



CROSS FLOW HEAT EXCHANGER H352



Year 1
study

Features

- 8 options available
- Allows Investigation Of Plain And Finned Cross Flow Heat Exchangers.
- Expandable Free & Forced Convection Heat Transfer Investigation
- Allows Investigation Of Local Heat Transfer Coefficient Around A Cylinder.
- Safe and Suitable For Unsupervised Student Operation.
- Responds Rapidly to Control Changes.
- Negligible Operating and Maintenance Costs.
- Optional Computerised Data Acquisition Upgrade.

Description

A vertically mounted rectangular section duct with an opaque plastic front cover is connected at its lower end to the intake of a powerful variable speed fan. At the upper end of the duct is a bell mouth air intake. Air is drawn by the fan into the duct and past the heat exchanger accessory before being discharged from the fan. A pair of manometers allows measurement of the pressure drop across the intake from which the air velocity in the duct may be determined. Situated at approximately mid height in the front of the duct is an opening into which any of the various heat exchanger accessories may be located. Each of the optional heat exchanger accessories is serviced by an instrumentation and control console supplied as part of the Cross Flow Heat Exchanger H352. The console provides control and measurement of low voltage power to the optional heat exchanger accessories and allows measurement of all the relevant heat exchanger and air stream temperatures. For operator safety the instrumentation console limits all heat exchanger accessories to approximately 100°C and contains electrical overload and earth leakage protection. The instrumentation and control console also enables installation of the optional computerised data acquisition upgrade that may be either factory fitted or user installed at a later date.

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

- For detailed descriptions and experimental capabilities of the Cross Flow Heat Exchanger H352 with the optional heat exchanger accessories refer to individual data sheets for each optional heat exchanger accessory.

Technical Specification

- Maximum air velocity: up to 30m/s
- AIR DUCT
 - - Vertically mounted duct of 65 x 150mm cross-section.
 - - Front cover of opaque plastic with a central opening of 200mm length.
- FAN
 - - Three-phase centrifugal blower.
 - - Air Flow Control by fan speed control inverter mounted on the fan frame.
- INSTRUMENTATION AND CONTROL
 - - Digital electronic thermometer with 0.1°C resolution.
 - - Analogue voltmeter Range: 0 to 70V.
 - - Rotary variable transformer range: 0 and 70V.
 - - 1 Duct mounted inclined manometer. Range: 0 to 100 mm H₂O.
 - - 1 Duct mounted inclined manometer. Range: 0 to 20 mm H₂O.
- Voltage switch

Essential Ancillaries

- H352A
- H352B
- H352C
- H352D
- H352E
- H352F
- H352G

What's in the Box?

- 1 x H352 with wind tunnel duct and instrument console
- 1 x External transformer (115V version only)
- 1 x Manometer hose
- 1 x Manometer fluid
- 1 x Ear defenders
- Set of fastenings
- 2 x Spare fuse
- 1 x Spare manometer fluid
- Instruction manual
- Packing list
- Test Sheet
- Power lead

Weights & Dimensions

- Weight: 52 kg
- Weight: 56 kg (115V only)
- Length: 890mm
- Width: 440mm
- Height: 1970mm

Essential Services

- 220-240 Volts, Single Phase, 50Hz (With earth/ground).
- Line current up to 6A at 230v.
- 110-120 Volts, Single Phase, 60Hz (With earth/ground).
- Line current up to 12A at 110v.

Ordering information

To order this product, please call PA Hilton quoting the following codes:
H352/230
H352/115
H352/230/HC
H352/115/HC

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COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS