



System Description

The **Multiple Compressor Trainer** is a comprehensive educational system designed to demonstrate the core principles and control modes of refrigeration compressors. As a central component in the refrigeration cycle, the compressor transforms low-temperature, low-pressure refrigerant gas into high-temperature, high-pressure gas, enabling the process of compression → condensation (heat release) → expansion → evaporation (heat absorption).

This trainer is ideal for **technical and vocational institutions**, offering hands-on training that familiarizes students with various compressor start-up and operational modes, electrical configurations, and practical fault diagnosis.

Core Features

- **Educational Focus:** Designed for higher vocational training in refrigeration and HVAC systems.
- **Compressor Type:** Reciprocating type to demonstrate standard refrigeration cycles.
- **Frame Construction:** Sturdy, lightweight **aluminum profile frame** for durability and portability.
- **Panel-Mounted Components:** All training elements are clearly laid out on a front-facing panel for ease of use and visibility.
- **Safety:** Includes built-in **safety protection systems** to ensure safe operation during practical sessions.
- **User-Friendly Design:** Modular setup minimizes risk of component damage and simplifies maintenance.

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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Scope of Experiments

The trainer supports a wide range of compressor start-up configurations and operational modes. Trainees can perform the following experiments:

1. **Compressor Winding Measurement Experiment**
2. **Heavy Hammer Start Mode – Compressor Running**
3. **Heavy Hammer + Capacitor Start Mode – Compressor Running**
4. **Heavy Hammer + Capacitor Start & Capacitor Operation Mode – Compressor Running**
5. **PTC Thermistor Start Mode – Compressor Running**
6. **PTC Thermistor + Capacitor Start Mode – Compressor Running**
7. **PTC Thermistor + Capacitor Start & Capacitor Operation Mode – Compressor Running**

These experiments allow learners to explore how various components such as capacitors, PTC thermistors, and different starting methods influence compressor behavior.

Technical Highlights

- Compressor simulates real-world refrigeration system operation.
- Various **starting configurations** for educational flexibility.
- Includes wiring and testing terminals for safe hands-on learning.
- Enables comprehensive **understanding of compressor control principles**, motor behavior, and common troubleshooting techniques.

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