

**Product Name :**  
JOURNAL BEARING APPARATUS**Product Code :**  
Theory of Machine0003**Description :**

JOURNAL BEARING APPARATUS

**Technical Specification :**

The unit consists of a plain steel shaft encased in bearing & directly driven by a small electric motor. The bearing is freely supported on the shaft & sealed at the motor end. The motor speed is precisely controlled and adjusted by specially designed control unit and can be run in both the direction. The bearing contains twelve equispaced pressure tapings around its circumference and four additional once along its top side and on a vertical radial plane. All are connected by light and flexible plastic tubes to the rare manometer panel, so that pressure head of oil at all sixteen points can be clearly observed at all times. Oil is supplied to a low pressure region at both ends of the bearing by an adjustable reservoir fitted at the side of the rare panel. The bearing can be loaded by attaching various weights to the arms supported beneath it. A table is conveniently provided at the front of the apparatus.

**SPECIFICATIONS**

- 1) Journal Dia. - 50 mm. Dia.
- 2) Bearing Dia. - 55 mm. Dia.
- 3) Weights - 4 adjustable weights.
- 4) Recommended oil - SAE 10
- 5) Motor - D.C. shunt wound, speed range 500- 3000 rev. /min. in both the directions.
- 6) Control Unit - Special Design.
- 7) Manometer Panel - 16 tubes mounted on wooden Background

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### **FEATURES**

- Pressure profiles along and around the bearing continuously monitored on large manometer panel.
- Theoretical pressure profiles can be carried out & compared with practical result.
- Wide range of speeds & loads possible.
- Ideal for group studies & demonstrations.
- A.C. single phase F.H.P. motor is used with a speed control unit.
- Manometer height of 2-3 m. provided to study bearing pressure variation at higher speeds.

### **RANGE OF EXPERIMENTS**

- Simple Demonstrations:-  
Observation of the pressure profile at the various conditions of load & speed.
- Experimental investigations:-  
After noting the pressure profile for any chosen condition, the theoretical Sommer field curves may be plotted.

### **SERVICE REQUIRED**

- Single Phase 15amp Electrical Connection.

 **LAB ENGINEERING**

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