

VAPOUR COMPRESSION REFRIGERATION TEST RIG (EE-1596)

The REFRIGERATION test rig works on simple vapour compression refrigeration cycle and uses R134A as a refrigerant. It is environment friendly. The experimental refrigeration cycle test rig consist of a compressor unit, condenser, evaporator, cooling chamber, controlling devices and measuring instruments those are fitted on a stand and a control panel. Hermetically sealed compressor is fitted on stand with the help of flexible foundation bolts to minimize vibrations. The system is fabricated such that students can observe and study vapor compression cycle, its component principle & working. The arrangement of parts such that, all the parts are visible and working can be easily understood.

SCOPE OF EXPERIMENTATIONS:

-) To study the vapour compression refrigeration cycle.
-) To determine the coefficient of performance of cycle

UTILITIES REQUIRED:

-) Water Supply.
-) Drain
-) Electricity 220V AC, Single Phase.
-) Space required: 2 x 2 m.



TECHNICAL SPECIFICATIONS:

- Compressor : Hermetically sealed, Standard make (1/3 Ton)
- Condenser : Forced convection Air cooled
- Condenser fan : Axial flow type (Standard make)
- Expansion Device : Capillary Tube
- Evaporator : Shell and Coil type (Jacketed type)
- Refrigerant : R134A Type
- Pressure Indication : 2 No.s dial type pressure gauges. One fitted at suction side and another at discharge side
- Temperature Sensors : RTD PT-100 type (5 Nos.)
- Control panel : Digital Voltmeter: 0-300 Volt.
: Digital Ammeter: 0-2 Amp.
: Digital Temperature Indicator: 0-300°C (With multichannel switch)
: On/Off switch, Mains Indicator etc.

- The whole set-up is well designed and arranged on a good quality painted structure.