

Product Name : " REFRIGERATION CYCLE DEMO UNIT "
Product Code : " RCDU 11 "



Description :

INTRODUCTION:-

A simple refrigeration circuit is demonstrated with this clearly laid out experimental unit. The evaporation and condensation processes are easily observed through the glass components. The function of the expansion valve (in the form of a float valve) can be seen. The changes in the refrigerant state can also be followed by measuring pressures and temperatures. A special environmentally friendly refrigerant is used at High pressure.

Compressor	Hermetic compressor of 1/3 HP(0.75 Ton)
Condenser	Vertical cylinder, made of glass, through which the coil ca where in its inside cooling water circulates. The cylinder is over special bridles that reduce the formation of tensions a hermetic by using special viton joints. The heat transmissio is formed by 9 nickel-plated copper spires of 1/4” diameter which the water flows. The heat transmission area is approx 0.032 m2.
Evaporator	Similar structure to that of the condenser, and with a special copper coil to promote the ebullition. The heat transmission area is approx. 0.032 m2. Expansion valve, float type, that is assembled on the condenser.
Sight Glass& Flow Meter(Rotameter)	Placed between the evaporator and the expansion valve, to observe the formation of vapour bubbles after the expansion valve.
9 Temperature Sensor	Temperature sensors that indicate the water output and input temperatures, both in the condenser and in the evaporator, and the evaporation, condensation, expansion and environmental temperatures.
Temp. Sensor Range	0-100°C.
Maximum working temperature	100°C.
2 Flow meters	Rotameter type, to measure the water flow (condenser and evaporator). Flow meters range: 0-21/min.
Pressure meter	Pressure meter (evaporator): from -1 to 18bar. Pressure meter (condenser): from 0 to 38bar.
2 Pressure meters	Pressure meters indicate the refrigerant fluid pressure in the condenser and in the evaporator.
Power measurement (wattmeter)	Energy Meter 5amp.- 20amp.
Solenoid valve	1 Nos.
Isolation valves	1 Nos.
Refrigerant Gas	R134a CFC Free
Temp. Controller (11 Channel)	Temperature sensors connections. Digital display for temperature sensors. Selector for temperature sensors.
Control Panel	Compressor Switch, Amp. Meter & Volt Meter.
Pressure Switch	High Pressure cut off.