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DOUBLE STAGE AIR COMPRESSOR TEST RIG (EE-1621)

DESCRIPTION:

Two Stage Air Compressor Test Rig consists of a double stage reciprocating type air compressor driven by 2 HP Motor through a belt. The outlet of the air compressor is connected to reservoir (Tank) and suction is connected to another air tank with a calibrated orifice plate and a water manometer. Bellow is fitted on one side of the air tank. Temperature of inlet air, after single compression, inlet and outlet of second compression and pressure in reservoir and at intermediate stage can be measured by temperature sensors and pressure gauge. RPM can be measured with the help of RPM Indicator provided in the panel box.

EXPERIMENTS:

- To calculate the volumetric efficiency
- To calculate isothermal HP
- To calculate compression ratio

UTILITIES REQUIRED:

- Electricity 3 kW, 220V AC, Single Phase
- Floor Area 1.5 x 0.75 m

TECHNICAL DETAILS:

- Compressor : Double Stage, Double Cylinder Capacity 9 CFM max. Working Pressure 15 kg/cm^2 max.
- Make : Standard available
- Motor : 2 HP driven by Belt Drive
- Manifold Tank : Suitable capacity.
- Flow Measurement : Orifice meter with Manometer
- Temperature Sensors : RTD PT: 100 type
- Air Tank : Capacity 145 liters with safety valve, shut off valve
- Pressure Gauge : Bourdon type
- Control Panel : Energy meter, Digital Temp. Indicator : 0-199.9C, with multi-channel switch, On/off switch, Mains Indicator, RPM Indicator, etc.
- The whole set-up is well designed and arranged in a good quality painted structure