

GE
Marine

LM2500+G4 Marine Gas Turbine

GE's LM2500+G4 aeroderivative gas turbine is the 4th generation of the industry standard-setting LM2500 marine gas turbine. Its main features are increased power (17%) compared to the 3rd generation LM2500+, the same high reliability and availability and the same high efficiency (lower sfc). The LM2500+G4 system's modular design with its split compressor casing, in-place blade and vane replacement, in-place hot-section maintenance and external fuel nozzles provide for easy and timely repair and refurbishment.

Comparing the Design of the LM2500+G4 to the LM2500+

The increase in power while retaining reliability and maintainability is derived from a combination of a 6% increase in airflow, higher exhaust gas temperatures, and a higher pressure ratio (24.2 vs 23.6) through incorporation of the following, proven technology enhancements:

- Redesigned inlet guide vanes (IGV) and re-staggered stage 0 blisk airfoils
- Increased high-pressure compressor life through changes in rotor materials
- Redesigned stage 1 high-pressure turbine blade with improved cooling and oxidation coating
- Application of thermal barrier coatings to high-pressure turbine stage 1 nozzle
- Material change and improved cooling for the stage 2 nozzle
- Redesigned stage 2 high-pressure turbine rotor for increased life; and
- Redesigned stages 2 and 3 nozzles of the 6-stage power turbine for increased power output.

Pre-wired, pre-piped and factory tested for easy installation, the LM2500+G4 module with gas turbine weighs just 50,600 lbs (22,707kg) is 27 ft (8.2m) long, 9 ft (2.0m) wide and 8 ft (2.4m) high. The inlet duct flow area is 57 square feet (5.3 sq m) and the exhaust duct flow area is 36 square feet (3.34 sq m).

The LM2500+G4, introduced in November of 2005 has been selected to power the new French and Italian frigates of the FREMM program as its first marine application.



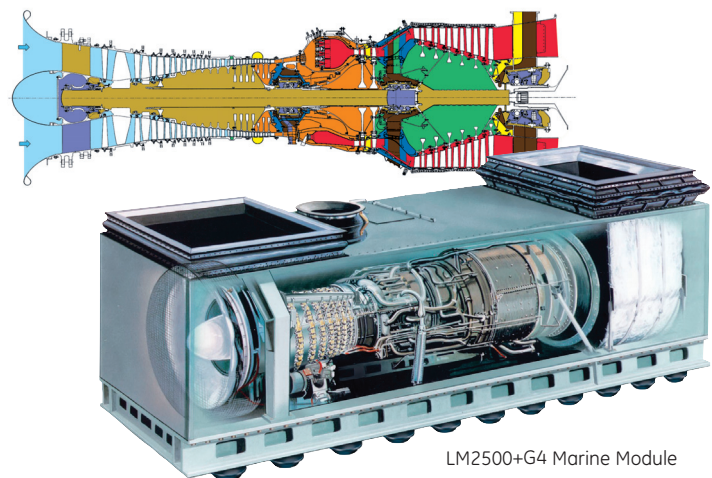
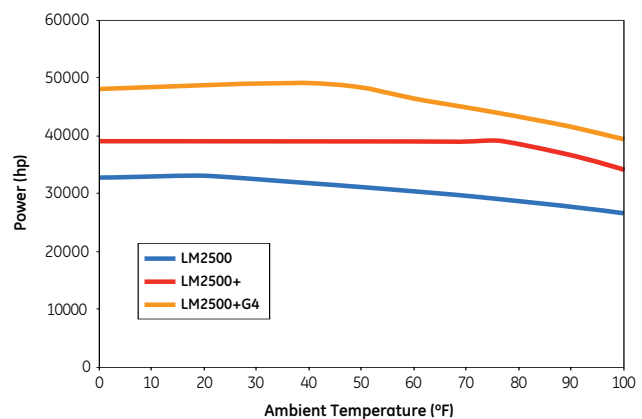
Performance

Output	47,370 shp (35,320 kW)
SFC	.354 lb/shp-hr
Heat rate	6,469.1 Btu/shp-hr 8,675.5 Btu/kWs-hr 9,150.9 kJ/kWs-hr
Exhaust gas flow	204.7 lb/sec (93 kg/sec)
Exhaust temperature	1,020°F (549°C)
Power turbine speed	3,600 rpm

Average performance, 60 Hz, 59°F, sea level, 60% relative humidity, no inlet/exhaust losses

Max Power vs. Ambient Temperature

(losses: inlet/exhaust 4/6 inches water)



Contact us at www.ge.com/marine

*Exact dimensions, weight and performance vary with the specific generator selected. Other product sheets are available on the LM500, LM1600, LM2500, LM2500+ and LM6000.

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