

# Ultrasonic pulse velocity tester

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EN 12504-4 | ASTM C597

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## MAIN FEATURES

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- For the non destructive evaluation of concrete homogeneity and determination of Dynamic Elastic Modulus
  - Ergonomic and compact
  - Lightweight and portable
  - Battery operated
  - Large size digital display 128x64 pixel
  - Digital calibration
  - High price/quality ratio
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## GENERAL DESCRIPTION

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### Introduction

The 58-E4800 UPV tester is used for quality control and inspection of concrete. It measures the transit time of ultrasonic pulses through concrete for inspection of new and old structures, slabs, columns, walls, fire damaged areas, precast and prestressed beams, cylinders and other concrete forms.

Combined with an oscilloscope can identify honey combs, voids, cracks and other non homogeneous conditions in concrete.

### Description

Hand held light instrument, battery operated, microprocessor incorporated, supplied complete with two 54 kHz transducers (transmitter and receiver), calibration rod, 250 mm of coupling agent, instruction manual and carrying case. The meter can also be used with low and high frequency transducers. See accessories.

### Note

Another advanced model of UPV tester is also available. See [Ultrasonic pulse analyser PULSONIC model 58-E4900](#) with incorporated oscilloscope, suitable for determining the Dynamic Modulus of elasticity, the measurement of the Attenuation of the transmitted energy, the Spectrum analysis by FFT method, the Concrete strength evaluation combining the pulse velocity with the Rebound number of the concrete hammer (SonReb method), etc.

## TECHNICAL SPECIFICATIONS

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- Microprocessor incorporated
- Battery operated by internal rechargeable battery pack (2400 MAh) and External charger
- 14 working hours using 1 Hz pulse rate
- RS 232 output for PC or printer
- Connectable to oscilloscope
- Transit time measurement from 0.1 to 1999.9 microseconds
- Pulse rate 1, 2, 5, 10 per second, selectable
- Resolution 0.1 microseconds
- Transmitter output 1200 V
- Frequency range 24 to 150 kHz
- Receiver input impedance 1 MOhm
- Weight of the tester 0.5 kg, complete set 2.3 kg

## ORDERING INFO

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## 58-E4800

Ultrasonic pulse velocity tester

## ACCESSORIES

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### Accessories

#### 58-E0046/30

24 kHz transducer head (1 piece)

#### 58-E0046/33

150 kHz transducer head (1 piece)

#### 82-P0172/B

24 column serial printer, rechargeable battery operated. External battery charger and batteries included. 110-230 V, 50-60 Hz, 1 ph

#### 82-P0172/1

Connecting cable for printer

### Spares

#### 58-E4800/P

Piezoelectric head for ultrasonic tester. Nominal frequency 50 kHz. Can be used either as receiver or transmitter. Fitted with BNC connector for coaxial cable (not included).

#### 58-E0046/2

Spare 2 m cable for testing probe connection

#### 58-E0046/3

Coupling agent (contact paste) 250 cc bottle



58-E4800 complete set



58-E4800 in use. Although the direction in which the maximum Energy is transmitted at right angle to the face of transmitting transducer, it is possible to detect pulses which have travelled through concrete in other directions: adjacent faces (semi-direct transmission) or same face (indirect or surface transmission).

## Array