

OSC 77FD560MT Two-Shaft Gas Turbine Engine



Photograph includes optional equipment

< Features >

- The turbine is a small two-shaft gas turbine engine with a radial flow compressor and axial flow turbine as in the modern power generation industry
- The first shaft is a gas negenerator
- Inlet air through an orifice flow measuring device is compressed by a single stage radial flow compressor
- The turbine is started by LPG and run on Jet A fuel
- Fuel is injected by a fuel pump and ignited in the combustion chamber providing hot gas for a single stage axial flow turbine
- The hot gas is discharged axially to a larger power turbine on the second shaft and exhausts to atmosphere
- The gas generator unit is complete with automatic front motor starter
- The turbines run on ceramic bearings
- Lubricating oil is mixed with fuel, no separate lubrication system to the turbine is required except in the gear box
- An air blower is provided for cooling the engine
- Speed of the power turbine is reduced by an oil cooled gear box
- A hydraulic dynamometer is connected to the gear box by a synchronous belt speed reducer for power measurement
- An Electronic Control Unit (ECU) controls the basic turbine operation
- Additional instruments are provided for monitoring and controlling turbine performance
- A human machine interface (HMI) unit with an input/output module and software are provided for data display and analysis
- Safety features includes shut down for gas generator or power turbine over speed, and high power turbine entry temperature

< Typical Tests >

- Understanding the thermodynamic
- Torque vs speed
- Power input and output and engine efficiency

