

Product Name :
Astra Scientific Multi Heat Exchanger with data Acquisition

Product Code :
HeatMassLab0013



Description :

Astra Scientific Multi Heat Exchanger with data Acquisition

Technical Specification :

The Offers basic experimental apparatus is used for studying of three types of heat exchangers namely-concentric tube, shell and tube, and plate-under parallel or counter flow conditions.

The unit consists of the three heat exchangers, and a service module. The module comprises a hot water tank with a transfer pump and instruments for monitoring and control. Selection of the heat exchanger is simply done by opening a valve and changing from parallel to counter flow is by switching two flexible hoses. The unit requires outside water supply.

The microprocessor-based instrumentation is well protected in the housing. The software consists of software for system operation and for data acquisition and educational software. is connected to the PC via USB.

FEATURES:

- Comparison of heat transfer for concentric tube, shell and tube, and plate heat exchanger.

- Demonstration of heat transfer under parallel or counter flow.
- Demonstration of batch type heat transfer for jacketed vessel.
- Determination heat transfer coefficient.
- Effects of flow rate and temperature difference.
- Useful for institutions, research laboratories & insulating powder manufactures
- Functions of the software: educational software, data acquisition, system operation

SPECIFICATION:

- Heat exchangers:

Concentric tube: 2 sections of stainless steel inner tube with clear acrylic casing.

Shell and tube: Stainless steel inner tubes with clear acrylic casing.

Plate: Stainless steel multiple plates.

- Service module consisting of

Hot water tank and pump.

Heater: 3000 W.

Temperatures: 14 ea.

Flow meters: Hot water and cold water.

Temperature control unit: 1 ea.

- Stainless steel jacketed vessel with coil and stirrer
- Vessel content

With a temperature sensor.

Jacket heat transfer area approximately 600 cm²

Coil heat transfer area approximately 350 cm²

Stirrer: 0- 500 rpm

- Measuring ranges

temperature: 2x 0...325°C

Heating power: 0...3000W

- Required for Operation

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase



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