

## COMPUTERISED AIR COMPRESSOR TEST RIG

MODEL: PCF14



### FEATURES

- Compact, comprehensive, sturdy design
- Versatile operation
- Self contained system
- Choice of single stage or tow stage compressor
- Menu driven screen
- User friendly data acquisition system

### DESCRIPTION

An invaluable aid in the effective understanding of the performance characteristics of single/two stage air compressor. The trainer carries out a complete analysis of acquired data, represents the results in tabular as well as graphical format.

The trainer is complete with transducers to measure relevant parameters. The parameters are fed to the computer via a signal conditioning unit, the interfacing and communication system along with necessary power supply. The acquired data is then analysed and displayed in tabular/ graphical format by the software provided. The software is Windows based user friendly and menu driven. Facility to print the data helps student keep record of their experiments.

## 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. To study the construction and operation of air compressor.
2. Plotting of intake volume flow rate versus delivery flow rate for varying speeds\*\*
3. Study of air delivery characteristics with varying compressor speed\*\*
4. Study of air delivery characteristics with varying compressor pressures
5. To determine volumetric efficiency, mechanical efficiency and isothermal efficiency.
6. To study the effect of an intercooler\*

\*For double stage compressor systems only.

\*\*For model with speed variation facility

## COMPONENTS

1. Air Compressor with all safety arrangements and storage tank
2. Electric Motor
3. Temperature Transmitter
4. Torque Transmitter
5. Pressure Transmitter
6. RPM Transmitter
7. Air Flow Transmitter
8. Data acquisition and interfacing system
9. Software



## OPTIONAL ADDITIONAL

1. Arrangement for PV Plot
2. PC with Colour monitor with Windows XP/Windows 7 (Home), one serial port R232
3. Variable speed drive unit

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

## SERVICES REQUIRED

1. Electric supply

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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.