

**Product Name :**  
Water And Water Turbulent Flow Heat Transfer Unit

**Product Code :**  
CHINAELABC3500004



**Description :**

Water And Water Turbulent Flow Heat Transfer Unit

**Technical Specification :**

Determination of heat transfer rate, logarithmic mean temperature difference, overall heat transfer coefficient and 4 point hot and cold stream temperature profiles.  
Determination of surface heat transfer coefficient inside and outside the tube, and of the effect of fluid velocity.  
Comparison of performance in concurrent and in counter-current flow.  
Investigation of the relationship between Nusselt (Nu), Reynolds (Re) and Prandtl (Pr) Numbers for Reynolds Numbers up to 65000 and for Prandtl Numbers between 2.5 and 5.0.  
Determination of the constants in  $Nu = k Re^a Pr^b$ .

Specification Of Water And Water Turbulent Flow Heat Transfer Unit:

Concentric tube heat exchanger for concurrent or counter-current flow under turbulent flow conditions. With all ancillary equipment and instrumentation for the determination of temperature profiles, surface and overall heat transfer coefficients during turbulent concurrent and counter-current flow.  
Panel: High quality glass reinforced plastic having an attractive appearance on which the following are mounted.  
Heat Exchanger: Concentric tube type with inlet, outlet and two intermediate measuring points plus pipe temperature. Area 0.0288m<sup>2</sup>.  
Water Heater: 3kW with electronic control .  
Pump: Continuous rated to circulate hot water.  
Flow Meters:- For hot and cold water.  
Digital Thermometer: 0.1°C resolution, with multi-way selector switch.  
Cold water flow reversal valves: To establish concurrent and counter-current flow



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