



ASTRO POWER SYSTEMS

The ASTB-12 Jet Engine Lab Equipment is an axial flow gas turbine system designed for practical educational purpose. The system consists of a Micro Gas Turbine Engine (MGTE) integrated with sensors and Data Acquisition System (DAQ). An Electronic Engine Controller continuously monitors the engine to ensure safe operating limits of the engine. A computer based software is used to manage the engine for real time data acquisition.

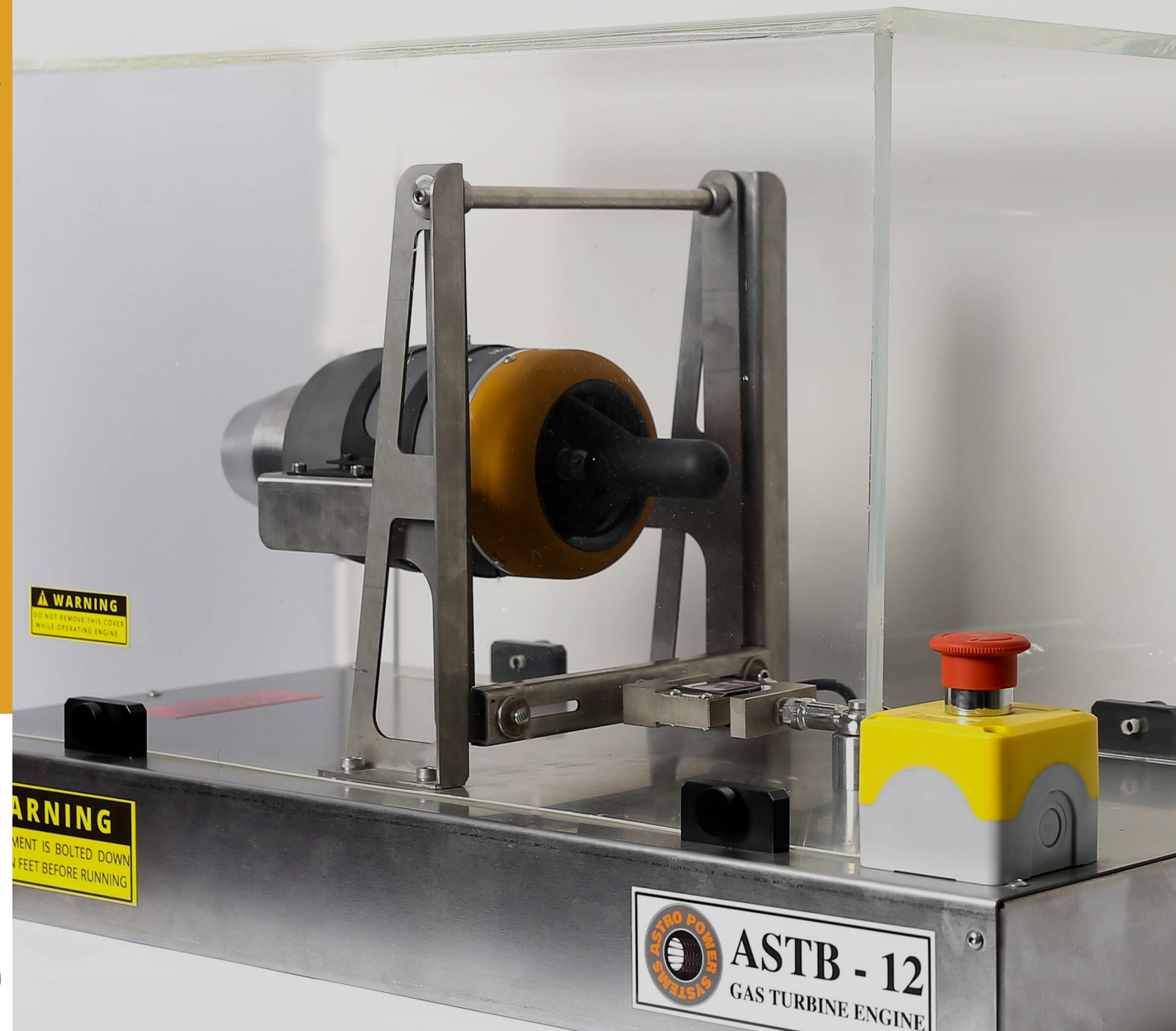


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INSTRUMENTS INCLUDED (FOR DATA READING):

Nozzle Area

- Exit Total Temperature
- Fuel Flow
- Shaft Speed (RPM)
- Thrust

Compressor Stage

- Exit pressure

Inlet Duct (Air Intake) Stage

- Inlet temperature
- Inlet Pressure

Turbine Stage

- Intel total temperature
- Inlet total pressure
- Exit total temperature
- Exit total pressure

ENGINE SPECIFICATIONS

- Thrust: 150 N Max
- EGT: 550-750°C
- Starting: Automatic Starting Sequence
- Compressor Type: Single Stage Radial
- Typical Fuel: Kerosene, Jet A-1, JP-4, JP-5, JP-8, bio-fuel and synthetic fuel.
- RPM: 33000~34000 @ Idle, 110,000 @Max
- Turbine Type: Single stage Axial



- Complete aeronautical axial gas turbine engine
- Real time thrust measurement
- software controllable throttle setting with safety limits
- Real time fuel metering system
- Transparent safety housing for protection while engine is visible to students
- Standard graph plotting, display parameters and data logging features for analysis
- Microprocessor based fully automatic ECU (Engine Control Unit)



SPECIFICATIONS OF LAB EQUIPMENT

- Length: 0.9m
- Width: 0.5m
- Height: 0.4m
- Trolley Height: 0.8m
- Overall Height: 1.2m
- AC Supply : 110/220 VAC 60/50 Hz
- Power Consumption: 200 W
- DC Supply: 12V 10AH / 11.1V 3S LIPO

