

Product Name :
Single Cylinder Four Stroke Diesel Engine Test Setup

Product Code :
NEGEMG144



Description :

Single Cylinder Four Stroke Diesel Engine Test Setup

The test setup consists of Four Cylinder Petrol Engine coupled to a suitable dynamometer. The engine is single cylinder, water cooled diesel engine running at constant speed. The dynamometer provides variable load on engine to study engine performance under variable load conditions. A wide range of dynamometers is available as option for the engine test set up. Exhaust gas calorimeter is used for estimation of heat carried away by exhaust gases for determination of heat balance of the engine. Air is supplied to the engine through an air box, fitted with orifice plate.

The instrumentation console includes measuring instruments for Engine Speed, Torque / Power, Air consumption, Fuel Consumption & temperature of water, gases.

Experimental Capabilities:

- Determination of brake power & mechanical efficiency at different load conditions.
- Determination of fuel consumption & brake specific fuel consumption, brake thermal efficiency.
- Determination of air consumption & volumetric efficiency, Air/Fuel Ratios.
- Calculation of Heat balance of the engine

Specifications:

- Engine:

Single Cylinder Four Stroke Diesel Engine, Constant speed, hand start.

Capacity 550 cc, Output Power 3.5 kW / 5 hp @ 1500 RPM

- Dynamometer Options:
 - Rope Brake Dynamometer
 - AC Alternator with Load Bank Capacity 3.5 / 5 kW, Switching Loads
 - Eddy current dynamometer, Capacity 5 kW / 7 kW with electronic controller
- Exhaust Gas Calorimeter: Pipe in Pipe type
- Air Box: Made in M.S. with damper & Orifice Plate
- Instrumentation Console:
 - Spring Balance for Load Measurement, Range 0-50 Kg
 - Non-contact type sensor with Digital indicator for Engine speed, Range 0-9999 RPM
 - U Tube Differential Manometer for Air, Range 0-300 mm
 - 'K' Type Thermocouples & 8 channel digital temperature indicator, Range 0-600 C

- Digital Fuel Level Indicator for Fuel M
- Digital Voltmeter & Ammeter (For AC Alternator)
- Rotameter for water, Range 100-1000 LPH

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