

Product Name :
WINDOW AIR CONDITIONER TEST RIG**Product Code :**
Conditioning0011**LAB ENGINEERING****Description :**

WINDOW AIR CONDITIONER TEST RIG

Technical Specification :

The Window AC test rig is designed and manufactured such that the students can understand construction and working of a window type air conditioner and conduct the trial on it to evaluate performance of the same. The window AC is fixed in a rigid angle frame, with its cover cut half open to reveal the internal parts of the AC. The required pressure and temperature tapings are drawn for measurement of pressures and temperatures at salient points. Energy meter is provided for recording compressor energy consumption. A sling psychrometer is provided for measurement of inlet and outlet Dry-bulb & wet bulb temperature. With the help of manometer, velocity of air and consequently the flow rate of air can be determined.

TECHNICAL SPECIFICATIONS

Capacity	:	1.0 TR at rated test conditions*
Compressor	:	Rotary type; Hermetically sealed.
Condenser	:	Forced convection air cooled
Condenser fan	:	Axial flow type.
Evaporator	:	Forced convection air cooled.
Evaporator fan	:	Centrifugal type
Drier/ filter	:	Molecular sieve type.
Expansion device	:	Capillary Tube
Refrigerant	:	R-22
Temperature	:	Sling Psychrometer for air temperatures & Digital Indicator for refrigerant temperatures.

Velocity	:	By inclined tube manometer
Pressure	:	Pressure gauges 2 Nos at suction & discharge
Supply	:	220-240 Volts, 50 Hz, 1 phase.
Input power	:	1.2 kW
Rated current	:	6.0 Amps.
Energy-meter	:	Provided for compressor
Material	:	Panel: 1.2 mm thick CRCA
Outer finish	:	Powder coating

LIST OF EXPERIMENTS:

- To determine Tonnage capacity of the Window type Air Conditioner by enthalpy difference method.
- To determine actual C. O. P & theoretical C. O. P of the cycle.
- To plot operating cycle on P-H chart.

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