 lb/sec)
  - Vertically Split Case
- Combustion Chamber, Annular-Type
  - 12 Lean-Premixed, Dry Low Emissions SoLoNOx Injectors
  - Single Torch Ignitor System
- Power Turbine
  - 3-Stage Reaction
  - Clockwise Rotation
- Bearings
  - 3 Radial Journal: Tilt-Pad
  - 1 Thrust, Active: Tilt-Pad
  - 1 Thrust, Inactive: Fixed Tapered Land
- Coatings
  - Compressor: Inorganic Aluminum
  - Turbine and Nozzle Blades: Platinum Aluminide (Stages 1 and 2)
- Vibration Transducer Type
  - Proximity Probes, 2 per Radial Bearing / 2 per Thrust Bearing
  - Velocity Pick-up

**Main Reduction Drive**

- Epicyclic Type
  - 1500 or 1800 rpm (50 or 60 Hz)
- Vibration monitoring: Acceleration Transducer

**Generator**

- 4 Pole, 3 Phase, 6 Wire, Wye Connected, Synchronous with Permanent Magnet Generator Exciter
- Available Construction Types:
  - Open Drip-Proof Construction
  - CACA/TEAAC (Closed Air, Cooling Air/Totally Enclosed, Air to Air Cooling)*
  - CACW/TEWAC (Closed Air, Cooling Water/Totally Enclosed, Water to Air Cooling)*
- Sleeve Bearings
- Vibration Monitoring: Velocity Transducers
- Vibration Monitoring: Displacement Transducers

**Package**

- NEMA Class F Insulation
- Class F Temperature Rise
- Class B Temperature Rise*
- Continuous Duty Rating Voltages:
  - 3300, 6600, 11 000 (50Hz)
  - 4160, 6900, 12 470, 13 200, 13 800 (60Hz)

- Package Power
  - 120V/DC Battery/Charger System*

- Turbotronic™ 4 On-Skid Gas Turbine and Generator Control System Features
  - Combination Generator Control Module with Load Share, Auto Synchronization, Voltage Control
  - Standard Display with Discrete Event Log, Strip Chart, Historical Trend, Maintenance Screen
  - Vibration and Temperature Monitoring
  - English Display Text and Labels
  - Spanish, Portuguese, German, French or Simplified Chinese Display Text and Labels*
  - Auxiliary and Remote Display/Control Terminals*
  - Turbine Performance Map*
  - KW Import Control*
  - KVAR/Power Factor Control
  - ControlNet Redundant Media, Ethernet, Modbus RS232/C/422/485 Supervisory Interface*
  - Heat Recovery Application Interface*
  - Multi-Unit Applications: Load Shed Control, Import/Export or kW/KVAR Control Panels*
  - InSight System™ Equipment Health Management*
  - Printer/Logger*
- Electrical System Options
  - Neutral Grounding Resistor or Transformer*
  - Switchgear and Generator Protective Relay*
  - Motor Control Center with Automatic Transfer Switch*

**Documentation**

- Drawings
- Quality Control Data Book
- Inspection and Test Plan
- Test Reports
- O&M Manuals

**Factory Testing of Turbine**

**Factory Testing of Package Systems**

- Non-Dynamic
- Dynamic
Performance

Output Power  6300 kWe
Heat Rate    10 945 kJ/kWe-hr  (10,375 Btu/kWe-hr)
Exhaust Flow 75 950 kg/hr  (167,440 lbs/hr)
Exhaust Temperature  550°C  (1020°F)

Application Performance

Steam (Unfired)  14.7 tonnes/hr  (32,430 lb/hr)
Steam (Fired)  57.1 tonnes/hr  (125,850 lb/hr)
Chilling (Absorp.)  12 670 kW  (3600 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 = 35 MJ/Nm³ (940 Btu/scf)
No accessory losses
Engine efficiency: 32%
(measured at generator terminals)

Enclosure Access and Maintenance Space

MINIMUM CLEARANCE REQUIRED FOR ENGINE REMOVAL

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

Package Height:  3.3 m (10’ 9’’)
Package Weight:  39 600 kg (87,300 lb)