C372M
ULTRASONIC PULSE VELOCITY TESTER, HIGH PERFORMANCE
WITH MICROPROCESSOR FOR COMBINED ULTRASONIC AND REBOUND HAMMER DATA ACQUISITION AND PROCESSING
STANDARDS: EN 12504: part 4 | BS 1881:203 | ASTM C597 | NF P18-418

MAIN FEATURES

- Touch screen LCD display 800x480 pixel.
- Windows operating system like a standard PC.
- Flash memory 128Mb, expandable with SD card to illimited memory.
- Time measuring from 0 to 9999,9 µS resolution.
- Possibility to combine the ultrasonic measurement with rebound index (SonRed method).

This is an instrument using the most modern technologies; it has a 7" WVGA colour touch screen, 128 MB, SD card, USB, working system Windows CE.

Ultrasonic tests:

The appliance allows measuring the ultrasonic impulse **speed** inside the material (by knowing the distance between the probes).
It measures the **distance between the probes** (by knowing the speed of the ultrasonic impulse to go through the tested material).
It measures the required **time** by the ultrasonic impulse to go through the tested material.
Young's modulus for soils is also measured (by knowing the distance between the probes, the density of the tested material and the shear-speed).
Young's modulus for concrete is measured by knowing the distance between the probes, the density of the tested material and the poisson ratio.
Calculation of the **crack depth**.
Zero calibration with depuration of the time for the impulse to go through the probes.
Calibration of a defined time value.

C372M

Infinite filing capacity of the test dates and the graph tracing of the tests on SD card or extractable and expandable.
Possibility to use the instrument with two exponential probes, or with one standard probe and one exponential probe.
Possibility to connect the instrument to internet for consultations or extractions, like a common PC.
Visualization of the shape of the transmitting wave while it goes through the material checked, by transforming the instrument into a real oscilloscope.

Combined ultrasonic and rebound hammer determination (sonreb method):

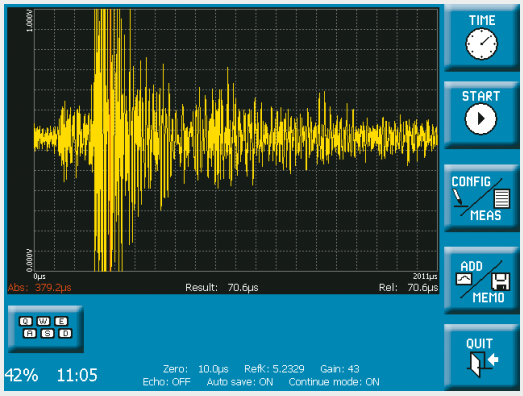
The C372M ultrasonic tester houses an integral data logger for data acquisition, processing and store of rebound hammer values.
The acquisition of the rebound values is performed with manual or automatic mode.
a) Manual mode:
Rebound values measured with a standard concrete hammer are manually input into the ultrasonic Tester.
b) Automatic mode:
The digital Matest test hammer mod C386N is directly connected to the ultrasonic tester through a cable. The measured rebound values are automatically transmitted to the C372M tester.
The measures of the velocity of ultrasonic pulses and the rebound values, gives estimates of dynamic modulus of elasticity and Poisson's Ratio, and provides informations on possible voids, cracks and strength of the structure.
It is possible to evaluate the compressive strength of the concrete, useful to estimate formwork striking times.
The combined test allow to rectify different inaccuracies that are typical of the simple rebound hammer test, and obtaining estimates on the compressive strength of the concrete, that cannot be obtained with the ultrasonic test, granting high accuracy and reliability of the results.

The standard appliance includes:

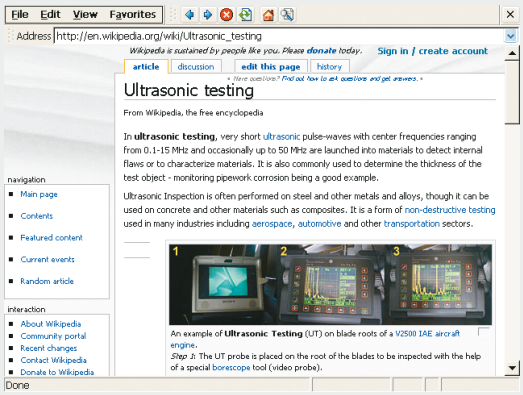
- Instrument in basic configuration (ARM Cortex-AS 400MHz, 128 MB Flash Memory, 128 MB Ram) in a practical and elegant palmer container.
- Two 55 kHz probes with connecting cables.
- Calibrating cylinder and contact paste
- Strong anti shock case holding the instrument and the accessories.
- Battery pack Li-Ion 11.1V 3000mA.h
- External feeder 230V/24V and battery charger

Dimensions: 400x300x180 mm
Weight: 3 kg approx.

C372M + C368N



Display of graphic function



Display of internet function

Electronic card: detail

C372M with case

ACCESSORIES

C370-08 EXPONENTIAL TRANSMITTING/RECEIVING PROBES (couple), **55 kHz** Nominal Frequency.

C372-10 TRANSMITTING/RECEIVING PROBES (couple), **150 kHz** Nominal Frequency, indicated for homogeneous, compact, high density concrete.

C372-11 TRANSMITTING/RECEIVING PROBES (couple), **24 kHz** Nominal Frequency, indicated for heterogeneous, low density concrete.

C370-09 COUPLE OF CABLES (each 10 m long) to connect the probes to the tester.
Used to test voluminous/large structures.

C372-10

SPARES

C370-02 Transmitting/receiving probes (couple), 55 kHz

C370-04 Couple of cables (each 3.5 m long) to connect the probes to the tester.

C370-07 Tube of grease to better coupling the probes to the material under test.

C370-02

C370-08