

LM2500 Gas Turbine

Technology

Derived from the CF6 family of aircraft engines used on wide body jet liners, the LM2500 family is a hot-end drive, two-shaft gas generator with free power turbine. Thermal efficiencies are from 34% to 40%.

- Baseload Power Capabilities of 18 - 32 MW ISO
- Unsurpassed Reliability – Exceeding 99%
- Three Models with a High Degree of Parts Commonality

Experience

Maintaining a high degree of commonality with its flight-tested forerunners, the LM2500 family continues to build its reputation as the most reliable industrial gas turbine generator in its class.

- 40 Million Operating Hours
- More than 2,000 units
- End-users: Mechanical Drive and Power Generation for Industrial Plants, Pipelines, Platforms and Marine Ships
- Configurations: Simple-cycle, Cogeneration and Combined-Cycle

Innovation

GE Aero Energy offers three models in the LM2500 family of products: LM2500+

- Providing More Than 30 MW ISO
- Power Generation, Marine and Mechanical Drive Applications
- Available in a 6-stage or 2-stage Power Turbine Configuration

LM2500

- Produces in Excess of 22 MW ISO
- Operates at 3000 or 3600 rpm Without a Gearbox
- Optional Steam Injection (STIG) for Power Enhancement

LM2000

- Capable of 18 MW ISO
- Extended Maintenance Intervals

ISO performance based on natural gas with water injection to 25 ppmvd NOx.

	LM2000	LM2500	LM2500+
Power Output (kWe)	18,000	22,000	30,500
Heat Rate LHV (Btu/kWe-Hr)	9,900	9,465	8,850
Exhaust Flow (lbs/sec)	134	149	191
Exhaust Temperature (°F)	927	990	960
Emissions (ppmvd)	NOx/CO	NOx/CO	NOx/CO
Gas-DLE	25/25	25/25	25/25
Gas or Liquid-Water	25/75, 42/68	25/50, 42/30	25/60, 42/60
Gas-Steam	25/74	25/30	25/138
Power Turbine Speed (rpm)	3,600	3,600	3,600
No. of Compressor Stages	16	16	17
No. of Turbine Stages	6	6	6 or 2

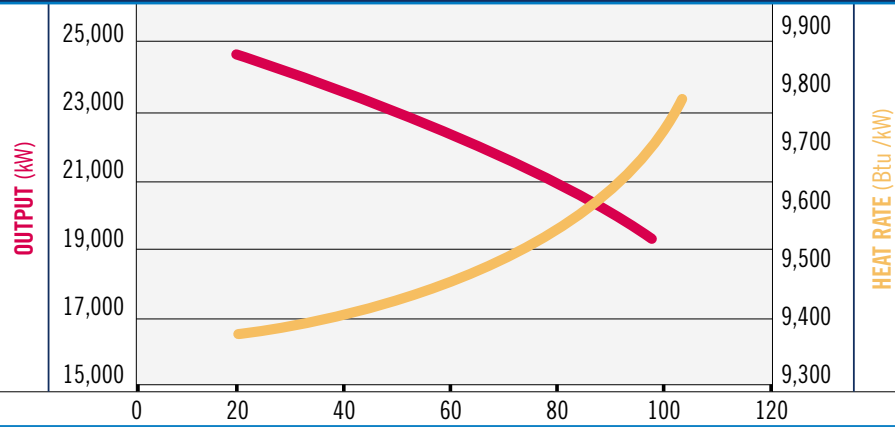
Service

GE Aero Energy is the world's largest aeroderivative service provider, with a global network of field service offices and fully equipped depots. A wide range of products and services are offered for the LM2500+, LM2500, and LM2000 Industrial, Cogeneration, and Oil & Gas operators, including:

- Level IV depot repair and overhaul capability in Houston, Texas; Rheden, The Netherlands, and Agotnes, Norway
- Conversions, Modifications and Upgrades (CM&U) designed to enhance the efficiency, power output and reliability of the LM2500, such as Exhaust Flow Enhancer, Wet/Dry Low Emissions (DLE) Upgrades; Inlet Conditioning, Fuel Conversions, Remote Monitoring and Diagnostics, among many others
- Spare or Lease Engine Options
- Engine Exchange Programs
- Rotable Hot Section and Module Exchange Programs
- Wide Variety of Contractual or Long-Term Service Agreements

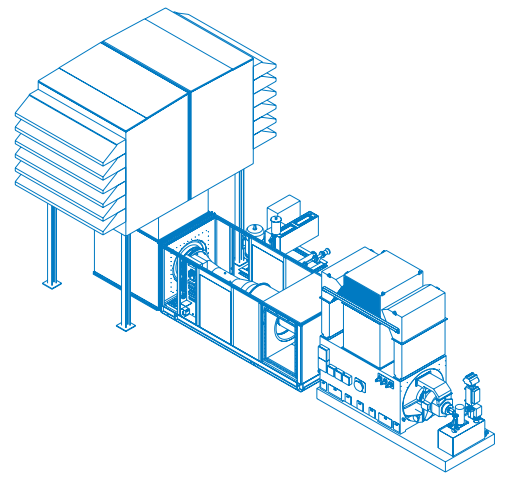
This comprehensive product offering, combined with GE Aero Energy's commitment to reduced depot and outage turn times, results in substantial life cycle cost savings for the plant owner/operator.

LM2500 60Hz Output and Heat Rate



0 ft, 60% RH, 4/6 in H₂O inlet/exhaust loss on natural gas with water injection to 25ppmvd NOx water inj.

AMBIENT (°F)



LENGTH 68'6" x WIDTH 14'9" x HEIGHT 29'5"

STANDARD 60HZ LM2500 GENERATOR PACKAGE

Gas Turbine

- 16 Stage Axial Compressor
 - > 1st 6 Stages are VIGV
 - > Horizontal Split Casing
 - > 20:1 Compression Ratio
 - > 103 lb/s Nominal Inlet Mass Flow
- Annular Combustor
 - > 30 Nozzles Gas Fuel, Water Injection for NOx Control
- 6 Stage Power Turbine

Generator

- Continuous Duty 13.8kV, 0.85 PF
- 2 pole, 3 Phase Brushless Exciter
- WP11 Weather Protected
- Voltage Regulator/Neutral Side Protection CT's
- NEMA Class F Insulation & B Temperature Rise

Package

- 24V and 125V DC Batteries
- 90dBA Near Field Design
- Barrier Inlet Air Filters
- Electro-hydraulic Start System
- Class I Div 2 Group D Class Electrical System
- Digital Control System with a Human Machine Interface (HMI)
- Turbine and Generator Lube Oil System with Simplex Shell and Tube Coolers
- Turbine Factory Tested
- On/Off-line Water Wash
- 1 Year Parts/Service Warranty
- Package Familiarization Training
- Electronically Transmitted Drawings
- Startup Technical Assistance

OPTIONAL EQUIPMENT AND SERVICES

- Generator Options
 - > TEWAC
 - > Voltages: 12.47kV
 - > Enclosure
 - > Fault Protection
- Fuel System
 - > Liquid
 - Water Injection or DLE
 - > Dual
 - Water Injection or DLE
 - > Gas
 - Water or Steam Injection or DLE
 - > Filters
- Control System
 - > 10 minute start
 - > Black start
 - > Continuous Emission Monitoring
 - > Remote Display
 - > Control House
 - > Motor Control center
- Lube Oil System
 - > Air to Oil Coolers
 - > First Fill Lubricants
- Winterization
- Remote Monitoring and Diagnostics
- Pulse Air Filter
- Inlet Conditioning
 - > Evaporative Cooling
 - > Chilling
 - > Heating