

WINDOW AIR CONDITIONING TEST RIG (EE-1599)

The Window Air Conditioning Test rig works on simple vapour compression refrigeration cycle and uses R32 as a refrigerant. It is environment friendly. The experimental Window Air conditioning test rig consist of a compressor unit, condenser, cooling chamber, Capillary expansion controlling device and measuring instruments those are fitted on a stand and a control panel. 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 about the Window Air conditioning test rig.
-) To determine the coefficient of performance of Window Air conditioning Test rig.

**UTILITIES REQUIRED:**

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

TECHNICAL SPECIFICATIONS:

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| ▪ Compressor | : | Hermetically sealed, Standard make (1 Ton) |
| ▪ Condenser | : | Forced convection Air cooled |
| ▪ Condenser fan | : | Axial flow type (Standard make) |
| ▪ Expansion Device | : | Capillary Tube |
| ▪ Evaporator | : | Forced convection Air cooled type |
| ▪ Evaporator fan | : | Axial flow type(standard make) |
| ▪ Refrigerant | : | R32 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 (6Nos.) |
| ▪ 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.