



PLAIN TUBE and TUBE BUNDLE in CROSS FLOW H352A



Year 1
study

Description

The accessory includes two clear plastic plates that are designed to fit the aperture in the Cross Flow Heat Exchanger H352 duct. One plate has a single central hole and the other consists of a six row tube bank with a removable tube in the centre of each row. An electrically heated cylindrical active element with an integral surface thermocouple is supplied which may be inserted in the apertures in each of the two plates. Using the single tube plate the active element may be used to investigate the variation in heat transfer, temperature difference and surface heat transfer variation with air stream velocity. Replacing the removable tube in each row in turn in the tube bundle allows the variation in heat transfer coefficient in a tube bundle to be investigated. The cylindrical active element plugs directly into the Cross Flow Heat Exchanger H352 instrumentation console and this allows measurement of the low voltage power supplied to the heater and the surface temperature.

Related Laws/Applications

- Engine Radiators
- Air Heaters
- Refrigeration evaporators and condensers
- Super-heaters and economisers
- Mechanical Engineering
- Nuclear Engineering
- Chemical Engineering
- Control and Instrumentation
- Plant and Process Engineering
- Building Services
- Engineering Physics
- Refrigeration
- Marine Engineering

Learning capabilities

- Steady state determination of heat transfer, temperature difference and surface heat transfer coefficient for a single tube in a transversely flowing air stream at speeds of up to 30m/s
- Steady state determination of the mean surface heat transfer coefficient for tubes in the 1st, 2nd, 3rd, 4th, 5th and 6th rows of a cross flow heat exchanger.
- Determination of the mean surface heat transfer coefficient for cross flow heat exchangers with one to six rows.
- Deduction of the relationship between Nusselt, Reynolds and Prandtl Numbers for each of the six tube rows.

Technical Specification

- Active element: Ø15.8mm copper x 50mm (L)
- Multi Tube Plate: 27 fixed tubes, Ø16mm, 32mm pitch
- Single Tube Plate: Hole for active element

Essential Ancillaries

- H352

Recommended Ancillaries

- H352B
- H352C
- H352D
- H352E
- H352F
- H352G

What's in the Box?

- 1 x H352A
- Instruction manual
- Packing List
- Test Sheet

You might also like

- H352B
- H352C
- H352D
- H352E
- H352F
- H352G

Weights & Dimensions

- Weight: 6.5 kg
- Length: 210mm
- Width: 80mm
- Height: 200mm

Essential Services

- H352

Ordering information

To order this product, please call PA Hilton quoting the following code: H352A

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COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS