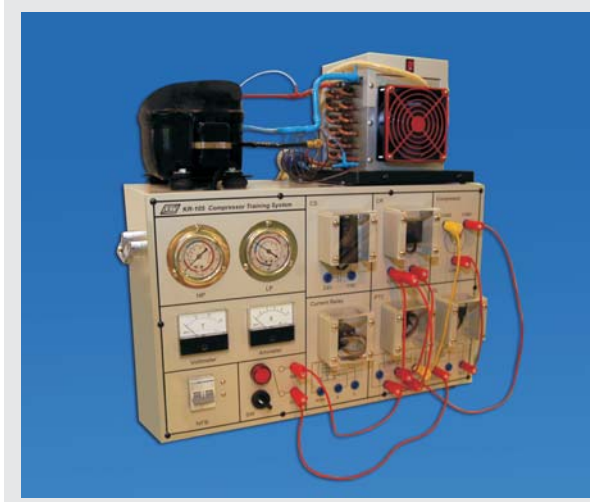


## KR-105

### Compressor Training System



By using this trainer, trainees can wire the circuit of compressor. Two start-up methods (current-mode and PTC) are provided in this training system. Trainees can measure and observe the signals on terminals in the start-up circuit to comprehend its operating principle. In addition, the trainer includes a real refrigeration system. Hence, the start-up circuit can drive a real compressor when the wiring is completed. High/Low pressure gauges and voltage/current meters are embedded in front panel. The copper tubes in the system have reserved apertures for users to measure the temperature. Each component in the system is fixed individually. A transparent acrylic cover is assembled which can protect the components and make trainees observe the component's structure clearly. Two fans are installed on the evaporator and the condenser respectively for adjusting evaporation and condensing conditions, which makes experiments diversified.

#### ► Features

- The components' structure is able to be observed clearly, and protected by transparent acrylic cover.
- Two start-up methods are included (current-mode and PTC).
- Quick connectors are used in each component for easy wiring.
- A real circulation of refrigeration system is included for users observation and analysis.
- Several apertures are reserved for users to measure the temperature easily.
- A fan with standalone switch is installed on the evaporator for users to adjust heat absorption of the evaporator.
- A fan with standalone switch is installed on the condenser for users to adjust heat dissipation of the condenser.
- High/Low pressure gauges are embedded in front panel and connected with the compressor for observing the pressure change.
- Trainees can use the fix valve to practice the refrigerant supplement.

#### ► Specifications

##### 1. Compressor

- a. Motor : 1/10 HP
- b. Input : 220V (50Hz)
- c. Refrigerant : R-134a

##### 2. Condenser

- a. Cooling type : Nature & Force(Can change)cooling
- b. Refrigerant contact : Input 1/4", output 1/4"

##### 3. Evaporator

- a. Cooling type : Nature & Force(Can change)cooling
- b. Refrigerant contact : Input 1/4", output 1/4"

##### 4. Refrigerant controller

- a. Type : Capillary tube
- b. Size : 2.54 $\varnothing$  x 0.55t(mm)

##### 5. Filter and Drier

- a. Input : 1/4"
- b. Output : 1/4"

##### 6. Service Valve

Low pressure service : 1/4"

##### 7. High Pressure Gauge

- a. Size : 67 $\varnothing$  (mm)
- b. Range : 0 ~ 35kg/cm<sup>2</sup>

##### 8. Low Pressure Gauge

- a. Size : 67 $\varnothing$  (mm)
- b. Range : 0 ~ 15Kg/cm<sup>2</sup>  
0 ~ 76cmHgVac (29.92inHgVac)

##### 9. AC Voltmeter

Range : 0~300V

##### 10. AC Ammeter

Range : 0~10A

##### 11. FAN

- a. Power : AC 220 V
- b. Size : 120 x120

##### 12. Dimension

600(W) x 580(H) x 350(D) mm ( $\pm 10\%$ )

#### ► Experiments

1. Operating Principle and Structure of Compressor
2. In-Circuit Component Testing
3. PTC Start-Up Practice
4. Current-mode Start-Up Practice
5. Overview of the System
6. Circulation of Refrigeration System
7. Management of Refrigeration System
8. Circulation of Refrigeration system Practice
9. Drawing Mollier Diagram
10. Evaluation and Comparison of Refrigeration Performance