

Product Name :
Window Air Conditioner Test Rig

Product Code :
NLAB-ENGINEERINGLB34011



Description :

Window Air Conditioner Test Rig

Technical Specification :

PRODUCT DESCRIPTION:

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

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Capacity	Rated test conditions†
Compressor	Hermetically sealed.
Condenser	Convection air cooled
Cooling fan	
Evaporator	Convection air cooled.
Compressor type	
Motefilter	sieve type.
Capillary tube	device
Refrigerant	
Temperature	Psychrometer for air temperatures & Digital Indicator for refrigerant temperatures.
Velocity	Orificed tube manometer
Pressure gauges	2 Nos at suction & discharge
Supply	220-240 Volts, 50 Hz, 1 phase.
Input power	
Rated current	
Energy efficiency	compressor
Material	1.2 mm thick CRCA
Paint finish	

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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