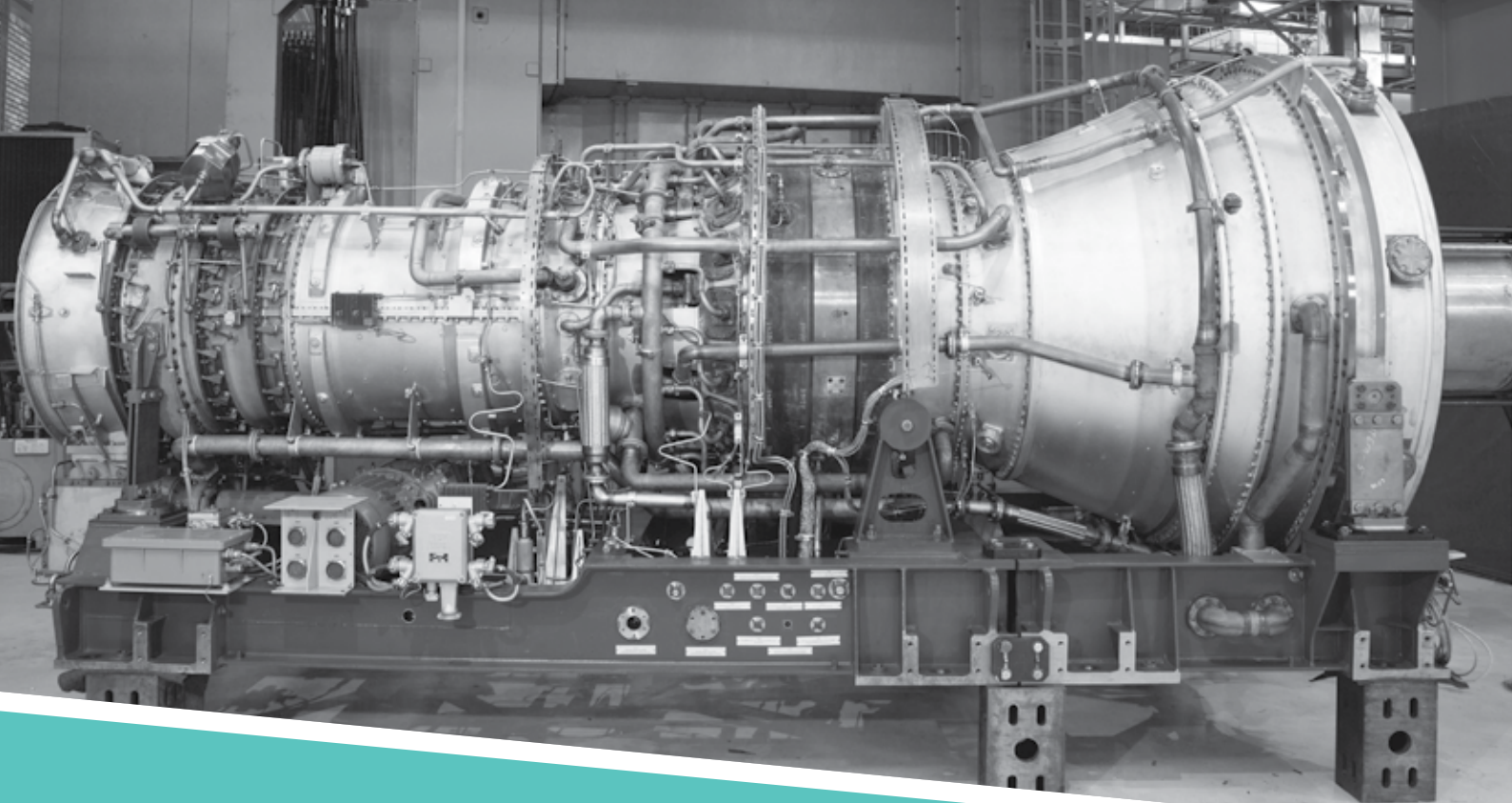


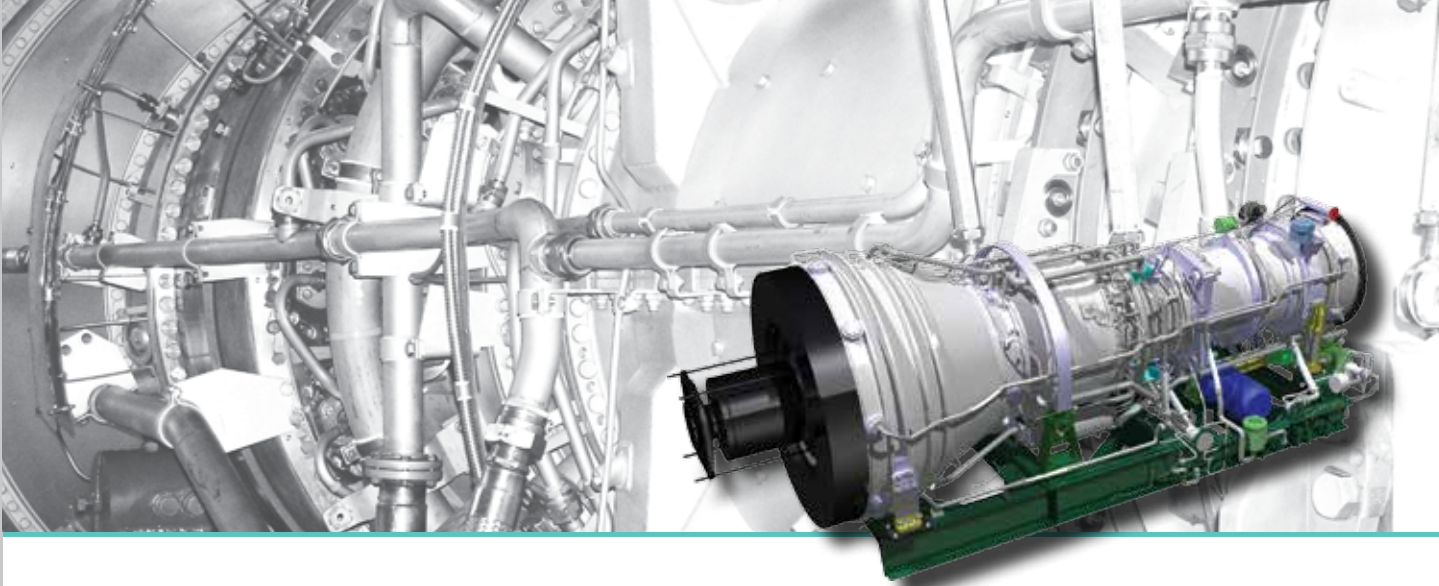


MGT-30

MAPNA TURBINE ENGINEERING & MANUFACTURING Co. (TUGA)



GAS TURBINE
MGT-30



MAPNA Gas Turbine MGT-30

The Gas Turbine MGT-30 meets customer requirements for economic installation and operation and provides excellent flexibility for complex industrial processes. There are various types of applications that use industrial gas turbines. However, the most prevalent are found in the oil and gas industry (refineries, petrochemical plants) and the mining and cement industry, as well as those requiring independent and dispersed power generation. Whether you need a generator drive for power generation or a mechanical drive for compressors, blowers or pumps, just talk to us and together we can select the turboset that optimally suits your needs.

Product Specifications*

1	ISO rated power	25.7 MW
2	Efficiency	35 %
		35.2 %
3	Heat rate	10285 kJ/kWh
		10227 kJ/kWh
4	Turbine inlet temperature	1232 °C
		1241 °C
5	Exhaust gas temperature	478 °C
		487 °C
6	Exhaust gas mass flow	90 kg/s
		89 kg/s
7	Pressure ratio	21.44
8	Number of compressor stages	Axial: 9 stages LPC
		Axial: 9 stages HPC
9	Combustion chamber	Can-annular
10	Gas generator turbines	Axial single stage LPT and HPT
11	Power turbine speed	3000 rpm
		5000 rpm
12	Power turbine stages	4
		2
13	Turbine dimensions	6.3m × 2.4m × 2.5m
		6.3m × 2.3m × 2.3m
14	Shipping weight	15 Tons
		14 Tons

* In ISO conditions with pure Methane

MGT-30 (Power Generation)

MGT-30MD (Mechanical Drive)

Advantages

- High simple cycle efficiency
- Combined cycle and CHP reliability
- Mechanical drive reliability specially for centrifugal compressors
- Mixed duty applications



Other Features

The machine consists of two main sections, Gas Generator (GG) and Power Turbine (PT), which are thermodynamically coupled to each other. These special design considerations make our product unique:

Anti Stall and Surge Built-ins

Twin-shaft configuration in the Gas Generator unit leads to maximum reliability hindering stall and surge phenomena. Additionally, integrated IGV and VGV rings applied in the GG's structure improve the flow inside. Also blow-offs along the flow path inside the GG provide maximum safety.

Design Reliabilities

Due to using a centrifugal ratchet clutch, start-up as a mechanical interchange between the starting system and the lube oil power pack runs as easily as possible. Nearly maintenance-free roller bearings are used in the whole machine design. Furthermore, fir grooves/trees are applied to the first three stages of the compressor to enhance fatigue strength on both the blades and disks. A by-pass anti-surge chamber in the vicinity of the first rotary stage contributes to stability and sustainability of transition regimes.

