

Francisco, World's Fastest Commercial Ship Powered by LNG-Fueled GE Gas Turbines



On June 15, 2013, *Francisco* achieved 58.21 knots – making it the fastest commercial ship in the world. Built by Australian shipyard Incat for Argentina's Buquebus, this 1,516-tonne displacement catamaran can operate on Liquefied Natural Gas (LNG) or Marine Gas Oil (MGO). The ship is powered by two lightweight and compact 25 MW GE marine gas turbines. As the world's first high-speed ship to use LNG, *Francisco* ushers in a new era of eco-sustainability in heavy-duty transportation. Undoubtedly owners and operators will turn to LNG-powered gas turbines for future high-speed newbuild projects.

The Buquebus-owned ship services passengers crossing the River Plate between Argentina and Uruguay. *Francisco* is the first craft built under the International Maritime Organization's International Code of Safety for High-Speed Craft to be powered by gas turbines using LNG as the primary fuel and marine distillate for standby and ancillary use. The wave-piercing catamaran design allows *Francisco* to swiftly transport 1,000 passengers and 150 vehicles on each leg of its route.

In addition, under a customized 10-year service agreement, GE provides for scheduled and unscheduled maintenance for *Francisco's* dual fuel gas turbines.

25 MW Gas Turbine and Package

GE's 25 MW gas turbine is a simple-cycle, two-shaft, high performance engine. Derived from GE's CF6 aircraft engine, the 25 MW gas turbine offers 33,600 shaft horsepower at 39% thermal efficiency. Pre-wired, pre-piped and factory tested for easy installation, the 25 MW module weighs just 45,500 pounds (20,639 kilograms). It requires only 27 x 9 x 10 feet of ship space (8.23 x 2.74 x 3.05 meters).

GE took into consideration the operating and design requirements for *Francisco* and developed a lightweight 25 MW gas turbine package design to address its narrow catamaran hull. In addition, the package's control system seamlessly switches between LNG and MGO for continuous dual-fuel operation.



GE's 25 MW gas turbine

Shown is *Francisco*, the world's first LNG fueled ship (photo courtesy of Buquebus).