PRODUCT NAME

GENERAL CYCLE AIR CONDITIONING TEST RIG

PRODUCT CODE
ELABCONDITIONING0003



DESCRIPTION

GENERAL CYCLE AIR CONDITIONING TEST RIG

TECHNICAL SPECIFICATION

The A.C. test rig works on simple vapour compression refrigeration cycle using as a refrigerant. The system is fabricated such that student can study all the air conditioning processes. It is also useful to understand working of all the components of system, their performance and control etc.
All the components are mounted on the display board, so that students can observe their working easily.

TECHNICAL SPECIFICATIONS:

CAPACITY	:	1/3 TR@RATED TEST CONDITIONS
COMPRESSOR	:	HERMETICALLY SEALED. MAKE: EMERSON CLIMATE TECH.OR ANY EQUIVALENT MAKE.
CONDENSER	:	FORCED CONVECTION AIR COOLED.
CONDENSER FAN	:	AXIAL FLOW.
DRIER/ FILTER	:	PROVIDED.

EXPANSION DEVICE	:	CAPILLARY TUBE.
EVAPORATOR	:	FORCED CONVECTION AIR COOLED.
EVAPORATOR FAN	:	CENTRIFUGAL / AXIAL FLOW TYPE
DEHUMIDIFIER OR REHEATER	:	FINNED TYPE AIR HEATER.
HUMIDIFIER	:	PROVIDED
REFRIGERANT	:	R-134 a.
HP / LP CUT-OUT	:	ALCO/ OR DANFOSS / OR INDFOSS OR ANY EQUIVALENT MAKE.
TEMPERATURE	:	6 CHANNEL FACILITY WITH DIGITAL DISPLAY.
PRESSURE	:	2 NOS.; DIAL TYPE PRESSURE GAUGES.
REFRIGERANT FLOW	:	GLASS TUBE ROTAMETER PROVIDED.
AIR TEMPERATURE	:	DBT & WBT MEASUREMENT BY SLING PSYCHROMETER.
AIR FLOW MEASUREMENT	:	BY INCLINED TUBE MANOMETER.
SUPPLY	:	220-240 VOLTS, 50 HZ, 1 PHASE.
INPUT POWER	:	0.75 KW.
RATED CURRENT	:	4 AMPS.
INDICATING LAMPS	:	PROVIDED FOR COMPRESSOR AND HEATER.
ENERGY-METER	:	RANGE 0-20 A; PROVIDED FOR COMPRESSOR
MATERIAL	:	PANEL: 1.2 MM THICK CRCA
OUTER FINISH	:	POWDER COATING

LIST OF EXPERIMENTS:

- To evaluate the tonnage capacity of the air conditioning system by enthalpy difference method.
- To evaluate actual and theoretical C.O.P. of the system.
- To plot the refrigeration cycle on P-H & T-S charts.
- To plot the psychometric processes on psychometric charts.

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Specifications are indicative and subject to continuous improvement.