

RAC-001 ICE PLANT TEST RIG



RANGE OF EXPERIMENTS TO BE CARRIED OUT:

1. To study all components used in refrigeration system.
2. To study the Vapor compression Refrigeration cycle.
3. To study the concept of Ice formation.
4. To determine the Refrigeration Effect, Work Input, Actual C.O.P., Carnot C.O.P., Theoretical C.O.P., Relative C.O.P., Ton of Refrigeration, and Plant Efficiency.

TECHNICAL DESCRIPTION :

The present equipment uses compression cycle system with Freon – 134a as the cooling media. The unit differs in many aspects than the commercial plants.

The equipments consists of control panel, condensing unit, cooling system, brine solution tank & a main tank etc. The brine tank is insulated from all sides with a door at the top side to load/unload the cans. The brine is placed in main tank.

The brine tank has a structure at the top side where the cans be hold. An agitator (stirrer) is used to stir the brine solution. A drain is provided to the brine tank. This tank is coated from inside to prevent any action by brine.

The compressor is mounted at one side of base with a condenser & fan. A liquid receiver is adopted in the circuit. The evaporator coil is held at one side in the brine tank.



The panel consists of switches, energymeter, pressure gauges, HP/LP cutout, Thermostat

DIMENSIONS AND WEIGHT :

Size :2.5 m.(L)x 1.5 m(W) X 1.5m (H)

Weight :Approx. 250 Kg

SERVICE REQUIRED :

230 v Ac Supply 50 Hz

Brine Solution : 70 ltr

SCOPE OF DELIVERY:

1. Experimental Setup
2. Instructional Manual

OPTIONAL FACILITY: Data logging Facility