

Product Name :
Single Cylinder Four Stroke Petrol Engine Test Rig - IC
Engine Lab**Product Code :**
ICE0002**@ LAB ENGINEERING****Description :**

Single Cylinder Four Stroke Petrol Engine Test Rig

Technical Specification :**Introduction**

The test rig is designed to provide self-contained facility for teaching spark Ignition engine principles. The unit is instrumented so that the following experiments can be carried out.

- 1). Bhp Measurement
- 2). Brake Thermal Efficiency
- 3). Fuel Consumption Measurement
- 4). Air Intake Measurement

The Engine Test Rig Facilitate To Evaluate The Following

- 1). Performance at various throttle position
- 2). BHP measurement from no load to full load

Description

Three main components from main parts of the test rig. Welded steel base plate, complete with Mechanical Brake or A.C. Alternator or D.C. Generator or Eddy Current Dynamometer, Drive coupling and with safety guard, anti vibration mounting. Resistance loading with selector switches to the engine from no load to full load (Only for A.C. Alternator & D.C. Generator) Panel board positioned over the base plate consisting of fuel system with flow measurement by burette, air flow measurement system, temperature indicator.

Dynamometer (as applicable)

Mechanical Brake (Belt brake) Dynamometer arrangement with a brake drum fitted on the Engine shaft and provided with cooling water arrangement, spring balance. A set of dead weights in kg units. AC Alternator of matching capacity to load the engine upto 3HP at 3600 RPM along with Resistance loading arrangement provided with selector switches. DC Generator of matching capacity to load the engine upto 3HP at 3600 RPM along with Resistance loading arrangement provided with selector switches. Eddy current dynamometer of matching capacity to load the engine up to 3 HP at 3600 RPM.

Instrumentation (as applicable)

- 1). The following instrumentation is provided.
- 2). 'U' tube manometer for air flow rate
- 3). Burette for fuel flow rate
- 5). Digital Temperature Indicator-Multi point indicator with thermocouples.
- 6). Digital Voltmeter, Ammeter

Controls

The test rig is arranged for manual control of the engine with a kick start arrangement for engine starting & manual throttle control.

Fuel measuring arrangement

Fuel Measuring Arrangement consists of fuel tank, burette and suitable cock all mounted on a suitable framework and panel board and supplied with fuel piping from fuel tank to Engine.

Air intake measurement & heat carried away by exhaust gas

Consisting of an air tank mounted on an iron stand fitted with a suitable orifice plate, manometer, Thermocouple for measuring the exhaust gas temperature with pocket connection with instruments suitably mounted on a panel board.

Engine

New Honda engine Single Cylinder two stroke Air Cooled Petrol Engine to develop 3 HP @ 3600 RPM

Services

Electrical supply of 230V, Single Phase, 50Hz & Cooling water supply.



Elab Engineering Equipments Manufacturers