EDDY CURRENT DYNAMOMETERS

Eddy Current Dynamometers are used for Testing Engines from SHP to 1000HP capacity. Precision Strain Gauge Type Load Cell are used for sensing the Torque developed by the Engines. Its rugged and rigid design of Power absorbing systems are ensured for long working life. This is achieved by electroless nickel plating to the most critical parts which are always in contact with cooling water.

Standard Features:
1. High accuracy Strain Gauge Load Cell
2. Electroless Nickel plated water passages
3. Dry running is avoided by water flow switch.
4. Bi-directional operation
5. Low Inertial Rotor
6. Smooth running of Rotor
7. SS Magnetic Filter
8. Safety Guard
9. Compact design

Principle Of Operations: When the current flow through the field coil, then magnetic field and decelerate the rotor. The braking torque is transferred via the frictional bearing mounted body to the load cell. The dynamometer load is regulated by changing the excitation current.

Energising Coils: The coils are fully encapsulated in two pieces. These are insulated from the main body with high quality insulating material. This gives very optimum distribution of flux throughout the working area. Because of this in case of low speed torque it gives best results of air flow from the center of dynamometer. This features ensures rapid response of reliability under the severable loading conditions.

Control: The power absorbed by the dynamometer is controlled by varying the energising current at the field coil. System is provided with Closed Loop Control by giving feedback signal from Load Cell for Torque & from RPM Sensor for Speed. Both Manual & Automatic Control Systems are provided along with PC based Data Acquisition & Control System.

Accessories Available:
1. Engine starting arrangement
2. Calibration equipments (S.I. or Imperial)
3. Universal Propeller Shaft
4. Motor Rotor locking device
5. Universal Engine Test Bed with common frame
6. Volumetric & Gravimetric Fuel Measurement
7. S.I Magnetic Filter
8. Safety Guard

Water Connections: Very high grade flexible rubber hoses are used for water inlet & outlet lines. Hoses are being very flexible which are always in contact with cooling water. No effect on calibration & sensitivity of dynamometers.

Energising Coils: Standardised software demand from the customers.

Installation all over India in various fields. To cater to the increasing demand and to give effective service to customers, Technomech shifted from Tiny Industrial Estate at Kadavanahalli to 4,000 sq ft State-Of-The-Art infrastructure facility name ETHOS, in Hadapsar Industrial Estate.

ETHOS stands for value based culture with everyone involved, and it portrays in our Mission and Vision.

Technomech has a very strong base of customers in Engineering colleges, IITs, Polytechnics, and in Research organizations, OEM, engine & Prime Mover manufacturers all over India.

Its has recently launched LabView based Data Acquisition System considering the need for standardized software demand from the customers,.

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>No</th>
<th>PARAMETER</th>
<th>UNIT</th>
<th>MODEL TME</th>
<th>MODEL TIME</th>
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<tr>
<td>1</td>
<td>Torque</td>
<td>Nm</td>
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<td>48</td>
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<td>7</td>
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<td>350</td>
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<td>8</td>
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GENERAL ARRANGEMENT

8: Energising Coil
2: Trunnion Bearing
3: Shaft
7: Water Cooling Connectors
4: Tooth Wheel
8: Load Cell

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**DYNAMOMETER CONTROL UNIT (DCU)**

TM92E is in-house developed precise controller for Torque. It is in-house developed microprocessor based instrument with unbeatable reliability and best-in-class repeatability. DCU is well known for precise and fast action in controlling the Torque. Speed measurement is done using 60 teeth gear arrangement which is cost effective and highly accurate.

**FEATURES**
- Highly precise Torque Control
- Easy Loading & Unloading
- Password Protected Program
- Over Speed Protection
- Over Torque Protection
- Modbus RTU protocol
- Current Retransmission Of P
- Built-in Power Card
- Analog and Digital Isolation

**LabVIEW DATA ACQUISITION SYSTEM**

Technomech has in-house team working dedicatedly on LabVIEW from National Instruments. With its continuous R&D, Technomech has developed a superior Data Acquisition System. Here is a glimpse of the Dashboard and short list of the features provided by the application. Full customization is available as per user requirements.

**CONTACT US**

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Landline: +91-20-26819617 / 18
Mobile: +91-98506 32062, +91-98506 02184

Branch Offices:
- Mumbai, Turbhe MIDC
- Nashik, Mumbai Naka
- Pimpri-Chinchwad, Bhosari MIDC
- Aurangabad, Station Road
- Kolhapur, New Shahupuri
- Gravelpoint, Municipal Industrial Estate, Pimpri Chinchwad

**Ours Other Products**

- Waterbrake (Hydraulic) Dynamometers
- Engine Test Systems for 2 stroke / 4 stroke multi cylinder Petrol Engines
- Engine Test Systems for 2 stroke / 4 stroke multi cylinder Diesel Engines
- Fuel Measurement System

Currently we are developing Air Cooled Dynamometers and it will be launched very soon!

**ACCESSORIES**

- Load Cell & Indicator
- RPM Sensors & Indicators
- Temperature Sensors & Indicator
- Waterbrake (Hydraulic) Dynamometers
- Engine Test Systems for 2 stroke / 4 stroke multi cylinder Petrol Engines
- Engine Test Systems for 2 stroke / 4 stroke multi cylinder Diesel Engines
- Fuel Measurement System

**COMBUSTION ANALYSIS**

- P-Theta and P-V Diagrams
- Power Calculations
- Combustion Analysis
- Fuel Measurement
- Combustion Analysis
- Heat Balance Sheet
- Morse Test
- All Efficiencies calculations
- Reports in CSV formats

**FEATURES**

- Easy to operate
- Smooth running
- Highly accurate & reliable
- Easy for maintenance
- Barly design
- Protected field performance
- Operator free operation
- High MTBF & Low MTTR

A Reliable Source for Prime Mover Test Equipments

Bi-directional Working
- Low Inertia, Long Life
- Smooth Running
- Sturdy Design
- Highly Accurate
- Easy To Operate
- Vibration Free Working

**FEATURES**

- With DCU & LabVIEW SCADA
- A Reliable Source for Prime Mover Test Equipments

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