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PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Gas Turbine Jet Engine Test Bench | ThermoFlux 7086A

Category: Thermodynamics Lab Equipment · **Order Code:** THERMOFLUX 7086 · **Country of Origin:** India

Product Overview

The Gas Turbine Jet Engine Test Bench ThermoFlux 7086A studies the operating behaviour of a small single-shaft jet engine. This gas turbine jet engine test bench delivers 80 N maximum thrust at 120,000 min^{-1}, with force-sensor thrust measurement, electric automatic start-up, and remote control. It supports specific thrust, specific fuel consumption, and lambda analysis.

View this product online: https://scienticoindia.com/product/gas-turbine-jet-engine-test-bench-thermoflux-7086a/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Gas Turbine Jet Engine Test Bench ThermoFlux 7086A — Technical Specifications

Parameter	Value
Engine Type	Single-shaft gas turbine, radial compressor, axial turbine
Maximum Thrust	80 N at 120,000 min^{-1}
Speed Range	35,000 to 120,000 min^{-1}
Maximum Fuel Consumption	22 L/h (full load)
Exhaust Gas Temperature	610°C
Sound Level	Maximum 130 dB(A) at 1 m
Fuel	Kerosene or petroleum with turbine oil
Starting System	Electric starter
Fuel Tank Capacity	5 L
Differential Pressure Range	0 to 150 mbar
Combustion Chamber Pressure Range	0 to 2.5 bar
Temperature Sensors	2 x 0 to 1200°C, 1 x 0 to 400°C
Speed Measurement Range	0 to 120,000 min^{-1}
Fuel Consumption Measurement Range	0 to 25 L/h

Parameter	Value
Force Measurement Range	0 to ±200 N

Technical Data

Jet Engine:

- Single-shaft design
- Radial compressor and axial turbine
- Maximum thrust: 80 N at 120,000 min^{-1}
- Speed range: 35,000 to 120,000 min^{-1}
- Maximum fuel consumption: 22 L/h at full load
- Exhaust gas temperature: 610°C
- Sound level: maximum 130 dB(A) at 1 m

Fuel System:

- Fuel: kerosene or petroleum with turbine oil
- Fuel tank: 5 L
- Electric starter for fully automatic start-up

Thrust Measurement:

- Turbine mounted on moving base
- Force sensor for thrust measurement
- Force range: 0 to ±200 N

Measuring Ranges:

- Differential pressure: 0 to 150 mbar
- Combustion chamber pressure: 0 to 2.5 bar
- Temperature: 2 x 0 to 1200°C, 1 x 0 to 400°C
- Speed: 0 to 120,000 min^{-1}
- Fuel consumption: 0 to 25 L/h

Controls and Safety:

- Remote control unit for display and operation
- Protective grating around the jet engine

Key Features

Key Features

- Thrust Measurement: Maximum 80 N thrust with force sensor on moving base
- Automatic Start-Up: Electric starter for fully automatic engine activation
- Remote Operation: Separate remote control for display and control
- Performance Analysis: Specific thrust, specific fuel consumption, and lambda calculation
- Wide Speed Range: 35,000 to 120,000 min^{-1} operating range
- Safety Grating: Protective guard around the jet engine

Experiments

- Jet engine start-up procedure
- Engine operating cycle study
- Specific thrust determination
- Specific fuel consumption determination
- Lambda (fuel-air ratio) calculation under different operating conditions
- Thrust measurement across speed range
- Fuel consumption measurement
- Exhaust gas temperature monitoring

- Combustion chamber pressure analysis

Construction and Design

The ThermoFlux 7086A test bench houses a single-shaft jet engine with radial compressor and axial turbine. The turbine sits on a moving base fitted with a force sensor for thrust measurement. A protective grating covers the engine. An electric starter provides automatic start-up. A 5 L fuel tank supplies kerosene or petroleum with turbine oil. A remote control unit displays and controls operation.

Scope of Delivery

- 1 Gas turbine jet engine test bench
- 1 Remote control unit
- 1 Fuel tank (5 L)
- 1 Instruction manual

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q: What is the maximum thrust of the Gas Turbine Jet Engine Test Bench ThermoFlux 7086A?
A: The maximum thrust is 80 N at 120,000 min^{-1}.

Q: What fuel does the Gas Turbine Jet Engine Test Bench ThermoFlux 7086A use?
A: It runs on kerosene or petroleum mixed with turbine oil, with a 5 L fuel tank.

Q: How is thrust measured on the Gas Turbine Jet Engine Test Bench ThermoFlux 7086A?
A: The turbine sits on a moving base with a force sensor. The measurement range is 0 to ±200 N.

Q: How is the engine started and controlled?
A: An electric starter provides fully automatic start-up. A remote control unit displays and controls the jet engine.

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