



Motorized Gyroscope Apparatus

Specification:

Disc rotor – 30 cm dia, 10 mm thick approx.
Drive – AC/DC Single phase motor. Fractional HP 6000 RPM.
Overall Size – 30 cm base diameter, 5 cm height
Approximate weight – 30 kg.



Static and Dynamic Balancing Apparatus

Specification:

- Drive Motor – F.H.P. Universal motor.
- Balancing Weights – 6 nos with different sized drills for varying the unbalance.
- Cord and container system with precision steel balls for relative weight measurement.



Universal Governor Apparatus

Specification:

- Drive unit- D.C. Motor 0.5 H.P., 0-1500, RPM 220 V. D.C.
- Speed Control Unit working on single phase.
- Belt and Pulley system to give spindle speed 100 to 500 RPM.
- Governor mechanisms with necessary springs and weights.



Cam Analysis Machine

Specifications:

- Cams : Tangent, Eccentric, Circular Arc.
- Followers : Roller, Knife edge, Mashroom
- Drive : D.C.-0.25 HP 0-1500 RPM.
- Speed Control Unit : A Dimmer stat of 2 Amp capacities

Universal Vibration Apparatus



Range Of Experiments:

- Free vibrations of spring mass system.
- Forced damped vibrations of spring mass system.
- Verification of Dunkerley's rule.
- Forced damped vibrations of simply supported beam at various amounts of damping.
- Oscillations of simple pendulum.
- Oscillations of compound pendulum.
- Radius of gyration of bi-filler suspension.
- Undamped torsional vibrations of single rotor system.
- Damped torsional vibrations of single rotor system.
- Torsional vibration of double rotor system
- Free vibrations of helical coiled spring.

All the experiment units and accessories can be suitably fitted to a sturdy frame.

Whirling Of Shaft Apparatus



Specifications :

- Shafts made from steel & of the following nominal dimensions.

Dimensions in mm	Length in mm
4.76mm or (3/16)"	900 or (36)
6.35mm or (1/4)"	900 or (36)
8 mm or (5/16)"	900 or (36)
• Drive 'PROMPT' make single phase AC/DC fractional HP 6000 RPM. • Dimmerstat for controlling of speed.	



BIHAR COMMUNICATIONS PVT. LTD.

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Journal Bearing Apparatus



Specifications:

- Journal Bearing -70mm dia (Nominal) 75mm dia.
- Weights -4 adjustable weights.
- Recommended oil -SAE 10
- Motor -D.C. shunt wound Speed 1500 RPM in both the directions
- Control Unit -Special design.
- Manometer Panel -16 tubes mounted on a M.S. board.

• **Experimental Investigation** : After noting the pressure profile for any chosen conditions the following analysis may be conducted.

- a) Plotting the Cartesian and polar pressure curves.
- b) Plotting the theoretical Sommerfeld curves.

Epicyclic Gear Train & Holding Torque Apparatus



Specification:

- 1HP D.C. Motor, 1500 RPM
- Voltmeter 0-300 V, Ammeter 0-5 Amp
- RPM indicator, Dimmer 4 Amp
- Spring Balance 0-10 Kg.

Corioli's Component of Acceleration

Specifications :

Main Tank : Fabricated out of fiber glass plastic sheet.

Rotating Arms : 9mm/6mm orifice dia, 300 mm long.

- Rotameter OR Watermeter 250 to 2500 LPH Coupled to D.C. Motor 0.5 H.P. 1500 RPM
- Voltmeter 0-300 V, Ammeter 0-5 Amp
- RPM indicator, Dimmer 4 Amp
- **Mono block Pump** : Single phase, pump with Motor 2400 LPH discharge.
- **Control** : Consisting of pump switch, Variac Speed Control, Speed Indicator Main Switch.



