

# NEOMETRIX

## Dynamometer Engine Test Rig

### About

An Eddy current dynamometer is an electromechanical energy conversion device, which converts mechanical energy to electrical energy. It fundamentally uses Faraday's Law of electromagnetic induction as its working principle.

In this system we test different ranges of engines RPM, Torque in N-m, and Power. And parameters will be shown in panel.

Power- up to 200 KW

Torque- 1780 N-m

Engine for testing with a range of 1500- 2000 rated rpm.

Engine monitoring system: Control panel with digital meters, oil pressure, lube oil temperature, water temperature, Engine RPM.

Engine parameter recording: A computer based data logger to record engine control parameters. A printer to be provided for printout report of all engines parameter.

And parallel we can record engines parameter like Lube oil pressure, Engine temperature, water temperature etc.



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## Specifications:

When properly installed and operated within the limits specified, Dynamometers are expected to provide long trouble-free service life.

Model	A5756P0001
Max. Torque (Nm)	1780 Nm
Maximum Torque speed (R / Min)	810 to 2000 RPM
Speed measurement precision	± 0.5 FS %, 1RPM resolution
Torque measurement precision (F. S.)	± 0.5 FS %, 0.1Nm resolution
Coil Excitation Volts DC	90 V DC
Coil Current Amps	6.72Amps
Torque Sensing	Reaction type, Force Sensor
Form of Torque Sensor	Full Bridge, Strain Gauge type. 10 V DC Excitation. 2mV/V output.
The direction of rotation	Bi directional, Clockwise & anti -clockwise
Cooling Water Flow required.	12500 LPH



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## **Mechanical Dimensions:-**

- Overall Size: 2000 mm x 850mm x 1350 mm
- Centre Height: 900 mm
- Inlet Piping: 2"
- Outlet Piping: 2"
- Calibration Arm Length from centre: 1000 mm
- Cooling Water Requirement (Dynamometer Inlet) Pressure: 1.0-2.0 bars
- Temperature: Less than 40°C.
- Cooling Water Flow (Dynamometer Inlet): 12500 LPH
- Type of Lubrication: Grease (Inner earing), Oil (Outer Bearing)

## **Electrical:**

- Supply Voltage: 240 volts  $\pm$  10% AC, 50 Hz
- Separate Earth should be given to the system.
- Maximum Excitation: Internally set in the instrument depending on the capacity of Eddy current dynamometer. Generally, 3 To 5 Amps D.C.
- RPM: This is displayed by a 4 digit display. This displays Motor/dynamometer rpm.
- Accuracy:  $\pm$  1 rpm.

## **Environmental:**

- i) Temperature: 5 to 55°C maximum
- ii) Humidity: R.H. 95% maximum

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## Application:

Dynamometer system will test the engines parameters RPM, Torque, Power, Lube oil pressure, temperature, water temperature and result will be shown in control panel with digital meters.

