



ASSOCIATED PRODUCTS



OTHER PRODUCTS



ABOUT US



ETHOS State Of The Art Infrastructure

Technomech was started in 1985, as a partnership company. All the partners are highly experienced having 35+ years of experience in the same field. We have 850+ Dynamometers installations all over India till March 2013.

Commitment to quality, stringent inward procedures, strict quality inspection, and in-house manufacturing capability are the prime aspects of our success over the years.

So as to cater to the increasing demand and to give effective service to our customers, we have built our own new State-Of-Art infrastructure at Hadapsar Industrial Estate, Pune.

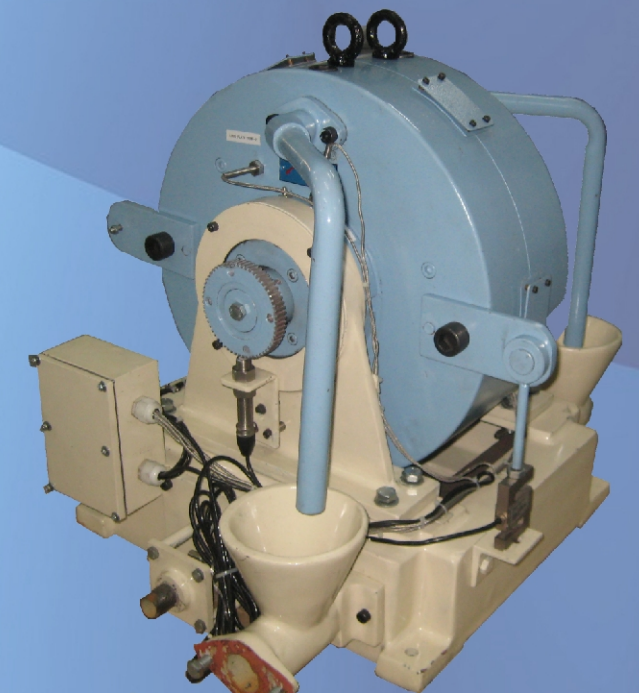
ETHOS, stands for value based culture with everyone involved, and this portrays our Mission and Vision.

We have very strong base of satisfied customers in Educational institutes like Engineering colleges, Polytechnics, IITs and Research organisations, OEMs, engine & prime mover manufacturers all over India.

Brochure: TM-ETS / Designed by: www.esd-india.com



TECHNOMECH
DYNAMOMETERS



HYDRAULIC & EDDY CURRENT DYNAMOMETERS



TECHNOMECH
DYNAMOMETERS

ETHOS

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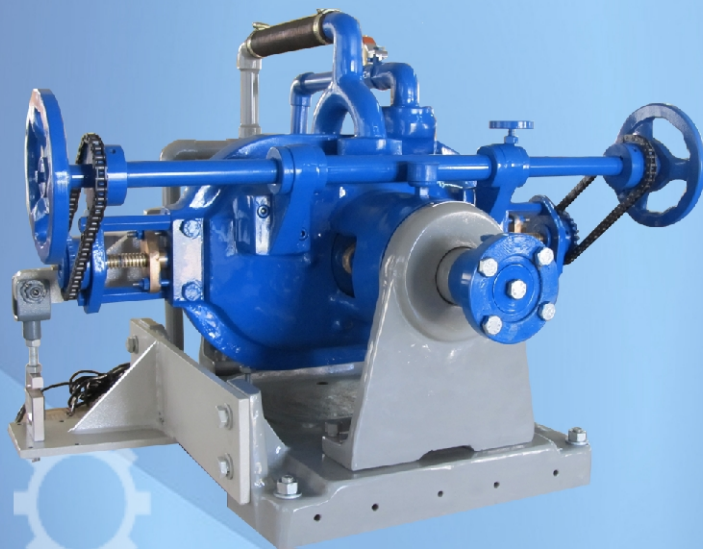
Photos not to the scale.

Due to continuous development product specifications are likely to change.

A Reliable Source Of Dynamometers



WATER BRAKE DYNAMOMETER



Technomech Water Brake Dynamometers (WBD) are suitable for measuring Brake Horse Power of different types of Prime Movers like Diesel Engines, Petrol Engines, Electrical Motors, Vehicles, Gear Boxes in their Production, Quality Assurance and R&D centers.

These are sluice gate operated Dynamometer. The rotor & stator rings are cast from Phosphor Bronze material while the power absorption unit is mounted on sturdy Cast Iron base plate with the help of trunnions. The load indication is in digital form with a load cell. A calibration setup is provided for periodic check-up in order to ensure accuracy.

