

**Product Name :**  
Laminar And Viscous Flow Heat Transfer Unit

**Product Code :**  
ENGLABINGCAG6100003



**Description :**

Laminar And Viscous Flow Heat Transfer Unit

**Technical Specification :**

Demonstration of a simple concentric tube heat exchanger with con-current and counter-current flow.  
Simple energy balance for a heat exchanger.  
Determination of surface heat transfer coefficients on both the oil and water sides and of the overall heat transfer coefficient.  
Establishment of the relationship between Nusselt Number and Graetz Number( $Nu=f Gza$ ) for Reynolds Numbers up to 1400.

**Specification of Laminar And Viscous Flow Heat Transfer Unit**

A bench top unit incorporating a concentric tube heat exchanger for the investigation of Laminar And Viscous Flow Heat Transfer Unit between oil and water at velocities when the flow is Laminar And Viscous Flow Heat Transfer Unit. The unit includes oil heating and pumping equipment, temperature control, flow and temperature measurement and provides for con-current and counter-current flow in the heat exchanger.  
Panel: High quality glass reinforced plastic having an attractive appearance on which the following are mounted.  
Heat Exchanger: Concentric tube type with 2 inlet, 2 outlet and two pipe surface type T thermocouples . Area 0.0305m<sup>2</sup>.  
Heater Tank: Capacity approximately 2.5 litre with 500W heater controlled by digital PID controller.  
Measuring Tank: Pyrex glass, effective capacity 0.5 litre, fitted with contents gauge and a combined drain and internal overflow control  
Pump: Continuous rated to circulate hot oil.

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Flow Meter:- For 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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