

GE LM2500+G4 Marine Gas Turbines to Power Italian Navy's PPA Offshore Patrol Ships



GE LM2500+G4 marine gas turbines will soon power the Italian Navy's new Pattugliatori Polivalenti d'Altura (PPA) multipurpose offshore patrol ships. The first PPA, *Paolo Thaon di Revel*, was launched in June 2019; the ship will be delivered to the Italian Navy in 2021. GE's contract includes an order for seven LM2500+G4 gas turbines. The ship's flexible and unique hybrid propulsion plant features small gearbox mounted-motors for low speed operations, two propulsion diesels for mid-speed service and the LM2500+G4 gas turbine to reach 32+ knots. GE is responsible for the electrical system integration of the hybrid system.

The PPA project is an example of the GE Store: the LM2500+G4 gas turbines are built in Evendale, Ohio; Avio Aero manufactures the LM2500+G4 turbine control system at its facility in Brindisi, Italy; and GE Power Conversion manufactures the drives. GE LM2500+G4 marine gas turbines were also chosen to power 20 new European Multi-Mission FREMM frigates: 10 ships for the Italian Navy, eight ships for the French Navy, and one ship each for the Egyptian and Royal Moroccan navies.

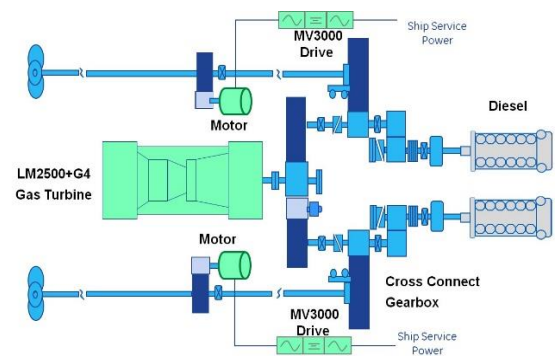
LM2500+G4 Marine Gas Turbine

The LM2500+G4 gas turbine, ISO power-rated at 47,370 shaft horsepower/35.3 MW is the fourth generation of the LM2500 marine gas turbine. Main engine features are increased power (17%) compared to the third generation LM2500+, the same high availability and reliability and the same high efficiency in excess of 39%. The increase in power is derived from a combination of a 6% increase in airflow, higher exhaust gas temperatures and a higher pressure ratio. The staging and length of the LM2500+G4 is identical to the LM2500+ gas turbine with components slightly modified for the increased air and fuel flow.

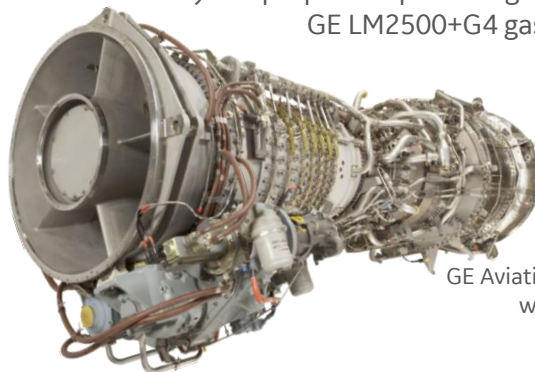
To date, GE has on order or has delivered more than 590 LM2500+G4 gas turbines. All GE marine gas turbines reliably operate the world over in some of the most arduous conditions, in temperatures ranging from -40 to 120°F/-40 to 48°C.



Shown is the first Italian Navy PPA offshore patrol ship at its launch ceremony at the Fincantieri Shipyard in Muggiano – La Spezia, Italy (photo courtesy of OCCAR)



The PPA hybrid propulsion plant diagram (above) and a GE LM2500+G4 gas turbine (below)



GE Aviation (Cincinnati, OH)
www.ge.com/marine

Imagination at work.