

**Product Name :**  
Astra Scientific Single Cylinder Two Stroke Petrol Engines Test Bench

**Product Code :**  
ThermalLab0014



**Description :**

Astra Scientific Single Cylinder Two Stroke Petrol Engines Test Bench

**Technical Specification :**

The experimental test stand The engine is mounted on a vibration-insulated base plate and connected to the asynchronous motor. The mass of the base plate in conjunction with the soft bearing support ensures that the test stand runs very smoothly.

The asynchronous motor is initially used to start the engine. As soon as the engine is running, the asynchronous motor and energy recovery unit act as a brake unit for applying a load to the engine. The braking power is fed back into the electrical system. In passive mode of the engine the asynchronous motor is also used to determine the frictional power of the engine.

The lower section of the mobile frame contains fuel tanks and a stabilization tank for the intake air.

The air consumption is measured by way of a measuring nozzle. The fuel consumption is measured by way of the level in a vertical pipe.

The switch cabinet contains digital displays for the speed, torque and temperatures. Pressure gauges indicate negative intake pressure and air consumption. The measured values are transmitted directly to a PC via

USB. The data acquisition software is included.

## FEATURES

- control and load unit for single-cylinder internal combustion engines up to, 3 kW
- asynchronous motor used as load unit, also as starter motor
- vibration-insulated base plate for engine mounting
- plotting of torque and power curves
- determination of specific fuel consumption
- determination of volumetric efficiency and lambda (fuel-air ratio)
- determination of the frictional power of the engine (in passive mode)
- stabilisation tank for intake air
- measurement and display of torque, air temperature, air intake quantity, negative intake pressure, speed, fuel consumption, fuel temperature
- measured value displays for engine: exhaust gas temperature and cooling water temperatures

## SPECIFICATION

- Asynchronous motor as brake

power output: approx. 3 kW at 2900min<sup>-1</sup>

- Measuring ranges

torque: -50...50Nm

temperature: 0...900°C

speed: 0...5000min<sup>-1</sup>

fuel consumption: 50cm<sup>3</sup>/min

engine intake pressure: -400...0mbar

air consumption: 0...690L/h

- 230V, 60Hz, 1 phases



## **Astra Scientific**

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