



The apparatus consists of a storage water tank, embraced by evaporator coil of the cooling unit, cooling cycle comprises of a hermetically sealed compressor, air-cooled condenser, a capillary tube as expansion device and an evaporator cell. The stainless steel water tank is provided with insulation on air Sides and a door are provided at the top. Cold water can be taken out from a top provided and inlet water supply is controlled by a ball-operated top. Various measurements provided enable students to determine the theoretical and actual COP, power consumption, actual cooling capacity refrigerant flow and compressor volumetric efficiency of compressor.

SPECIFICATIONS:

1. Cooling Cycle
 - a) Compressor Hermetically sealed type, having the capacity of 1/3 ton of refrigeration using R-12 refrigerant.
 - b) Finned tube type air colled condenser with forced air flow.
 - c) Filter cum drier for refrigerant.
 - d) Capacity expansion device.
 - e) Evaporator coil embraced on stainless steel water tank, Provided with glass wool Insulation.
2. Water drain tap and float operated inlet water tap are provided for water tank with insulated lift door at top.
3. Measurement
 - a) Pressure gauges for evaporating and condensing pressure.
 - b) Thermometers to measure refrigerant temperatures at inlet and out let of condenser and evaporator.
 - c) Dial type thermometer for water temperature.
 - d) Rotameter to measure liquid refrigerant flow.
 - e) Energymeter to measure compressor Input.
4. Safely & Controls -
 - a) Thermostat to put off compressor at set water temperature.
 - b) Pressostat to put off compressor if high or low pressure Goes out of set limit.
 - c) Over load protector for compressor,

A technical manual will be supplied along - with the unit. Also, the unit is provided with an attractive and anti corrosion powder costing.

SERVICES REQUIRED:

1. Floor space of 1.5 m. X 1.5 m.
2. Water supply of 5 lit/min,
3. 230 V, 15A AC stabilized supply with earthing connection

Note: Specifications are subject to change.

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