



# 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  $\mu$ 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%   |



### RECEIVER

|                       |   |
|-----------------------|---|
| GAIN                  | 0-118 dB con step 0,1/0,5/1,0/6 dB  |
| WAVE WIDTH            | 10KHz ~ 10MHz α -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                                |

# ORDERING INFORMATION

Article Code 01.DRC.0025



\* 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)
- \*\*Hammer for tests on masonry (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

**DRC**  
Diagnostic Research Company  
Non Destructive Testing

For ordering information please contact:

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