



Republic of Korea Navy PKX High Speed Patrol Boats Powered by Compact GE LM500 Gas Turbines

The Republic of Korea (ROK) Navy will use GE LM500 gas turbines to power its PKX-B patrol boat program. The LM500s, rated at approximately 6,017 shaft horsepower (shp), will be configured into a combined diesel and gas turbine arrangement (CODAG) with two diesels. The PKX-A program is also powered by GE LM500 gas turbines.

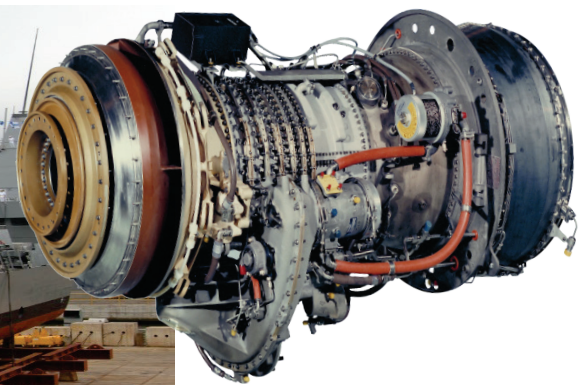
The potential gas turbine propulsion system value over the life of the 34-ship PKX-B program is approximately \$400 million. The program will be conducted in two phases. Phase one is for 16 shipsets. After completion, Phase II will proceed according to ROK government procedures.

GE's LM500 marine gas turbines already power the ROK Navy's PKX-A patrol boats. Each of the PKX-A boats uses two LM500 gas turbines, rated at approximately 5,600 shp, in a CODAG configuration. The first PKX *Yoon Young-ha* was launched at Hanjin Heavy Industries' Busan, ROK, shipyard. The LM500 gas turbines are manufactured in-country by Hanwha Techwin (formerly Samsung Techwin), at its Changwon, Korea, facility.

To date, Hanwha Techwin -- a GE Marine System Supplier -- has provided 36 LM500 gas turbine modules for the PKX program. Continuing PKX-A program capabilities into the PKX-B program, Hanwha Techwin will locally manufacture selected parts of the LM500s, and assemble and test the completed engines. GE will provide support of the gas turbine, control, and reduction gear system to Hanwha Techwin, Hanjin Heavy Industries and Construction shipyard, and the ROK Navy throughout installation, sea trials and commissioning.

LM500 Gas Turbine

The LM500 is derived from GE's TF34/CF34 turbofan aircraft engines, and has 90% commonality with the CF34 engine that powers the popular CRJ100/200 regional jet with more than 14 million hours of operation. The simple cycle LM500 is a two-shaft gas turbine consisting of a gas generator, a free power turbine and cold end drive capabilities.



GE LM500 gas turbine

Shown is *Yoon Young-ha*, the first PKX-A patrol boat of the ROK Navy (photo courtesy of the ROK Navy).