

Product Name :
Astra Scientific Single Cylinder Four Stroke Diesel Engine Test Bench

Product Code :
ThermalLab0012



Description :

Astra Scientific Single Cylinder Four Stroke Diesel Engine Test Bench

Technical Specification :

The experimental test stand, which includes a drive and brake unit, the four-stroke diesel engine is highly suitable for use in teaching the fundamentals of engine functioning and measurement.

The engine used here is an air-cooled single-cylinder four-stroke diesel engine with direct injection. The diesel engine is started and slowed down by an electric motor mounted in the unit. A flywheel fan affects the air-cooling. The brake unit is connected by way of a elastic claw coupling.

The engine is prepared for measurement of the cylinder pressure for indication. It includes a sensor to measure the exhaust gas temperature and a connection to measure the intake pressure. Both sensors, ignition cut-off and fuel supply are connected to the test stand.

FEATURES:

- familiarization with a four-stroke diesel engine
- engine mounted on base plate

- force transmission to brake via elastic claw coupling
- Fuel hose with self-sealing quick-release coupling
- The full load and partial load characteristic curves of the engine are plotted in experiments.
- plotting of torque and power curves
- determination of specific fuel consumption
- determination of volumetric efficiency and lambda (fuel-air ratio)
- determination of engine friction loss

SPECIFICATION:

Air-cooled single-cylinder diesel engine with direct injection

- power output: 4,5kW at 2700min⁻¹
- compression ratio 22:1
- bore: 80mm
- stroke: 69mm



Astra Scientific

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