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PRODUCT DATA SHEET
Catalogue reference for product evaluation

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TEST STAND FOR SINGLE CYLINDER 7.5kW ENGINE | ThermoFlux-2927

Category: Thermodynamics Lab Equipment · **Order Code:** THERMOFLUX-2927 · **Country of Origin:** India

Product Overview

The Test Stand for Single Cylinder 7.5kW Engine ThermoFlux 2927 measures power output of single-cylinder two-stroke and four-stroke petrol engines up to 7.5 kW. This test stand features an energy recovery asynchronous brake, frequency converter control, torque measurement from -50 to 50 Nm, and comprehensive intake, fuel, and temperature monitoring with USB data acquisition.

View this product online: https://scienticoindia.com/product/test-stand-for-single-cylinder-7-5kw-engine-thermoflux-2927/



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

Technical Specifications

Test Stand for Single Cylinder 7.5kW Engine ThermoFlux 2927 — Technical Specifications

Parameter	Value
Maximum Power Output	7.5 kW
Brake Motor Type	Air-cooled asynchronous with energy recovery
Brake Motor Rated Speed	Approximately 2900 rpm
Engine Types	Single-cylinder two-stroke and four-stroke petrol
Torque Measurement Range	-50 to 50 Nm
Speed Measurement Range	0.5 to 5000 rpm
Temperature Measurement Range	0 to 900°C
Fuel Consumption Measurement Range	50 cm³/min
Engine Intake Pressure Range	-400 to 0 mbar
Air Consumption Measurement Range	0 to 690 L/min
Power Requirements	400V, 50/60 Hz, 3-phase; 230V, 60 Hz, 3-phase

Technical Data

Brake Unit:

- Type: air-cooled asynchronous motor with energy recovery
- Power output: approximately 7.5 kW at 2900 rpm
- Torque and speed generated via frequency converter
- Suspended brake unit with force sensor

Engine Mounting:

- Elastic claw coupling for force transmission
- Vibration-insulated base plate
- Passive start and drive by asynchronous motor

Intake System:

- Stabilization tank for intake air
- Intake pressure range: -400 to 0 mbar
- Air consumption range: 0 to 690 L/min

Controls:

- Potentiometer for continuous braking torque adjustment
- Potentiometer for continuous braking speed adjustment

Measuring Ranges:

- Torque: -50 to 50 Nm
- Temperature: 0 to 900°C
- Speed: 0.5 to 5000 rpm
- Fuel consumption: 50 cm^3/min
- Engine intake pressure: -400 to 0 mbar
- Air consumption: 0 to 690 L/min

Electrical:

- Power: 400V, 50/60 Hz, 3-phase; 230V, 60 Hz, 3-phase

Key Features

Key Features

- Energy Recovery Braking: Braking energy returns to the system for efficient operation
- Engine Compatibility: Supports single-cylinder two-stroke and four-stroke petrol engines
- Continuous Load Control: Potentiometers adjust braking torque and speed steadily
- Comprehensive Measurement: Torque, speed, fuel consumption, air flow, intake pressure, and temperatures
- Vibration Isolation: Insulated base plate for stable engine mounting
- Passive Start: Asynchronous motor starts and drives the engine
- Data Acquisition: USB connection with Windows software

Experiments

- Power output measurement of single-cylinder engines
- Torque and speed characteristic measurement
- Fuel consumption determination
- Air consumption and intake pressure analysis
- Exhaust gas and cooling water temperature monitoring
- Two-stroke and four-stroke engine performance comparison
- Engine motoring in passive mode

Construction and Design

The ThermoFlux 2927 test stand consists of a control and load unit and a single-cylinder petrol engine mounted on a vibration-insulated base plate. An air-cooled asynchronous brake motor with energy recovery unit applies load. An elastic claw coupling transmits force from the engine to the brake, and a suspended brake unit with force sensor measures torque. A stabilization tank smooths intake air. Digital displays show measured values for the engine and load unit.

Scope of Delivery

- 1 Control and load unit
- 1 Asynchronous brake motor with energy recovery unit
- 1 Elastic claw coupling
- 1 Vibration-insulated base plate
- 1 Stabilization tank for intake air
- 1 Software for USB data acquisition (Windows)
- 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 engine types does the Test Stand for Single Cylinder 7.5kW Engine ThermoFlux 2927 support?
A: It supports single-cylinder two-stroke and four-stroke petrol engines with a maximum power output of 7.5 kW.

Q: How is load applied on the ThermoFlux 2927 test stand?
A: An air-cooled asynchronous motor with energy recovery unit acts as the brake. A frequency converter generates torque and speed, and braking energy returns to the system.

Q: What parameters does the ThermoFlux 2927 measure?
A: It measures torque (-50 to 50 Nm), speed, fuel consumption, air consumption, intake pressure, air temperature, fuel temperature, exhaust gas temperature, and cooling water temperatures.

Q: What power supply does the ThermoFlux 2927 require?
A: It requires 400V, 50/60 Hz, 3-phase, or 230V, 60 Hz, 3-phase.

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