FADAK LAB EQUIPMENTS

THD-007 ROTARY AIR COMPRESSOR TEST RIG

RANGE OF EXPERIMENTS TO BE CARRIED OUT:

1. To study all components/Accessories usedin Rotary Air Compressor.
2. To study & determine Actual Work,Pressure After Internal Compression,Volume After Internal Compression, WorkRequired to Internal Compression, WorkRequired to Increase the Pressure, TotalWork Required, Isentropic Work, ActualWork, Vane Efficiency, IsentropicEfficiency & Free Air Delivery at differentdelivery pressure.
3. To Plot Vane Efficiency/IsentropicEfficiency 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.

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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

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