

### Standard Package Configurations

#### Gas Turbine

- Mercury™ 50 Recuperated, Combustion, Industrial, Single-Shaft
- Axial Compressor
  - 10-Stage
  - Variable Inlet Guide Vanes and Stators
  - Compression Ratio: 9.9:1
  - Inlet Airflow: 39.2 lb/sec (17.9 kg/sec)
  - Speed: 14,179/14,186 rpm (50/60 Hz)
  - Vertically Split Case
- Annular Combustion Chamber
  - Ultra-Lean-Premix Combustion System
  - 8 Fuel Injectors
  - Torch Ignitor System
- Proximity Probe Vibration Transducers
- Turbine
  - 2-Stage, Reaction
  - Clockwise Rotation
- Bearings
  - Radial: 3 Viscous, Damped Rolling Element
  - Thrust: 1 Unclamped Rolling Element

#### Recuperator

- Primary Surface Type
- Alloy 625 Construction

#### Main Reduction Drive

- Epicyclic Type
  - Double Helical Gearing
  - 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
- Permanent Magnet
- Open Drip-Proof Construction
- Rolling Element Bearings
- Velocity Vibration Transducers
- NEMA Class F Insulation with F Rise

#### Package

- Single Skid
  - Maintains Turbine, Reduction Drive and Generator Alignment
  - Contains All Major Turbine Systems
- Direct-Drive AC Start System
- Natural Gas Fuel System
- Turbotronic® 4 Control System
  - ControlLogix Processor
  - Standard Display with Discrete Event Log, Strip Chart, Historical Trend, Maintenance Screen
  - Gas Turbine and Generator Control
  - Vibration and Temperature Monitoring
  - Auto Synchronizing
  - KW Control
  - KVAR/Power Factor Control (Optional)
  - Combination Generator Control Module (CGCM) with Load Share, Synchronization, Voltage Control, Reactive Power Control, Generator Protection
- Integrated Lube Oil System
  - Main/Pre/Post Lube Pump
  - Backup Lube Pump
  - Air and Oil Cooler
  - Integral Lube Oil Tank
  - Lube Oil Tank Heater
  - Simplex Lube Oil Filter
  - Oil Mist Eliminator

- Documentation
  - Drawings
  - Quality Control Data Book
  - Test Reports
  - Operation and Maintenance Manuals
- Turbine Cleaning System: On-Crank
- Factory Testing of Turbine and Package

#### Optional Equipment

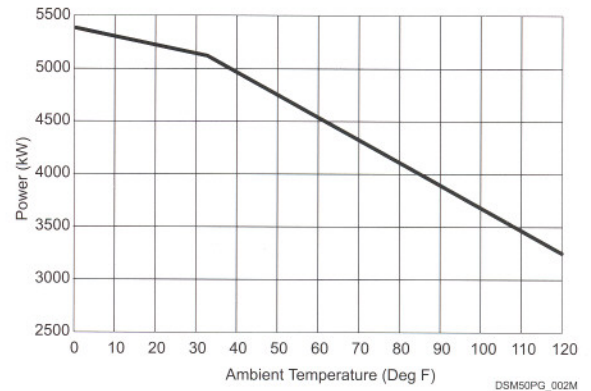
- Generator Options:
  - Totally Enclosed Water/Air Cooled
  - Standard Voltages: 4160, 6900, 12,470, 13,800V; 60 Hz
- Lube Oil System
  - Water/Oil Lube Oil Cooler
  - Duplex Lube Oil Filters
  - Vent Flame Trap
- Control System
  - Auxiliary and Remote Display/Control Terminal
  - Heat Recovery Application Interface
  - Serial Link Supervisory Interface
  - Turbine Performance Map
  - Printer/Logger
  - Field Programming Terminal
- Accessory Equipment
  - 120-VDC Battery/Charger System
  - Package Lifting Kit
- Weatherproof Acoustic Enclosure
- Ancillary Equipment
  - Inlet and Exhaust Silencers
  - Self-Cleaning or Prefilter/Barrier Air Inlet Filter
  - Inlet Evaporative Cooler
  - Inlet Chiller Coils
  - Ancillary Support Frame