Simple Installation and Maintenance

The GT is available as a factory-assembled package. It is easily transported, installed and maintained on-site. The package includes the gas generator and the power turbine and all the wiring and piping mounted on a single base. For maintenance purposes the gas generator part can be slid off completely from the whole package to make room for any ensuing operation. These characteristics have made the GT stand out from its competitors in terms of safety, maintenance, and reliability.

Services Offered After Sales

After 25000 EOH, the gas turbine flow path is inspected on site. Depending on the machine condition and operating parameters, a decision is made either to extend further operation or carry out an overhaul. In the aggregate, total recommended service lifetime is 100,000 EOH, which is normally reached in approximately 12 years. Based on the machine inspection, the time between overhauls and total service time may be extended in case of good machine condition. The following services are available to the clients after sales.



Provision of spare parts for the turbine and auxiliaries

Our own manufacture, as well as reliable network of spare parts suppliers enables us to satisfy individual client demands, including capital spares, as per order.

Long-term supply and support agreements

We offer long-term contracts for various types of support and service.

Supervision with installation and commissioning

Installation and commissioning of turbines and auxiliaries are performed by skilled personnel under our direct supervision. Personnel can also be made readily available on and off the client site until the end of the guarantee period of the last unit in the plant.

Technical consultation services for end users

Our experienced and knowledgeable technical and engineering team is available for consultation at any time.

Training of end-user staff

We offer several training courses for new staff on site, such as general plant knowledge, operation, maintenance, and some special training, such as firefighting.

Performing inspections and overhauls

Our experienced maintenance personnel can perform turbine inspections and overhauls thoroughly.

Fabrication and repair of turbine special parts

Thanks to our state-of-the-art machineries and skilled manufacturing personnel, we can provide fabrication and repair of special parts for our MGT-30 machines.

Factory:

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