

**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 cm<sup>2</sup>

Coil heat transfer area approximately 350 cm<sup>2</sup>

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



## Astra Scientific

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