

**THD-009 SCREW COMPRESSOR TEST RIG**



**RANGE OF EXPERIMENTS TO BE CARRIED OUT:**

1. To study all components/Accessories used in Screw Air Compressor.
2. To study & determine Isentropic Work, Actual Work, Volumetric Efficiency, Isentropic Efficiency & Free Air Delivery at different delivery pressure.
3. To Plot Volumetric Efficiency/Isentropic Efficiency against Delivery Pressure & comment on the nature of the plot.

**TECHNICAL DESCRIPTION :**

The test rig consists of Air Compressor with an air suction tank, is fitted with an orifice at one end & other end connected to cylinder. The orifice pressure tapping is connected to one limb of U -Tube manometer on panel. Thermocouple  $T_1$ ,  $T_2$ ,  $T_3$  reads temperature at inlet (  $T_1$  ) outlet Temperature (  $T_2$  ) & (  $T_3$  ) records temperature of air in receiver.

Energy meter is used to record the power input to motor & in turn the work required for compression. The control panel houses starter for motor, main switch, Temperature Indicator .

**DIMENSIONS AND WEIGHT :**

Size :1.5 m.(L)x 1.0 m(W) X 2.0m ( H )

Weight :Approx. 200 Kg

**SERVICE REQUIRED :**

Power Supply :440v, AC ,Three Phase , 50HZ

**SCOPE OF DELIVERY:**

1. Experimental Setup
2. Instructional Manual

**OPTIONAL FACILITY:** Data logging Facility