

DRC

Diagnostic Research Company
Non Destructive Testing



ULTRASOUND D1000 LF

The Ultrasound D1000 LF is made in accordance with all major global standards

ASTM-C597
EN 12504-4

The new D1000 LF Ultrasound is the highest performance, most reliable instrument present on the market today for low frequency measurements.

Thanks to a long experience in ultrasound instruments development and the use of a new generation of electronic components and fast micro-processors, the latest version of D1000LF Ultrasound makes the instrument the ideal solution for qualitative analysis of the concrete.

■ HARDWARE SPECIFICATIONS

- Ergonomic, light and versatile
- Colour 1024x768 pixel LCD display offers optimal visibility in all conditions
- Compact 50KHz probes with BNC connector
- Burst emitter for non-contact probes 0.01 μ s resolution, 75 - 275 V pulse energy
- PRF probe selection filters
- More than 540 selectable configurations, over 3000 selectable measurement points, 200MHz

■ SOFTWARE SPECIFICATIONS

- Misura sampling frequency
- TOP measurement travel time
- Base time selection
- Gate 1-2 selection
- Probe power selection
- Probe calibration
- Gain and attenuation measurement
- Speed measurement on distance
- Data Freeze-storage (number and image)
- Frequency analysis filters, Probe type - frequency selection



■ FIELDS OF APPLICATION

Developed and produced for Low Frequency applications, D1000 LF Ultrasound acquires and processes all signals with waves with frequencies lower than 200KHz.

The instrument is supplied with TX and RX, 50KHZ probes (ideal for testing on concrete - in accordance with UNI EN 12504-4) but can be used on other construction materials such as wood, stone materials, and masonry, through the inclusion of dedicated probes and accessories:

- TOP concrete travel time (direct measurement)
- Speed and attenuation measurement
- Concrete homogeneity analysis (indirect measurement)
- Wood homogeneity and speed analysis
- Stone homogeneity and speed analysis

TECHNICAL SPECIFICATIONS

GENERAL TECHNICAL DATA

DISPLAY	6" TFT LCD, 1024x768 pixels— 60 Hz update rate
DISPLAY SIZE	99 x 130 mm
SAMPLE FREQUENCY	200 MHz - 12 bit
KEYBOARD	International icons and symbols
OPERATING TEMPERATURE	from -10°C to 60°C
DEPOSIT TEMPERATURE	da -40°C a 70°C
BATTERY LIFE	Test > 10 hours
BATTERY	Built-in Li-Ion, 3.6V, 16Ah
EXTERNAL POWER	AC 80V-240V 50Hz/60Hz
DATA STORAGE	≈ 3000 measurements (Print Screen PNG, Set-up, HTML T-Report)
SET UP	540 different set-ups
WEIGHT	1.3 kg with batteries
DIMENSIONS	224 x 180 x 34 mm
LANGUAGE	User selectable
WARRANTY	2 years

MEASUREMENTS

DISPLAY MODE	A, A+TOFD, A+Beam Shape, A+B Scan
TIME	First peak registration - Time and curve freeze - TOF/FAT travel time
ATTENUATION	Measurement peak attenuation measurement
ATTENUATION COMPENSATION	From 400.0 dB in 0.1 dB/m steps
COLOUR MAP	R-G-B colours
MEASUREMENT TYPE SELECTION	Picco - Picco+Flank - Peak+Flank + First Peak
GATES-MEASUREMENTS	4 available and autonomously selectable Gates, controllable over the entire measurement range. Gate per gate measurement time, Echo, position, alarm, amplitude
GATE SETTINGS	Full Range Start / Full Range Amplitude / Trash 2-98%
SPEED	



RECEIVER

GAIN	0-118 dB con step 0,1/0,5/1,0/6 dB
WAVE WIDTH	10KHz ~ 10MHz a -3dB
MEASUREMENT AMPLITUDE	0-150% FSH
PULSE AMPLITUDE	15ns - 50µs (10KHz - 33MHz)
FILTERS	50k, 120k, 200k, 400k, 500k, 10k-200k BP, 10k/100kHz HP, digitale LP 6MHZ



TRANSMITTER

WAVE	Unipolar square wave - Burst
EMISSION FREQUENCY	10Hz—20kHz, peak envelope of A-Scan display
ENERGY	75-275V
PULSE AMPLITUDE	15ns - 50µs (10KHz - 33MHz)
DAMPING	180 - 1000 Ω



* Support for probes



** Hammer for tests on masonry



THE KIT INCLUDES:

- Ultrasound D1000 LF
- Battery charger
- USB Flash disc interface
- TX-RX 50KHz probes
- BNC cables
- Transport belt
- Calibration bar
- Hard case IP67
- Operating manual
- *Support for probes (optional)
- **Hammerfortestsonmasonry(optional)

PACKAGE

DIMENSIONS	410 x 340 x 160 mm
WEIGHT	6,6 Kg

WARRANTY & MAINTENANCE

24
months

DRC guarantees maintenance service at its center or at authorized centers

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For ordering information please contact:

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