GE LM6000 PA Package for Sale

Business Unit Industrial Gas Turbines - Packaging
## Technical Characteristics – Gas Turbine

- **Brand:** GE
- **Type:** LM6000™ PA gas turbine
- **Power:** 42 MW @ ISO
- **Fuel:** Dual Fuel: Natural Gas & Diesel
- **NO\textsubscript{X} emissions:** < 25 ppm (15%\textsubscript{O\textsubscript{2}}, dry)

## Technical Characteristics – El. Generator

- **Brand:** Brush
- **Type:** BDAX 7-265 PR
- **Power:** 49,482 MVA
- **Voltage:** 11kV
- **Power factor:** 0.85
- **Frequency:** 50Hz
- **Speed for 50Hz:** 3000 RPM
- **Cooling System:** Water cooled system

## Features

- NOx reduction by water injection
- Fire detection and suppression system
- Air compressors for air supply
- 2x 11kV to 3.3kV Transformers
- Enclosures, air inlet system and exhaust stack
- Gas Compressors

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The package accommodates an aeroderivative industrial gas turbine of the type GE LM6000™ PA controlled by a GE Speedtronic™ Mark V controls system. The gas turbine is connected to an Brush alternator via a Graffenstaden gearbox. The set delivers an electrical power of 42MW at ISO.
LM6000 PA Package – Set-up
LM6000 PA Package – Gearbox and Alternator

Gearbox Type: Graffenstaden

- Rating: 52.200 kW
- Reduction: 3.612 rpm speed to 3.000 rpm alternator speed

Alternator Type: Brush BDAX 7-265 PRH

- 2 pole, water cooled
- Applicable National Standard IEC 34-3
- Rated output: 49,482 MVA at 15°C
- Power factor: 0.85
- Terminal voltage: 11 kV
- Frequency: 50Hz, 3 phase
- Speed for 50Hz: 3000 rpm
**LM6000 PA Package – Gas Turbine and Exhaust System**

**Engine Type: GE LM6000 PA**
- Dual Fuel: Natural Gas & Liquid Fuel
- Water injection for NOx reduction
- 42 MW$_{el}$ at ISO conditions
- 100,000 operating hours
- Complete overhaul after 50,000 operating hours
- Hot-end service 15,000 running hours ago

**Exhaust Gas Duct & HRSG**
- Stainless steel exhaust gas stack
- Including silencer
- Heat recovery steam generator for steam generation
- Exhaust by-pass for GT single cycle operation
- Supplementary gas burners for running 7 MW$_{el}$ SIEMENS steam turbine in single cycle operation
LM6000 PA Package – Scope of Supply

1 x LM6000 PA Gas Turbine Generator Package, comprising the Following:

- GE LM6000 PA gas turbine equipped with dual fuel nozzles
- GE Mark V LM control system incl. HMI
- Gas turbine instrumentation
- Gas turbine enclosure
- Gas turbine fuel system (Fuel Metering Valve, Shut Off Valves etc.)
- Package ventilation and combustion air system
- GT Synthetic lube oil system; GT hydraulic starting system
- GT Online water wash system
- Fire detection and fire fighting system
- Gas detection system
- Air Intake including silencer, air filtration (2 stages) and anti icing
- GT Exhaust system incl. Silencer (by-pass for single cycle operation)
- MCC´s, switch gear, auxiliary power transformers
- Preservation Kit, Air compressor, Gas compressor station
- De-NOx water system skid (incl. pumps, tanks, panels and control)
1 x Electrical Alternator and Main Reduction Gearbox including:

- Mineral Oil system / Combined System with main reduction gearbox
- Alternator / Gearbox Enclosure
- Enclosure Ventilation
- Generator control, synchronisation, protection and excitation cabinets, including neutral / line side cubicles of the generator
- Battery / Charging system
- Generator Circuit Breaker (switch gear)
LM6000 PA Package – Optional

- Transport, installation and commissioning of the package
- Control system upgrade to new state-of-the-art PLC incl. new control valve
- Vibration monitoring system upgrade
- Indoor / outdoor set-up
- Filter house 3rd filter stage
- Inlet cooling / fogging
- Spare parts
- HRSG: Heat Recovery Steam Generator (open cycle possible)
- Gas burners for HRSG
- Optional steam section of the power plant incl. SIEMENS 7MW\textsubscript{el} steam turbine
- LTSA