

Product Name : " DOMESTIC FREEZER TRAINING KIT "
Product Code : " R.A.C 01 "



Description :

DOMESTIC FREEZER TRAINING KIT:-

AIM:-

- Especially designed for educational and training purpose.

INTRODUCTION:-

The domestic refrigerator is one found in almost all the homes for storing food, vegetables, fruits, beverages, and much more. This article describes the important parts of the domestic refrigerator and also their working. The parts of domestic refrigerator can be categorized into two categories: internal and external.

Parts of the Domestic Refrigerator

The internal parts of the refrigerator are ones that carry out actual working of the refrigerator. Some of the internal parts are located at the back of the refrigerator, and some inside the main compartment of the refrigerator. Some internal parts of the domestic refrigerator are (please refer the figure above):

1) Refrigerant: The refrigerant flows through all the internal parts of the refrigerator. It is the refrigerant that carries out the cooling effect in the evaporator. It absorbs the heat from the substance to be cooled in the evaporator (chiller or freezer) and throws it to the atmosphere via condenser. The refrigerant keeps on recirculating through all the internal parts of the refrigerator in cycle.

2) Compressor: The compressor is located at the back of the refrigerator and in the bottom area. The compressor sucks the refrigerant from the evaporator and discharges it at high pressure and temperature. The compressor is driven by the electric motor and it is the major power consuming device of the refrigerator.

3) Condenser: The condenser is the thin coil of copper tubing located at the back of the refrigerator. The refrigerant from the compressor enters the condenser where it is cooled by the atmospheric air thus losing heat absorbed by it in the evaporator and the compressor. To increase the heat transfer rate of the condenser, it is finned externally.

4) Expansive valve or the capillary: The refrigerant leaving the condenser enters the expansion device, which is the capillary tube in case of the domestic refrigerators. The capillary is the thin copper tubing made up of number of turns of the copper coil. When the refrigerant is passed through the capillary its pressure and temperature drops down suddenly.

5) Evaporator or chiller or freezer: The refrigerant at very low pressure and temperature enters the evaporator or the freezer. The evaporator is the heat exchanger made up of several turns of copper or aluminum tubing. In domestic refrigerators the plate types of evaporator is used as shown in the figure above. The refrigerant absorbs the heat from the substance to be cooled in the evaporator, gets evaporated and it then sucked by the compressor. This cycle keeps on repeating.

TECHNICAL SPECIFICATION:-

450 W hermetic compressor, fan-cooled condenser, gravity type evaporator, capillary tube with strainer, filter-drier, sight glass, high low pressure control, main circuit breaker, duplex receptacle, compressor start switch, pilot light, hardware kit, cold box, and courseware.

The unit is supplied with a mobile storage cabinet of code-gauge furniture stock steel with 4-inch swivel rubber-tired casters. The unit is charged with R-134a HFC refrigerant.