



### Features

Sturdy, compact, self contained bench top unit for determining the surface strains and deflections of a flexible diaphragm under varying pressures. An aluminum diaphragm is clamped rigidly around its outer edge, creating a volume underneath its surface into which oil is filled. On the top surface of the diaphragm are attached 8 precision strain gauges at differing orientations. Round Diaphragm Apparatus diaphragm is flexed, the strain gauge output is fed into a digital display, which is supplied.

The force applied to the diaphragm is created by pressurizing the oil underneath the diaphragm using a fine adjustment control mechanism. An analogue pressure indicator monitors the pressure, whilst an electronic pressure sensor monitors the same pressure but gives an output signal to the digital display.

### Specifications

1. Apparatus for determining surface strain and deflection of flexible diaphragm
2. To have strain gauge attached to surface
3. To utilize digital dial gauge for recording surface deflection and profile of diaphragm
4. Diaphragm pressurized causing deflection and surface strain
5. To have fine pressure adjustment for adjusting applied pressure to diaphragm
6. Digital display for strain, pressure and deflection values
7. Data acquisition software for key experimental parameters, Optional

Note: Specifications are subject to change.

### **Tesca Technologies Pvt. Ltd.**

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com  
Website: www.tescaglobal.com

### Experiments

1. Measurement of diaphragm disc surface strain using strain gauges
2. Measurement of diaphragm disc deflection with a dial gauge
3. Determination of radial strain
4. Determination of circumferential strain
5. Diaphragm surface profile
6. Strain gauge technology and uses
7. Comparison of actual and theoretical results
8. Mohr Circle