Principle Of Operation: Water acts as the cooling and loading medium. The running rotor causes the water to whirl in the chamber. The braking energy thus absorbed converts to heat which is dissipated with the circulating water. At a given constant speed of the Dynamometer its reaction torque is a function of water volume in the whirl chamber which is in turn controlled by a sluice gate. The regulated water flow absorbs the generated heat and keeps the unit in prescribed temperature limit.

Advantages:

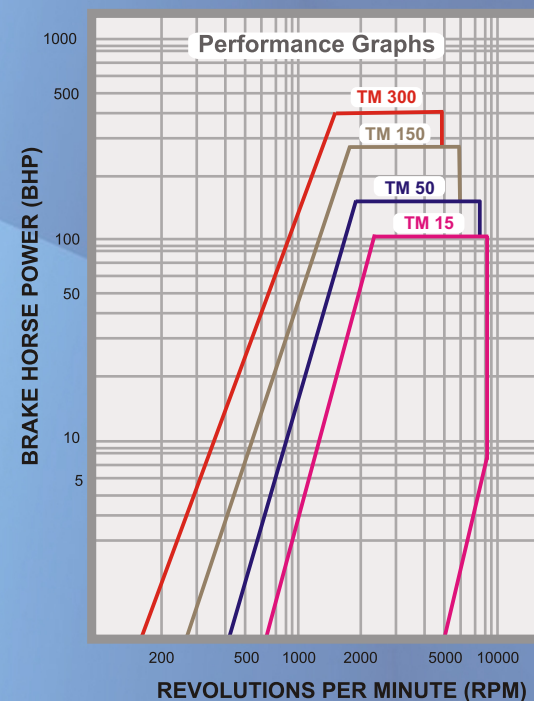
- ✓ Sturdy and Robust design
- ✓ Fast Response and Accurate Calibration
- ✓ Dynamically Balanced Rotor
- ✓ Highly Economical & Simple Mechanical Construction

In order to cater to a wide range of applications, we have models TM15, TM50, TM150 and TM300, suitable for 15, 50, 150, 300 BHP capacities respectively at 1500 RPM.

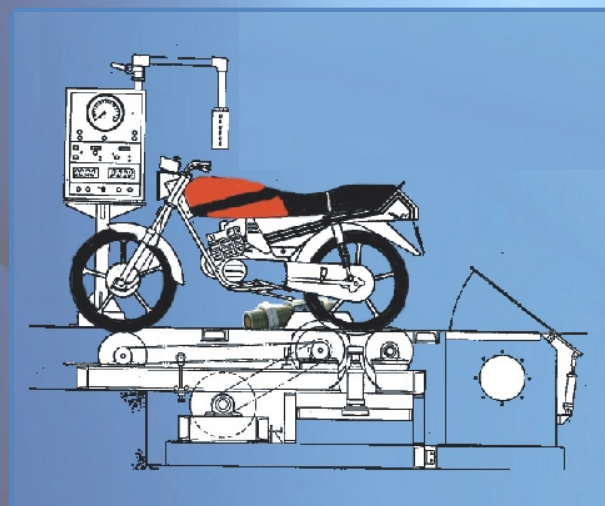
Load Control: Load control is effected by adjusting the sluice gates to and fro by means of chain and sprockets. This is achieved manually with the handwheel and remotely with electric motor and limit switches.

$$BHP = (W \times N) / C$$

W Load in Kilograms,
N RPM of Dynamometer, &
C Dynamometer Constant.



CHASSIS DYNAMOMETER



Chassis Dynamometers are tailor-made systems for Two & Four Wheel vehicles, used to verify Engine Test Bed results with Endurance and save Time & Efforts. The System consists of Power Absorption Unit, Load Simulation Device, Instrumentation Panel with Data Acquisition System and Software for System Simulation and other external interface devices.

