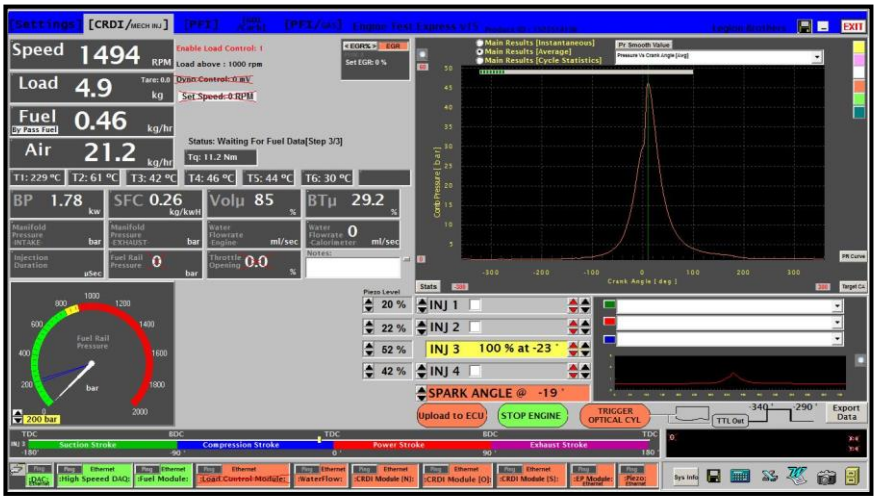
Legion Brothers

Obsessed with innovations

Data Acquisition System for IC Engine Performance Testing (Product Code: R&DU12)



Features

- Extensive range of Experiments
- Comprehensive teaching manual
- One year warranty
- Esthetically designed and finished Rig.
- High Quality instrumentation

Product Description

Most modern engines today are controlled by an onboard computer, for purposes like Engine Operation, Optimization, Safety, Fuel efficiency, Pollution control etc… be it any purpose, the primary process of all such control systems is collecting and processing real world data. This is a device designed for measuring, processing and transferring engine test data to any computer, such data is primarily intended for educational and research use. It consists of Data Acquisition module; Sensors for IC engine performance testing, Sensor mounting accessories, Windows based computer software and Inter connecting cables, facilitating it to be readily installed on your existing petrol or diesel engines.

Data Acquisition module

Processor Speed	16 MHz
Number of Analog channels	7
Number of Digital channels	2
Connectivity	USB-2
Power	USB powered

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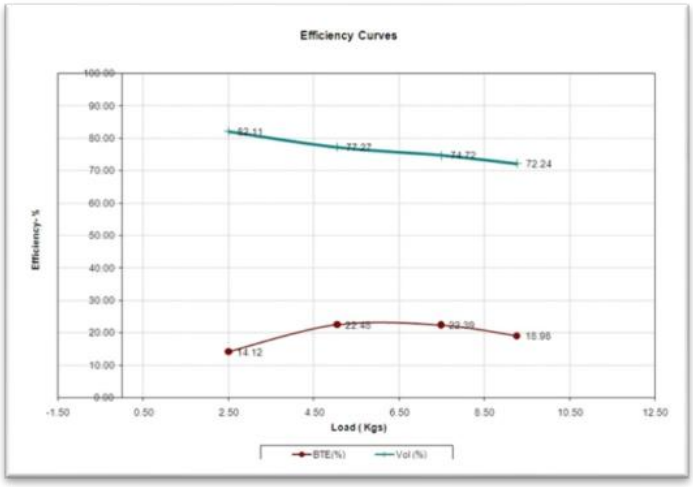
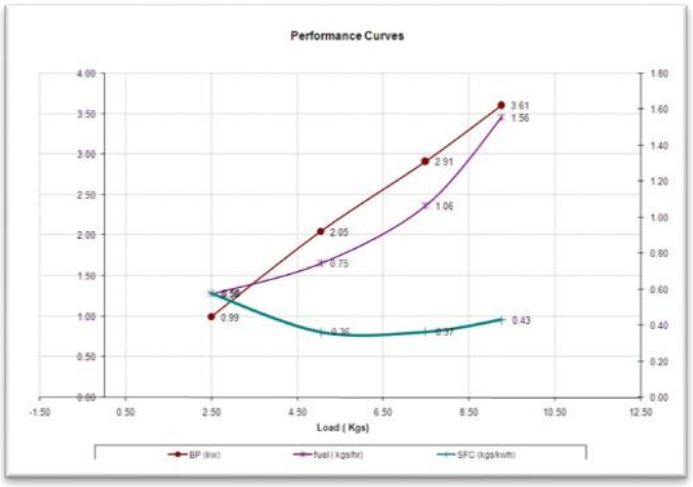
Product / Component Specification

