



Superb in Stable reading, Repeatability and Accuracy!

The velocity of ultrasonic wave in concrete is affected by elastic property or strength.

Ultracon-170 applies high voltage and sends it to transit transducer to generate ultrasonic wave. This ultrasonic wave reaches to the receive transducer through concrete. When elastic property or strength of concrete is high, the transit time is short. On the other hand, when the materials are contrary, the velocity is low.

Ultracon-170 measures the ultrasonic transit time accurately so it makes possible to evaluate a material or find an elastic properties non-destructively to investigate uniformity, cavities, cracks, fire/frost damage, delamination, deterioration and strength.

Ultracon-170 uses 52 kHz concrete transducers manufactured by mkcndt which was designed to send and receive ultrasonic signal effectively in highly attenuative materials, including concrete, wood, stone and plastic. This instrument was developed by cooperative research with Korea Research Institute of Standard & Science, subsidized from the national coffers of Ministry of Science & Technology. This is the 4th generation.



Features of Ultracon-170

This equipment consists of a measuring equipment body and two ultrasonic transducers connected to it. For measurement, the ultrasonic couplant is applied to the ultrasonic transducer, and then the measured value is read by contacting both sides or both surfaces of the concrete. The measured value is displayed in microsec on the main body. This Ultracon-170 is designed with TFT Color LCD and has the following features.

- Estimating the strength of concrete by measuring the propagation time of ultrasonic waves in concrete by oscillating an ultrasonic transducer with high voltage
- The combination of a high-powered pulser that generates strong ultrasonic energy, a receiver with high reception sensitivity, and a high-efficiency ultrasonic transducer designed to transmit ultrasonic waves most efficiently in concrete demonstrates excellent performance even in thick materials or materials with severe attenuation.
- Menus for direct, indirect and crack measurements and color display for at-a-glance measurement results
- Compact design for convenient use in the field and laboratory
- Sends/receives signals to an oscilloscope or PC through the RF output terminal
- Software that can send measured data to a laptop to create a report and a program that can analyze the transmitted waveform (optional)
- Monitoring the hardening state of mortar over time by sequentially acquiring signals from ultrasonic transducers connected to 2-20 test vessels (optional)
- A screen that allows you to see the transmission/reception status of ultrasonic waves and the remaining battery power
- 5+ hours of use with 6 x AA rechargeable batteries
- Ultrasonic transit time displayed in units of 0.1 μ s
- Specifications in accordance with BS1881 part 203 increase reliability
- Aluminum case for portability and protection of the device



Analysis of mortar on time axis using UC-170, MUX and container

Ultracon-170 Kit

- Ultracon-170 Main Body & Pouch
- 52kHz Ultrasonic Transducer (2EA)
- RG 58 cable with BNC Connector
- Ultrasonic Couplant
- Reference Block
- Instruction Manual
- Portable Aluminum Bag



Main Body



Pouch



Ultrasonic Transducer



RG 58 Cable



Ultrasonic Couplant



Reference Block



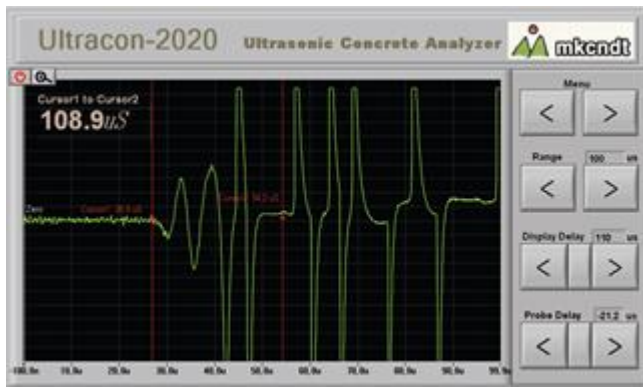
Battery Charger



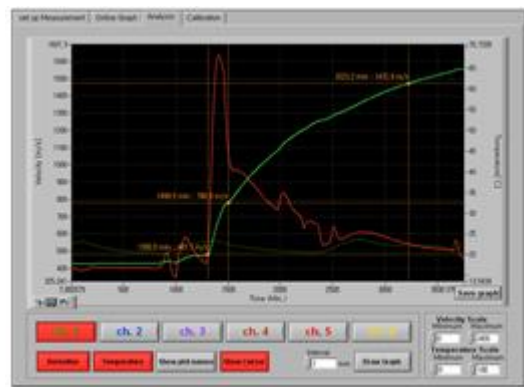
Instruction Manual



Aluminum Bag



A-scan waveform display

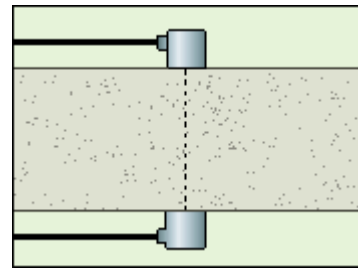


Mortar Analysis Software

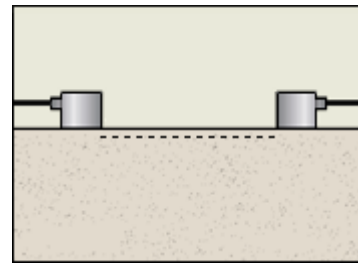
The Displays According to Measurement Modes



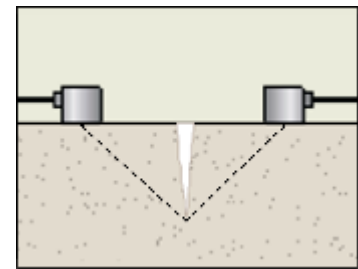
Direct Mode



In-direct Mode



Crack Depth Mode



Specifications

- Measuring Range of Ultrasonic Transit time: 1.0 μ s ~ 9999.9 μ s
- Display: 320 X 240 TFT Color LCD
- Measurement Period: 5Hz, 10Hz, 20Hz
- Display Cycle: 2Hz
- Connector: BNC/BNC
- Operating Temperature: -10 ~ 50°C
- Power: 6 x AA Rechargeable Battery
- Battery Life: Continuously 5 hours with 1,200V pulse
- Size: 105(H) \times 172(W) \times 68(D)mm
- Weight: 1065g (main body with batteries inside)
- Warranty: 1year

Initial Displays according to applications



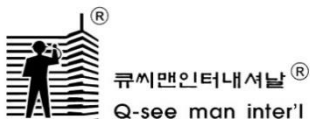
W&W



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