



installation of the H102D and need not be disturbed during experiments.

#### Related laws

- Mechanical Engineering
- Nuclear Engineering
- Chemical Engineering
- Control and Instrumentation
- Plant and Process Engineering
- Building Services
- Engineering Physics
- Refrigeration
- Marine Engineering

#### Learning capabilities

- To demonstrate indirect heating or cooling by transfer of heat from one fluid stream to another when separated by a solid wall (fluid to fluid heat transfer).
- To investigate the heating characteristics of a stirred vessel containing a fixed batch of liquid when heated using hot fluid circulating through a submerged coil.
- To investigate the heating characteristics of a stirred vessel containing a fixed batch of liquid when heated using hot fluid circulating through an outer jacket.
- To investigate the change in overall heat transfer coefficient and logarithmic mean temperature difference as a batch of fluid in the vessel changes temperature.
- To perform an energy balance, calculate the overall efficiency and determine the overall heat transfer coefficient for a continuous flow in a stirred vessel when heated using a submerged coil.
- To perform an energy balance, calculate the overall efficiency and determine the overall heat transfer coefficient for a continuous flow in a stirred vessel when heated using an outer jacket.
- To investigate the effect of stirring on the heat transfer characteristics of a stirred vessel.

#### Technical Specification

- Vessel wall inside diameter: Ø152.4mm
- Vessel wall outside diameter: Ø154.2mm
- Coil tube outside diameter: Ø6.3mm

- Coil tube bore diameter: Ø4.9mm
- Effective length of coil tube: 1150mm

#### Essential Ancillaries

- H102

#### What's in the Box?

- 1 x H102D
- 1 x Vessell Probe
- 1 x Stirrer power supply
- 1 x Water inlet tube assembly
- 1 x Water overflow tube assembly
- 1 x Measuring jug
- Hoses and fittings
- Instruction manual
- Packing List
- Test sheet

#### Essential Services

- H102

#### Ordering information

To order this product, please call PA Hilton quoting the following code:  
H102D

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