Description	Range	Accuracy
1. Temperature Sensor – T1, Type "K" thermocouple with amplifier and signal conditioner (For measurement of Exhaust gas temperature immediately after engine head)	0 – 1200°C	±3°C
2. Temperature Sensor – T2, Type "K" thermocouple with amplifier and signal conditioner (For measurement of Exhaust gas temperature after calorimeter)	0-300°C	±2°C
3. Temperature Sensor – T3, Type "K" thermocouple with amplifier and signal conditioner (For measurement of cooling water inlet temperature -engine and calorimeter)	0-100°C	±1°C
4. Temperature Sensor – T4, Type "K" thermocouple with amplifier and signal conditioner (For measurement of engine water outlet temperature)	0-100°C	±1°C
5. Temperature Sensor – T5, Type "K" thermocouple with amplifier and signal conditioner (For measurement of calorimeter water outlet temperature)	0-100°C	±1°C
6. Inductive PNP sensor and signal conditioner (For measurement of engine speed)	0-10000rpm	±0.2%
7. Fully Automatic volumetric fuel flow meter with signal conditioner (For measurement of engine fuel flow rate)	0-8 liters/hr.	±0.2%
8. Differential Pressure transducer with signal conditioner (For measurement of engine Air flow rate)	1-50 Kgs/hr.	±0.5%





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Sensors

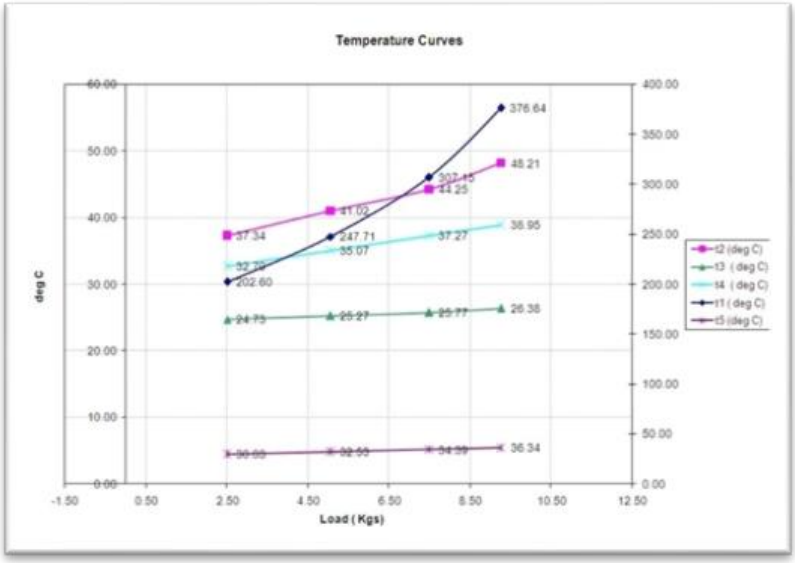
INSTALL ON EXISTING ENGINE, SAVE ON

Software

Windows based Real Time software capable of acquiring, processing and exporting data to Microsoft excel. The powerful software presents the key engine performance parameters both in tabulated and graphical form. These parameters are as listed below

1. *Engine Speed*
2. *Engine Fuel Flow Rate*
3. *Engine Air Flow Rate*
4. *Engine Exhaust Temperature*
5. *Engine Water Inlet Temperature*
6. *Engine Water Outlet Temperature*
7. *Calorimeter Exhaust Gas outlet Temperature*
8. *Calorimeter Water Outlet Temperature*
9. *Engine Power (upon manual entry of engine load)*
10. *Specific Fuel Consumption*
11. *Brake Thermal Efficiency*
12. *Volumetric Efficiency*
13. *Heat Balance*
14. *Air-Fuel Ratio*

WE ALSO UNDERTAKE CUSTOMIZED COMPUTER BASED DATA ACQUISITION SYSTEMS INCLUDING SOFTWARE DEVELOPMENT



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