

## Lathe Tool Dynamometer



This is a strain Gauge Type two/three component Lathe Tool Dynamometer designed to measure vertical & horizontal/(radial force in case of three component) forces on tool while orthogonal cutting process. The unit consists a mechanical sensing unit or tool holder and digital force indicator. With this dynamometer, students can study the change in these forces due to change in speed, feed and depth of cut.

### Specifications –

- Mechanical Sensing Unit with Tool Holder and Tool with strain Gauges
- mounted on it.
- Digital Force Indicator - two/three channel, to read both forces simultaneously.
- Balancing Potentiometer for initial balancing
- Range - 0 to 300 Kg, least count - 1 Kg.
- Tool Size 12 mm
- The set up is calibrated at our works with the help of standard Proving Ring.

### Contacts:

### Works:

## Data Logging Unit for Tool Dynamometer

### General Specifications:

a. Digital Indicator cum Data Logging Unit will be provided. This will be comprising of following features.

- a. Digital Display : 16 X 2 LCD with Back lit.
- b. Range : 0 to 200 Kgf.
- c. Least Count : 1 Kgf.
- d. Input : Analog i.e. 0 to 200 mV.
- e. Output : RS 232 Output for PC Interface.
- f. Supply : 230V AC Stabilized / Regulated.
- g. Enclosure : Powder Coated.

b. Windows compatible PC executable interface software will be provided. This will comprise of following features.

- a. Graph Plotting – Line Type.
- b. Table Plotting – Standard Tabular Format.  
(Load Channels Vs Time i.e. 2 Channel Or 3 Channel Vs Time)
- c. Auto Storage of Test Data Files.
- d. Menu Driven Functions.
- e. User Friendly execution features.
- f. Password type Security option.
- g. Graph & Table Printing feature.
- h. Please note that this Software will provide an Offline Display Interface Only.  
No Controlling at all.

### Contacts:

### Works:

## Milling Tool Dynamometer



This is simple and easy to understand set up designed to study behavior of cutting forces during Milling Operation. This is based on octagonal ring method, which consist two pairs of octagonal rings with strain gauges mounted on it. These rings are sandwiched between two plates. A machine vice is mounted on top plate to hold job to be machined. A three channel digital force indicator is provided to measure three forces simultaneously.

### Specifications –

- Mechanical sensing unit with octagonal ring set and strain gauges.
- Digital force indicator - 3 channel to measure three forces simultaneously.
- Range - 0 to 500 Kg
- Resolution - 1 Kg
- Balancing pots for initial zero setting.
- Machine vice to hold job.
- The set up is calibrated at our works with the help of standard Proving Ring.

## Grinding Tool Dynamometer



This is a simple setup to measure forces resolve during grinding operation based on strain gauges. It consists a mechanical sensing unit with vice to mount job and digital force indicator.

### Specifications –

Mechanical sensing unit with strain gauges.

Digital force indicator - 2 channel to measure three forces simultaneously.

Range - 0 to 200 Kg

Resolution - 1 Kg

Balancing pots for initial zero setting.

Machine vice to hold job.

The set up is calibrated at our works with the help of standard Proving Ring.

### Contacts:

### Works:

## Drill Tool Dynamometer



This is a strain gauge based Drill Tool Dynamometer designed to measure Thrust & Torque during drilling operation and effect of speed, feed cut on these forces. The unit consists a mechanical sensing unit or tool holder and digital force indicator. The job can be mounted on a workplace holder on mechanical sensing unit. The unit is useful for drilling up to 25 mm dia.

### Specifications –

- Mechanical Sensing Unit with Job Holder with strain Gauges mounted on it.
- Digital Force Indicator - two channel, to read both thrust and torque simultaneously.
- Balancing Potentiometer for initial balancing
- Range - thrust - 0 to 200 Kg, torque - 0 to 20 Kg m, least count - 1 Kg.
- The set up is calibrated at our works with the help of standard Proving Ring.