### Nominal Performance\*

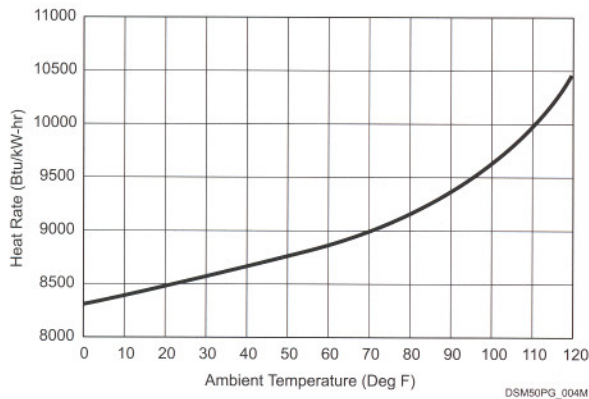
Output Power, kWe	4600
Heat Rate, kJ/kWe-hr (Btu/kWe-hr)	9349 (8863)
Exhaust Flow, kg/hr (lb/hr)	64 152 (141,430)
Exhaust Temperature, °C (°F)	374 (705)

\* ISO: 15°C (59°F), sea level  
No inlet or exhaust losses,  
Relative humidity 60%  
Natural gas fuel with  
LHV = 31.5 to 43.3 MJ/nm<sup>3</sup>  
(800 to 1100 Btu/scf)

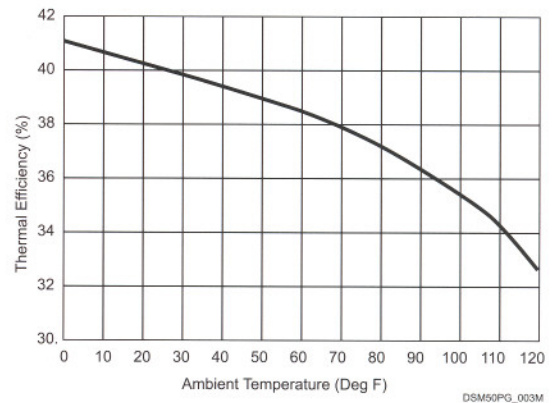
### Available Power



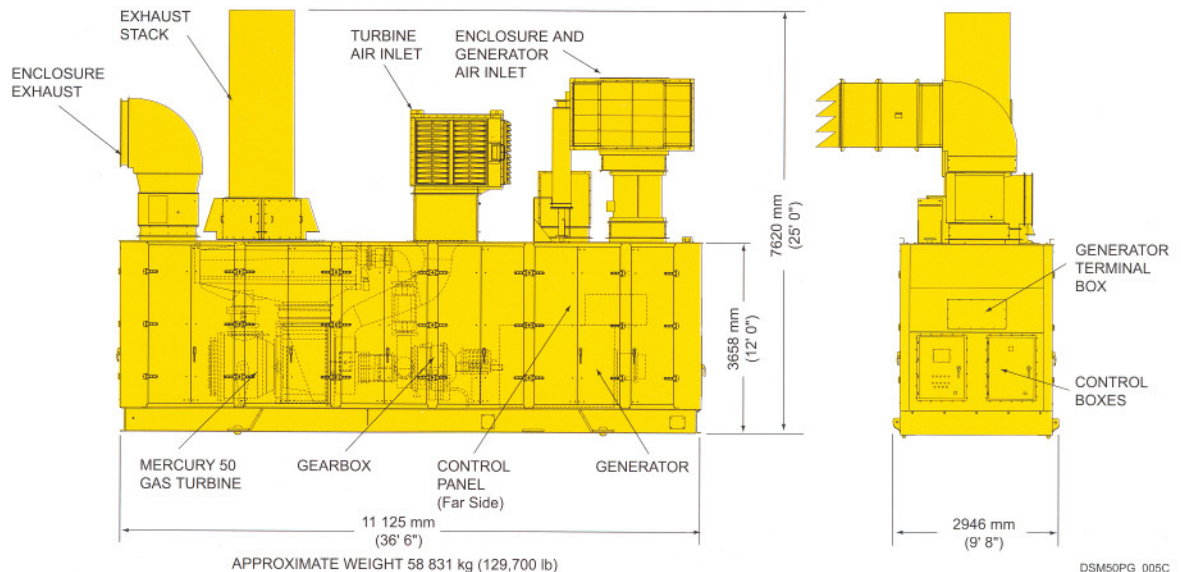
### Heat Rate



### Thermal Efficiency



### Package Dimensions



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