PRODUCT NAME

REFRGERATION TEST RIG

PRODUCT CODE
ELABCONDITIONING0007



DESCRIPTION

REFRGERATION TEST RIG

TECHNICAL SPECIFICATION

The Refrigeration Test Rig works on vapor compression cycle. The refrigeration (i.e. process of maintaining a closed space temperature below ambient temperature) is accomplished by continuously circulating, evaporating and condensing a fixed supply of refrigerant in a closed system. Evaporation occurs at a low temperature and low pressure while condensation occurs at a high temperature and pressure. Thus it is possible to transfer heat from an area of low temperature (in this case calorimeter) to an area of high temperature (the surroundings).
The required instrumentation is provided to measure the various parameters at different points. This includes pressure gauges, temperature indicators and controller, energy-meters, heater for applying load and flow meter to measure the refrigerant flow TECHNICAL SPECIFICATIONS OF REFRIGERATION TEST RIG

CAPACITY	:	500 WATTS AT RATED TEST CONDITIONS.
REFRIGERANT	:	R-134 a
COMPRESSOR	:	HERMETICALLY SEALED Make: EMERSON CLIMATE TECHNOLOGIES LTD.OR EQUIVALENT.
CONDENSER	:	FORCED CONVECTION AIR COOLED
CONDENSER FAN MOTOR	:	INDUCTION TYPE
DRIER / FILTER	:	PROVIDED

EXPANSION DEVICE	:	CAPILLARY TUBE
REFIGERANT FLOW MEASURMENT	:	GLASS TUBE ROTAMETER
EVAPORATOR	:	FORCED CONVECTION AIR COOLED.
HP/LP CUTOUT	:	PROVIDED
PRESSURE INDICATION	:	PRESSURE GAUGES, 2NOS PROVIDED
ENERGY METER		2 NOS PROVIDED. EACH ONE FOR COMPRESSOR & HEATER
TEMPERATURE CONTROL OF THE TEST CHAMBER	:	AUTOMATIC BY TEMPERATURE CONTROLLER
SUPPLY	:	230 VOLTS, 50HZ, 1 PHASE, AC.
CONSTRUCTION	:	MAIN BODY: 18 G CRCA, POWDER COATED. CALORIMETER: STAINLESS STEEL

LIST OF EXPERIEMNTS:

- To evaluate the cooling capacity in Watts & in Tons of the system.
- To evaluate actual and theoretical C.O.P. of Vapor Compression Cycle.
- To plot the actual Refrigeration Cycle on P-H chart.
- To study various components and controls used in Vapor Compression Cycle.

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purchase@elabengineeringequipments.com

Specifications are indicative and subject to continuous improvement.