

**IC-009**    **SINGLE CYLINDER FOUR STROKE DIESEL ENGINE TEST RIG**



**RANGE OF EXPERIMENTS TO BE CARRIED OUT:**

1. To Calculate Brake Power of Engine
2. To calculate the Brake specific fuel consumption of engine
3. To Calculate the heat balance sheet of the test rig
4. To Calculate the Volumetric efficiency of engine
5. To calculate the air to fuel ratio
6. To Calculate the air standard efficiency.

## **TECHNICAL DESCRIPTION:**

The Setup Consist of single cylinder four stroke Diesel engine (BrandNew). The engine is coupled to the rope brake / hydraulic brake / electric / eddy current dynamometer as a loading device. The air box with orifice plate and manometer is provided for measurement of air to the engine. A fuel tank with fuel measuring unit with scale is provided. The shell and tube type calorimeter is provided at exhaust of the engine. Digital temperature indicator with thermocouple is provided for measurement of temperature at eight different locations. A speed is measured by using tachometer. A rotameter is provided for measurement of water flow to the engine and calorimeter. Load on the engine is measured by using dynamometer accessories. Necessary water and air pipe connections are provided. The entire setup mounted on sturdy MS frame with powder coated and good color combination.

## **DIMENSIONS AND WEIGHT :**

Size :2 m.(L)x 1.5 m(W) X 1.7m ( H )

Weight :Approx. 150 Kg

## **SERVICE REQUIRED :**

Water :@ 10 LPM , ½ " Pipe connection

Drain Pipe Line 2" size

Fuel :Diesel , 5 ltr for 1 hr test period

Power Supply : 230v, AC ,Single Phase , 50HZ

## **SCOPE OF DELIVERY:**

1. Experimental Setup
2. Instructional Manual