



Since 2011

# COMPUTERIZED VCR DIESEL ENGINE TEST

**Make : MMI**  
**Model : MMIICE-020**

**Engine :**

- Engine type : Four stroke single
- Diesel Rated Capacity : 3.7 KW (5 HP)
- Speed : 1800 RPM
- Compression Ratio modified : 12:1 to 20:1 for Diesel
- Engine Cooling type : Water cooled

**EDDY CURRENT DYNAMOMETER :**

- Make : POWERMAG
- Model : PM 05
- Type : Air cooled eddy current dynamometer
- Power : 3.7KW/5 HP@ 1500 to 3000 RPM
- Load system : Variable speed loading unit
- Torque : 2.4 kg.m
- Load cell : 0 – 50 Kg, 0 – 30 mV strain gauge



**MEASUREING INSTRUMENTS :**

**Temperature measurement :** 7 No's of "K" type thermocouple transmitter will be provided to measure and 8 multi channel digital display temperature indicator with selector switch provided.

**Fuel measurement system :** Glass fuel metering tube with digitalstop watch to measure the fuel consumption. 10 liter capacity fuel tank and Burette fitted with two capacitive sensor one at the high level and the other at the lower level.

**Air intake measurement system :** Air intake measure using mild steel orifice meter and 'U' Tube manometer, Air tank, 2 meter length Air hose

**Water flow measurement system :** 2 No's of 1 – 50 LPM range rotameter will be provided to measurement for Water flow.

**Heat balance measurement system: Pipe in pipe exchanger**

**ENGINE PERFORMANCE ANALYZER KIT**

**Make :** National Instruments, Model: NI USB- 6210

**Analog Input :** 16 Single Ended, 8 Differential, No. of Bit: 16 Bit, USB

**communication compatible, Frequency :** 250 KHZ (Kb/s)

**ENGINE PERFORMANCE ANALYZER SOFTWARE :** Engine performance analyzer will contain of educational Software for representation for performance and data logging package for interfacing with computer for data acquisition. Data will be acquired in Excel Files for further calculations.

**Engine performance analyzer consisting of Software :** package for Data Acquisition and Analysis with the following **Experiment to Perform in software :** Specific fuel consumption, Brake power, Indicated power, BMEP, IMEP, Brake thermal efficiency, Indicated thermal efficiency, Mechanical efficiency, Volumetric efficiency, Air/Fuel ratio, Heat release curve

**Overall test rig mounting :** The entire test rig will be mounted on suitable, rouged and self-contained Structure/frame with painted. Engine test panel: MS powder coated engine testing panel will be provided with attachment of Air tank, Fuel tank, Load controller, CC tube, U tube.

Ph : 044 - 28389151, 82200 45908, 99404 90163



## MICRO MECH INSTRUMENTS

An ISO 9001 : 2015 Certified Company

No. 1, 2nd Cross Street, Thendral Nagar, Karapakkam, Chennai - 600 097, Tamil Nadu, INDIA.

Email - sales@micromechinstruments.com, Web - www.micromechinstruments.com