



### Features

- Compact, sturdy and safe design
- Controls temperature, humidity and air movement
- Total instrumentation for complete heat balance

Tesca Vapour Compression Refrigeration Air-Conditioning Trainer 32411 is 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.

### System Components

- Compressor
- Condenser
- Expansion Device
- Control chamber and ducting : Houses sensors, thermostats and axial fan
- Measuring vessel to measure water condensed at dew point conditions
- Cooling coil evaporator
- Electrical Heater to load the system
- Humidifier: Steam generation by using electrical heater
- Rotameter: To measure refrigerant flow
- Energy-meter
- Temperature Indicator with sensors
- Pressure gauges

### Optional Additions

- Computerised AC trainer
  - ◊ o 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.

- AC fault trainer
- Refrigeration components cut away model board.
- Digital Anemometer

### Experiments

1. Study of a typical air-conditioning cycle
2. Humidification and dehumidification
3. Heat balance at evaporator, condenser and the overall system
4. Compressor efficiency at various loads
5. Psychometric charts
6. Determination of coefficient of performance
7. Re-circulation of air

### Instruction cum Training Manual

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

### Services required

- Electric supply
- Water supply and drainage arrangement

Note: Specifications are subject to change.

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