

≡ WATER HAMMER APPARATUS

TE86

A 60-metre copper coil that demonstrates water hammer and cavitation and the propagation of shock waves at sonic velocity in water.



KEY FEATURES

- Illustrates the propagation of shock waves at sonic velocity in water
- Demonstrates how to calibrate an electronic pressure transducer
- Includes electric valve to stop flow instantly
- Contains over 60 metres of pipe in one compact unit to save space
- Includes mechanical and electronic pressure measurement
- Includes connectors for extra (optional) equipment for transient measurements

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DESCRIPTION

The apparatus is made up of a coil of copper pipe 60 m long. The inlet connects to your water supply and the discharge end has a solenoid valve.

An electronic pressure transducer near to the valve measures the pressure fluctuations in the pipe when the solenoid valve shuts.

A bypass valve discharges to waste at the inlet end of the pipe. A second adjustable valve is at the discharge from the pipe, downstream of the solenoid valve. This regulates the mean pressure in the pipe before the solenoid valve shuts.

A Bourdon pressure gauge fitted between the solenoid valve and the downstream control valve shows the pressure in the system. It also allows students to calibrate the pressure transducer.

STANDARD FEATURES

- Supplied with a comprehensive user guide
- Five-year warranty
- Manufactured in accordance with the latest European Union directives
- ISO9001 certified manufacturer

ESSENTIAL ANCILLARY

- Dual Beam Storage Oscilloscope (H405a):
A two-channel 50 MHz digital storage oscilloscope

LEARNING OUTCOMES

- Water hammer
- Propagation of shock waves in water
- Velocity of sound in a water filled pipe
- Transducer calibration

ESSENTIAL SERVICES

ELECTRICAL SUPPLY (SPECIFY ON ORDER):

Single Phase, 230 VAC, 50/60 Hz, 1A

or

Single Phase 110 VAC, 50/60 Hz, 2A

WATER SUPPLY:

Minimum 5 L.min⁻¹ at 3 bar

OPERATING CONDITIONS

OPERATING ENVIRONMENT:

Laboratory

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

TecQuipment is committed to a programme of continuous improvement; hence we reserve the right to alter the design and product specification without prior notice.

NETT DIMENSIONS:

700 mm x 950 mm x 1000 mm

PACKED DIMENSIONS:

0.84m³ and 121 kg