

## **AIR CONDITIONING FAULT TRAINER**

MODEL: RAC14



### **FEATURES**

- A free standing unit for easy installation
- Compact, sturdy and safe design
- Controls/indicators for temperature, humidity
- Total instrumentation for complete heat balance
- Fault trainer attachment to provide practical training in logical fault diagnosis

### **DESCRIPTION**

An invaluable aid in the effective understanding of the air-conditioning process. The equipment is a comprehensive plant which incorporates an axial flow fan, damper and test duct sections, flow meter, electronic control panel and loading arrangement. Temperature sensors at various points facilitate psychometric studies.

Fault Trainer is also provided as an additional teaching aid. Teachers/Instructor can create a fault using the teachers' panel provided. The students then logically trace the problem and rectify it.

### INSTRUCTION MANUAL

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Self-explanatory operating manuals are provided with each system. Detailed theory as well as practical exercises is also included in the manual

### LIST OF EXPERIMENT

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To Study Fault of

Fuse blown-off	Main overload relay tripped
Condenser fan motor fault	Compressor not working
Less refrigerant	Starting capacitor fault
Incorrect evaporator load	Low suction pressure
Running capacitor fault	Faulty starting relay
High ambient temperature	Undersized unit
System partially choked	Improper use

### COMPONENTS

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1. Compressor
2. Humidifier: Steam generation by using electrical heater
3. Expansion Device
4. Flow Indicator : To measure refrigerant flow
5. Control chamber and ducting : Houses sensors, thermostats and axial fan
6. Measuring vessel to measure water condensed at dew point conditions
7. Energy-meter
8. Temperature Indicator with sensors
9. Cooling coil evaporator
10. Pressure gauges
11. Electrical Heater to load the system
12. H.P. / L.P cut out
13. Arrangement for fault simulation

### OPTIONAL ADDITIONAL

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1. Computerised refrigeration trainer  
An advanced personal computer based model. This system has facility of data acquisition, plotting on-line and historical trends. It carries out complete calculations to determine performance. A comprehensive HELP menu makes the system user friendly.
2. Refrigeration components cut away model board.

*Note: Details of attachments can be made available on request.*

### SERVICES REQUIRED

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- Electric supply
- Water supply and drainage arrangement

#### NiYo Engineers

Unit 1B, Devgiri Industrial Estate, S. No. 17/1B Plot No. 14, Kothrud, Pune 411 029  
INDIA, Tel-91 20 2546 5004, 2546 8051, 2546 7296 Telefax - 91 20 2546 8051  
e-mail- [sales@niyoindia.com](mailto:sales@niyoindia.com) Web: [www.niyoindia.com](http://www.niyoindia.com)



(1) Since research and development is an on-going activity, the specifications mentioned herein are subject to change without notice  
(2) Photographs are indicative only