



**ZEAL INTERNATIONAL** (An ISO 9001 Certified Company)

**Head Office:** 1, Netaji Subhash Marg Daryaganj, New Delhi - 110002 INDIA

Phone: +91-11-23276114, 23244474, 23250281, 23278846 Fax: +91-11-43580558

**Branch Office:** 4/20 Kirti Nagar Industrial Area New Delhi - 110015 Phone: +91 11 45380800

**Warehouse:** 4/26 Kirti Nagar Industrial Area New Delhi – 110015

[info@zealinternational.com](mailto:info@zealinternational.com)

[sales@zealinternational.com](mailto:sales@zealinternational.com)

[support@zealinternational.com](mailto:support@zealinternational.com)

[quotation@zealinternational.com](mailto:quotation@zealinternational.com)

Visit us at: [www.zealinternational.com](http://www.zealinternational.com)

## High Performance Ultrasonic Tester ZI 2076

Standards:

Specification:

Ultrasonic pulse velocity tester, “high performance” with microprocessor for combined ultrasonic and rebound hammer data acquisition and processing. This is an instrument using the most modern technologies; it has a 1/4 VGA colour touch screen, 64 MB, Compact Flash interface, SD card, USB, RS232, RS485, working system Windows CE with the possibility to manage, EXCEL, WORD, PPT files etc.

### Ultrasonic tests:

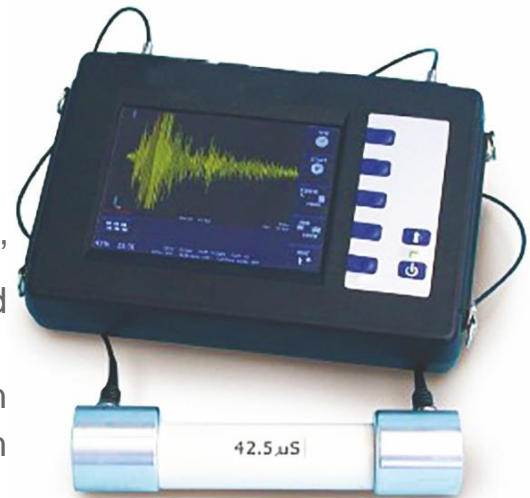
The appliance allows measuring the ultrasonic impulse speed inside the material (by knowing the distance between the probes).

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 is also measured (by knowing the distance between the probes and the density of the tested material). 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. Advance function for research purposes:

- Selection of the transmission frequency of the impulse.
- Selection of the impulse amplitude.



Infinite filing capacity of the test dates and the graph tracing of the tests on SD card or Compact Flash extractable and expandable.

RS232 or RS485 or USB interface for PC or printer connection.

Time measuring from 0 to 9999,9  $\mu$ S Resolution: 0,1  $\mu$ S

Possibility to use the instrument with two exponential probes, or with one standard probe and one exponential probe.

The use of the appliance is made easy because it is based on PC and Windows CE way of working, it allows using the user knowledge of the classic personal computer and its softwares.

Possibility to connect the instrument to internet for consultations or extractions, like a common PC.

Possibility to visualise the shape of the transmitting wave while it goes through the material checked, by transforming the instrument into a real oscilloscope with the option "Scope" mode.

**Combined ultrasonic and rebound hammer determination (sonreb method):** The C372N 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 C372N tester.

The measures of the velocity of ultrasonic pulses and the rebound values are automatically stored

and processed, giving estimates of dynamic modulus of elasticity and Poisson's Ratio, and providing informations on possible voids, cracks and strength of the structure.

Through mathematical formulas 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 (x-scale 400MHz, 64MB Flash Memory, 64 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 3000 mA/per hour

External feeder 230V/24V and battery charger

Dimensions: 400x300x180 mm.

Weight : 3 kg.