This unit consists of a hermetically sealed compressor with air cooled condenser. A capillary or expansion valves are next to condensers followed by medium temperature evaporators. Electrical energy supplied to the compressor can be measured by energy meter. This Test Rig is used to perform the following experiments :

Specifications

- Compressor – Hermetically sealed, Kirloskar make
- Air Cooled Condenser – Finned tube type, with forced air flow over the tubes,
- Expansion device – Capillary tube
- Evaporator Coil – Finned tube type with forced air flow,
- Measurements and Controls
  - a) H.P. / L.P. Pressure gauges
  - b) Digital temperature indicator to measure the temperatures at various points.
  - c) Energy meter to measure input to compressor.
  - d) Digital Voltmeter and Digital Ampere meter
  - e) Thermostat to put off the compressor at set room temperature.
  - f) Necessary switch for electrical components.
  - g) Control Valves - 2 Nos.
  - h) Filter - Drier - 1 Nos.
  - i) Charging Valve - 1 Nos.

The equipment is mounted on a sturdy frame with control panel.

Experiments

- To calculate the COP of unit.
- To calculate the refrigerating effect and HP of unit.
- To determine the sensible heat factor of air.

Utilities Required

Electric supply

Single Phase, 230 VAC, 50Hz, 5-15 Amp socket with earth connection.

Note: Specifications are subject to change.

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