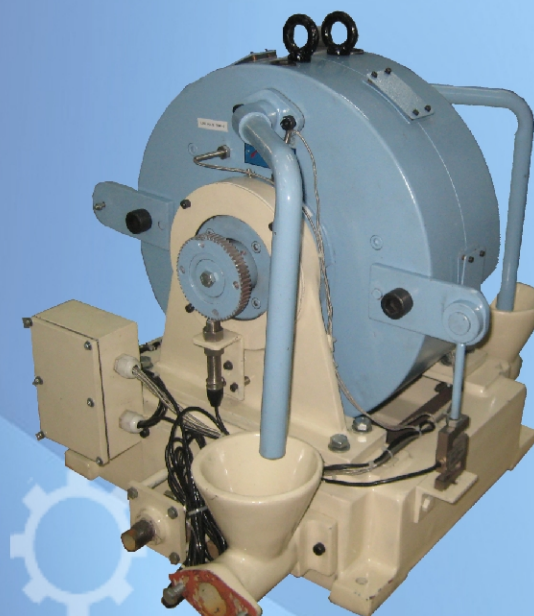
System gives results like Fuel Consumption, Maximum Speed, Temperature Profile, Emission Test, Endurance Test, EMC Test etc. can be made available through the Total System.

Features:

Sturdy and Robust design, Ease to operate, Low Maintenance, Windows driven software, Faster operation and highly economical & simple construction.



EDDY CURRENT DYNAMOMETER



Technomech Eddy Current Dynamometers (ECD) cater to a wide range of requirements of Prime Movers from 10 to 100 BHP with RPM varying from 1500 to 5000. These are widely used for testing of engines in Production, R&D, and Quality Assurance.

Rugged construction and effective power absorption ensure long working life. ECD comprise the following:

- ✓ Rotor & Shaft Assembly
- ✓ Base Plate & Trunnion support
- ✓ Cooling Water Flow lines
- ✓ Calibration Lever
- ✓ Sensors
- ✓ Stator Casing Assembly
- ✓ Excitation Coil
- ✓ Load Cell
- ✓ Hot Air Passages
- ✓ Electronic Control Unit

Principle Of Operation: When the Electronic Control Unit is connected to the excitation coils, the current flowing generates magnetic field. When the toothed rotor is rotated in this field, the magnetic flux changes and Eddy Current is produced in the end wall of cooling chambers. This Eddy Current builds an opposing magnetic field and decelerates the rotor. Thus the braking torque is transferred to the load cell through the main body. The regulated water flow absorbs the heat generated and keeps the unit in required temperature limit.

In order to cater to a wide range of applications, we have models TME10, TME20, TME30, TME50, TME100, TME200 & TME300, suitable for 10, 20, 30, 50, 100, 200 & 300 BHP capacities respectively.

Advantages:

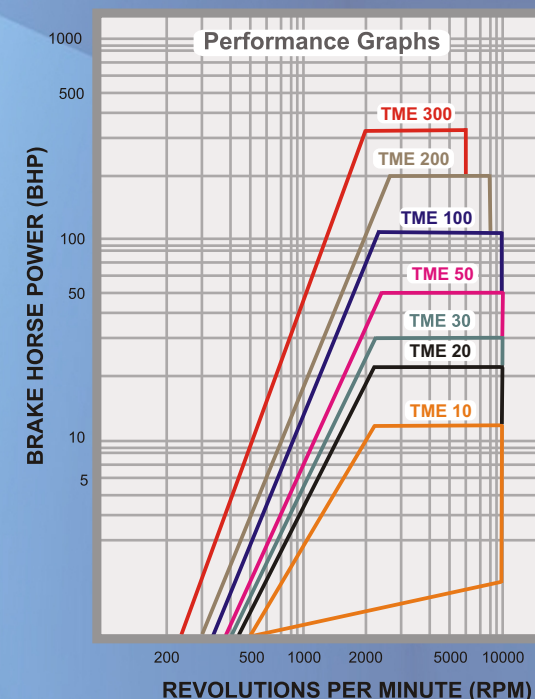
- ✓ Easy of assembly.
- ✓ Wide Power Range
- ✓ Disc rotor and therefore low moment of inertia.
- ✓ Minimal axial thermal expansion therefore no scope of seizing and damages, failure.
- ✓ Very high response to change in input signals.
- ✓ Suitable for both direction of rotation.
- ✓ Long Life uses, and long servicing interval.
- ✓ Easy maintenance due to less components.
- ✓ Low downtime due to simple mechanical design.



SELECTION OF DYNAMOMETER

The selection of dynamometer is a scientific process and needs careful study of the engine capacities to be tested on dynamometer. Points to be considered while selecting the Dynamometer are:

- ✓ Engine's maximum Power & corresponding Speed.
- ✓ Engine's maximum Torque & corresponding Speed.
- ✓ Engine's minimum Power & corresponding Speed.
- ✓ Engine's minimum Torque & corresponding Speed.



FEATURES



Easy to operate



Smooth running



Highly accurate & reliable



Easy for maintenance



Sturdy design



Proven field performance



Vibration free operation



High MTBF & Low MTTR