COMPUTERISED REFRIGERATION TRAINER

MODEL: RAC11

FEATURES

- Compact, comprehensive, sturdy design
- Smooth and silent operation
- Graphical displays and coloured mimic screens
- Windows based user-friendly software
- Safety measures against mishandling

DESCRIPTION

An invaluable aid in the effective understanding of the refrigeration process. The trainer is designed for the study of thermodynamics of vapour compression refrigeration cycle by way of demonstration and experimentation.

The trainer has all the necessary sensors/transducers to measure the test parameters. The data is fed to the PC through a signal conditioning unit, interfacing and communication system. The results can be analysed in tabular as well as graphical form.

The software is Windows based menu driven and user-friendly.

INSTRUCTION MANUAL

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

1. Study the typical refrigeration cycle
2. Heat balance at evaporator, condenser and the overall system
3. Compressor efficiency at various loads
4. Plotting pressure – enthalpy diagram and its comparison with ideal cycle
5. Determination of coefficient of performance
6. Computer based data acquisition
7. Study of temperature sensor
8. Study of pressure sensor
9. Study of flow transducer *Applicable only if flow transducer is ordered from Optional Additional items*

COMPONENTS

1. Compressor
2. Condenser
3. Expansion Device
4. Evaporator coil placed in a water tank
5. Electric heater to load the system
6. Water Stirrer
7. HP LP Cut out
8. Transducers to measure pressure and power consumed
9. Data acquisition and interfacing system and Software

OPTIONAL ADDITIONAL

1. Transducers to measure Refrigerant flow
2. Refrigeration fault trainer
3. Refrigeration components cut away model board.
4. PC with Colour monitor with Windows XP/Windows 7 (Home), one serial port R232

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

SERVICES REQUIRED

- Electric supply
- Water supply and drainage arrangement