Theory of Machine Lab

Pin & Disc Wear Apparatus

Specifications:

- DISC - Case hardened steel disc, dia. 200 mm, max speed 1500 RPM. Max. surface speed 26.5 m/s.
- Driver motor - 0.5 HP, 1500RPM, coupled to single phase Induction motor with 3 speed V- belt pulley.
- Dimmer 2 Amp, RPM Indicator
- Pins - Dia. 12 mm + 0.000 / - 0.005 mm, Aluminium and Cast Iron – 1 No. each, with pin guide.
- Lubricant tank with pipe for lubricated testing.
- Spring balance 10 kg.
- Analogue displacement measurement unit for measurement of wear of pin, range - 0-10 mm.
- A splash arrester and protective cover is provided around the disc.



Moment of Inertia upon Velocity and Acceleration

Specifications:

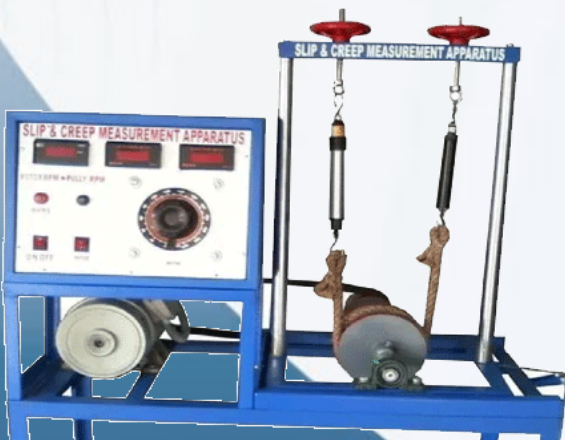
- Flywheel – 200mm x 35mm thick.
- Pulley and weight set for applying the torque weight set 200gm, 500 gm, 1 kg
- Recorder – Paper roll with reciprocating pen.
- Small Motor to mounting bucket with ball bearings.
- Flywheel mounting bracket with ball bearings.



Sleep & Creep Measurement Apparatus

Specifications:

- 0.5 HP D.C. Motor, 1500 RPM
- Voltmeter 0-300 V, Ammeter 0-5 Amp
- RPM indicator, Sensor 2 nos., Dimmer 2 Amp
- Spring Balance 0-10 Kg.
- Flywheel - 200 mm x 35 mm thick.
- Pulley and weight set for applying the torque weight set 200 gm, 500 gm, 1 kg
- Recorder – Paper roll with reciprocating pen.
- Small Motor to mounting bucket with ball bearings.
- Flywheel mounting bracket with ball bearings.





Ball Bearing Test Rig

Specifications:

- Bearing Mounting Fixture – Consist of a set of bearing races for bearings from 6201 to 6204 with parallelogram loading attachment.
- Drive motor – ½ HP, 1500 RPM D.C. motor.
- Lever and spring balance for applying the load, maximum loading capacity 25Kg.
- Dimmer Stat 2 Amp
- Electronic revolution counters with digital indicator.
- Torque arm with dead weights for measurement of friction torque fixture for measuring bearing radial clearance.



Dead Weight Pressure Gauge Trainer

Specifications:

- Precision ground plunger to develop the required pressure.
- Weight set for the pressure of 0.5 Kg/cm² to 50 Kg/cm². In steps of 0.5 Kg/cm² for 50 Kg/cm² and 0.5 Kg/cm² to 20 Kg/cm² for 20 Kg/cm².
- Adapters for gauges -
1/4" BSP. X 3/8" BSP. Threading - 1 No.
1/4" BSP. X 1/2" BSP. Threading - 1 No.
- A technical manual will be supplied with the unit.

Bourdon Tube Pressure Gauge Trainer

Specifications:

- Bourdon's Pressure Gauge. Capacity - 1 to 10 bar, least count - 0.5 bar (kg/cm²)
- System of which pressure has to be measured
- Air cylinder

- Slandered Bourdon gauge with comparative gauge.
- Foot pump based actuator setup.
- Analog dial gauge.