

## HT-023 PARALLEL AND COUNTER FLOW HEAT EXCHANGER



### **RANGE OF EXPERIMENTS TO BE CARRIED OUT:**

1. To determine Heat transfer rate of heating & cooling.
2. To Calculate L.M.T.D.
3. To determine Overall Heat Transfer Coefficient
4. To calculate Effectiveness of heat exchanger.
5. The experiments can be conducted at various values of input & calculation can be made accordingly.

### **TECHNICAL DESCRIPTION :**

The apparatus consists of a tube in tube type concentric tube heat exchanger.

The hot fluid is hot water which is obtained from an electrical geyser & it flows through the inner tube. While the cold fluid is cold water, flowing through annulus. The hot water flows in one direction & the flow rate of which is collected by means of a valve. The cold water can be admitted at one end enabling the heat exchanger to run as a parallel flow apparatus or a counter flow apparatus this is done by wall operations. The flow rate of hot and cold water are measured by using rotameter. Temperatures at inlet and outlet are measured by using thermocouples and temperature indicator.

**DIMENSIONS AND WEIGHT :**

Size :1.2 m.(L)x 0.7m(W) X 1.5 m ( H )

Weight :Approx. 80 Kg , Water: @10 Lpm

**SERVICE REQUIRED :**

230 v Ac Supply 50 Hz

**SCOPE OF DELIVERY:**

1. Experimental Setup
2. Instructional Manual

**OPTIONAL FACILITY:** Data logging Facility