

H34

Pipework Energy Losses

Shows losses in the bends and fittings of small bore pipework



- Compact unit
- Direct comparison of principal pressure drops
- Includes three different bends
- Includes a multi-tube piezometer for fundamental, accurate pressure measurements
- Works with TecEquipment's Gravimetric or Volumetric Hydraulic Benches for easy installation

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- An ISO 9001 certified company

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Description

This bench-top apparatus uses smooth plastic tubing, commonly used in domestic and other small-bore water systems.

It works with TecEquipment's Gravimetric Hydraulic Bench or Volumetric Hydraulic Bench (H1 and H1D, available separately). Either bench supports the apparatus and circulates and measures the water flowing through it.

This apparatus has one circuit with bends, pressure tapings and an expansion-contraction. A gate valve at the pipe exit controls water flow.

Each pressure tapping point in the pipe connects to a piezometer tube in the vertical panel of the apparatus. During experiments, these tubes measure and compare pressure differences across the bends, expansion and contraction.

Included is a hand-pump to adjust the datum of the piezometers. On the base of the apparatus is a diagram which shows the main dimensions of the pipework and fittings.

This apparatus is a smaller version of TecEquipment's Losses in Piping Systems (H16) which has two pipe circuits and scope for further project work.

Standard Features

- Supplied with a comprehensive user guide
- Two-year warranty
- Manufactured in accordance with the latest European Union directives

Essential Ancillaries

- Gravimetric Hydraulic Bench (H1)
or
- Volumetric Hydraulic Bench (H1D)

Experiments

Measurement of losses in:

- 90-degree mitre bend
- 90-degree elbow bend
- Large radius, 90-degree bend
- Sudden expansion
- Sudden contraction

Essential Services

Water supply:

From the hydraulic bench (H1 or H1D)

Operating Conditions

Operating environment:

Laboratory environment

Storage temperature range:

-25°C to +55°C (when packed for transport)

Operating temperature range:

+5°C to +40°C

Operating relative humidity range:

80% at temperatures < 31°C decreasing linearly to 50% at 40°C

Specification

Nett dimensions and weight:

1000 x 400 x 800 mm; 6.5 kg

Packed dimensions and weight:

0.5 m³ and 30 kg (approx – packed for export)

Bends and fittings:

- 90-degree mitre bend
- Small radius, 90-degree elbow bend, 14 mm centre line radius
- Large radius, 90-degree bend, 45 mm centre line radius
- Sudden expansion, 22.5/29.6 mm inside diameter
- Sudden contraction, 29.6/22.5 mm inside diameter