

Product Name :
Multi Cylinder Four Stroke Diesel Engine Test Rig**Product Code :**
ALABS-A104-416**Description :****Multi Cylinder Four Stroke Diesel Engine Test Rig**

The **test rig** is designed to provide self-contained facility for teaching Internal Combustion (spark Ignition) engine principles. The equipment is instrumented so that the following experiments could be performed.

- Bhp Measurement
- Ihp Measurement (By Morse Test Arrangement)
- Fuel Consumption Measurement
- Air Intake Measurement
- Measurement Of Heat Rejected To Water Jacket
- Heat Balance Test

The Engine Test Rig :

- Performance (BHP Measurement) from no load to full load
- Performance at various throttle position
- Heat Balance Sheet
- Morse test

Description:

Two main components from main parts of the test rig. Welded steel base plate, complete with Dynamometer, Drive shaft with safety guard, engine starting battery of 12V capacity and cooling water arrangement. Panel board positioned over the base plate consisting of fuel system with flow measurement by burette, air flow measurement system, temperature and speed indicator.

Dynamometer :

The Dynamometer used is a Hydraulic Dynamometer capable of absorbing a maximum load of 10 BHP at a speed of 1500 RPM.

- The Loading device used is an AC Alternator of matching capacity to load the engine upto 10HP at 1500 RPM along with Resistance loading arrangement with selector switches.

Instrumentation:

The following instrumentation is provided.

- Engine oil pressure gauge
- Engine charging circuit ammeter
- 'U' tube manometer for air flow rate
- Burette for fuel flow rate
- Speed Indicator-Digital
- Digital Temperature Indicator-Multi point indicator with thermocouples.
- Digital Voltmeter, Ammeter

Engine Starting:

The test rig incorporates a 12V DC electrical system designed for use with typical engine self starter

system. The battery is included in the scope of supply.

Controls:

The test rig is arranged for manual control with Ignition switch for engine starting, manual throttle control, manual control for hydraulic dynamometer loading and a manual operated clutch actuator arrangement to drive the engine with load or without load (For No Load testing).

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.
- Multicylinder four stroke petrol engine test rig with hydraulic dynamometer



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