LAB ENGINEERING

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Product Name : REFRGERATION TEST RIG	**Product Code :** Conditioning0007

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
C	HERMET

OMPRESSOR	ICALLY 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
EVAPORAT	FORCED CONVECTION AIR COOLED

OR	.
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. CALORI

	METER: 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.