

Product Name :
Parallel & Counter Flow Heat Exchanger for engineering schools

Product Code :
HTL009

Description :

Parallel & Counter Flow Heat Exchanger , technical teaching equipment for engineering We hold specialization in the manufacturing, trading and exporting of premium quality **Parallel & Counter Flow Heat Exchanger**.

Offered setup is designed to study the pipes in parallel of the same diameter. It consists of a set of 2 pipe test sections, supply tank, measuring tank and pump for closed loop water circulation. Our apparatus is appreciated globally for its dimensional accuracy, seamless finish and corrosion resistance.

Description:

- Heat exchanger is a device in which heat is transferred from one fluid to another. The apparatus consists of a concentric tube heat exchanger. Hot water flows through inner tube in one direction only and cold water flows through the outer tubes. Direction of cold fluid flow can be changed from parallel or counter to hot water so that unit can be operated as parallel or counter flow heat exchanger. Flow rates of hot and cold water are measured using Rotameters. A magnetic drive pump is used to circulate the hot water from a re-cycled type water tank, which is fitted with heaters and Digital Temperature Controller.

Experimentation:

- To calculate the following parameters both for parallel and Counter flow arrangement: Rate of Heat Transfer, LMTD, Overall heat transfer co-efficient.
- To compare the performance of Parallel and Counter flow heat exchanger.

Utilities required:

- Water supply 10 lit/min (approx.) and drain.
- Electricity Supply : 1 Phase, 220 V AC, 3 kW.
- Floor area 2 m x 0.6m

Technical Specifications:

- System: Water to Water, concentric tube type
- Heat Exchanger: Length 1.6m (approx.). insulated with ceramic wool and clad by aluminum foil.
- Outer Tube: Material Stainless steel. ID 27.5mm, OD 33.8 mm (approx)
- Inner Tube: Material Stainless Steel, OD 12.7mm (approx)
- Water Flow Measurement: Rotameters (2Nos.) one each for cold & hot fluid.
- Hot Water Tank: Made of Stainless steel. Insulated with ceramic fiber wool.
- Hot Water Circulation: Magnetic Pump
- Heaters: Nichrome wire heater (2Nos)
- Digital Temp. Controller: 0-199.90C (For Hot Water Tank)
- Digital Temp. Indicator: 0-199.90C, with multi-channel switch
- Temperature Sensors: RTD PT-100 type.
- Instruction Manual: An ENGLISH instruction manual will be provided along with the Apparatus

Technical Specification :

Parallel & Counter Flow Heat Exchanger

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