

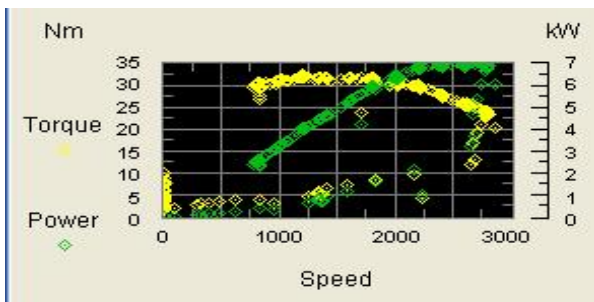
# BENCH-TOP DYNAMOMETER

Model BD-10



This Student Benchtop Dynamometer System consists of a dynamometer frame incorporating the electric motor/Diesel/Gasoline engine, inertial wheel, a load dynamometer and associated sensors & data acquisition system. It is designed for performance testing of the electric motor regenerative braking performance. The inertial wheel is mounted on the shaft using taper lock device for easy dismantling and change/add another inertia wheel (purchased optionally) to match different motor power.

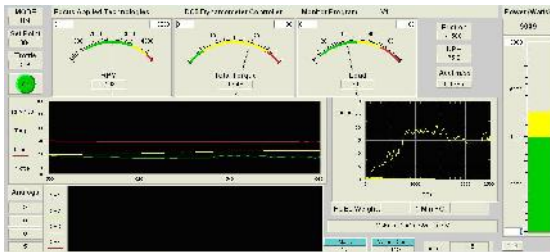
Features of heavy duty frame, integrated torque and speed measurements, and a universal dynamometer controller for control, display and recording of information via a computer interface. Our generator type dynamometer does not require water circulation, and the electrical dump load may be mounted remotely. Various power sources and coupling options are available.



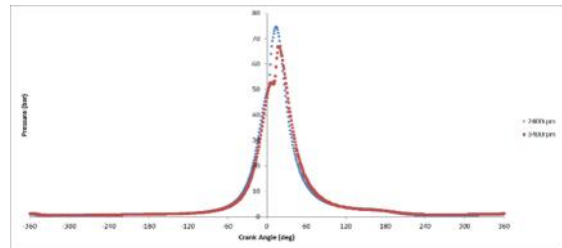
**Laboratory Exercise Manual Included with Labs, Quizzes and sample data**

# BENCH-TOP DYNAMOMETER

Model BD-10



Torque Screenshot



Cylinder pressure vs crank angle

## SPECIFICATIONS

### PHYSICAL

Weight:: Approx 65kg (without engine)  
LxWxH: 1200 x 490 x 400 mm

### POWER IN

Voltage: 220VAC +/- 10%  
Frequency: 50Hz  
Current Draw: 4A max

### CONTROLLER OUTPUT

Resistance : 10 ohms Min  
Power : 300W Max  
Voltage : 50V Nominal  
Current : 5A Max

### DYNO

Mechanical Power: 10,000W Max  
Voltage Output : 400V Max  
Current : 10A Max

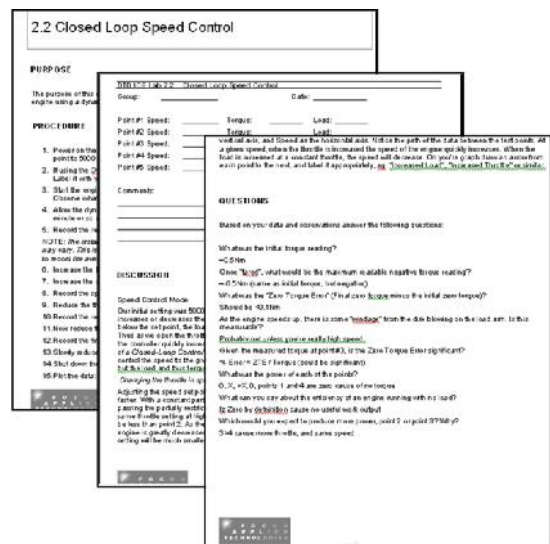
### INPUTS

Speed Input : Variable Reluctance type input  
1 to 60 pulse per revolution  
10V pk-pk Max  
60 to 10,000 rpm (typical)  
Strain : 200 to 500 ohm  
4 wire Wheatstone bridge  
5 or 10V Excitation

### ENVIRONMENTAL

Temp: 10 to 40° C Operational  
0 to 50° C Non-Operational  
Humidity: 5 to 90% Non-condensing  
Shock/Vibe: <10g

The Bench-Top system is widely used by student laboratories in Universities and Polytechnics and for Research and Development. Laboratory exercises are available, including sample data, physical explanations and quiz questions and answers.



## OPTIONS

- Throttle Controller
- Fuel Scale
- Gasoline / Diesel Engine
- Blower / Fan
- Electric Motor
- Combustion Analysis
- Inertial
- Wide Band O2 Display (AFR)
- Gas Emission Analyzer