AIR CONDITIONING

K-217 AIR-WATER-AIR TYPE HEAT PUMP TRAINING SET

GENERAL EXPLANATION

This training set is designed to show the operation of the heat pump from air to water and from water to air again (fanless serpentine unit).

EXPERIMENTS

1. Calculation of heating efficiency coefficient (COP)
2. Calculation of cooling efficiency coefficient (COP)
3. Comparison of ideal and practical cycles on the pH diagram
4. Drawing heat pump efficiency curves using different evaporation temperatures
5. Drawing COP curves at different condensation temperatures
6. Relation of compressor compression ratio - volumetric efficiency

DIMENSIONS

A x B x H : 1420 x 680 x 1365 mm

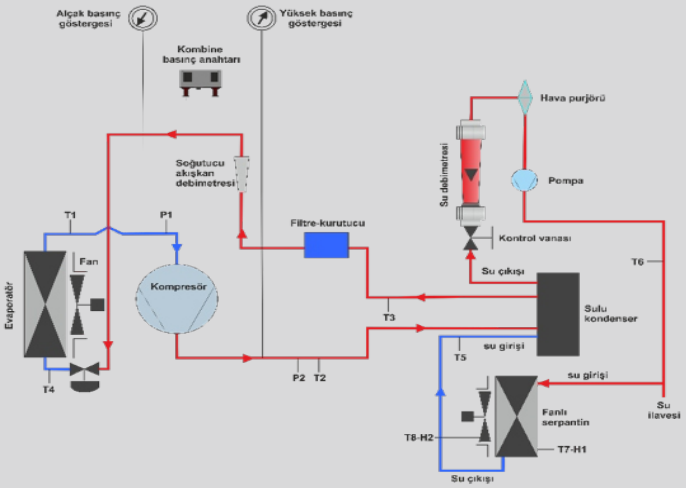
OPTIONAL FEATURES

- Touch LCD Display
- USB Computer Connection
- Computer Control

TECHNICAL SPECIFICATION

Heat pumps are devices that can transfer heat from a low temperature environment to a higher temperature environment. The heat pump transfers energy from the natural source environment to the user when heating and transfers energy to natural environment to the user when cooling. When examined as a thermodynamic process, heat pump is a cooling machine working on the principle of "Reverse Carnot Cycle" and consists of 5 important building elements:

- Refrigerant (performs heat transfer)
- Compressor (compresses vapor phase into fluid)
- Condenser (condensing the vapor into the liquid phase)
- Expansion Valve (reduces pressure and temperature)
- Evaporator



TECHNICAL DETAILS

- Hermetic compressor
- Fan with evaporator
- Fan cooled lamellar water-cooled condenser
- Capacitor air inlet-outlet temperature and humidity measurement
- Inner tube heat exchanger
- Step circulation pump

PACKAGE INCLUDED

Device, device cover, 1 printed experiment report, circuit diagram and product catalog