

PC BASED HEAT EXCHANGER TRAINER MODEL: HMT16



FEATURES

- Compact, comprehensive, sturdy design
- Smooth and silent operation
- Total instrumentation for complete heat balance
- One or many of Shell and tube, concentric pipe and plate type heat exchangers can be studied.

DESCRIPTION

An invaluable aid in the effective understanding of heat exchangers. The hot water unit comprises of a tank fitted with electrical immersion heaters. It has a facility to circulate hot and cold water through flow meters. Shell and tube heat exchanger and/or a concentric pipe heat exchanger and/or plate type heat exchanger is provided to conduct the experiment. Other type of heat exchangers can be provided, on request. The system facilitates to study the parallel and counter flow as well.

Flow rates and temperatures can be varied independently and the heat transfer coefficients derived. 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.

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 and compare the heat exchanged in different types of heat exchangers.*
2. Determination of mean temperature difference under parallel and counter flow
3. Determination of overall heat transfer coefficient.
4. To determine the heat exchanger capacity.

* Only if more than one heat exchanger is ordered.

COMPONENTS

1. Heat exchanger
2. Water Heater
3. Pump
4. Tank
5. Temperature indicator
6. Flow measuring unit
7. Control panel
8. Computerised data acquisition software for heat transfer.

OPTIONAL ADDITIONAL

1. PC with Colour monitor with Windows XP/Windows 7 (Home), one serial port R232
2. Glass Tube Heat Exchanger

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

SERVICES REQUIRED

1. Water supply and drainage arrangement
2. 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