pundit lab

The most versatile ultrasonic pulse velocity test equipment for concrete

Featuring on-line data acquisition, waveform analysis and full remote control of all transmission parameters

Building on the Pundit® tradition

Pundit Lab is the most versatile Pundit to date. It has all the functions of the classic Pundit 7, but offers additional benefits. Designed with laboratory use in mind, its compact size, rugged construction and optimized power consumption make it equally suitable for on-site use.

Along with the traditional transit time and pulse velocity measurement, Pundit Lab offers path length measurement, perpendicular crack depth measurement and surface velocity measurement.

Optimized pulse shaping gives greater transmission range at lower voltage levels. This coupled with automated combination of the transmitter voltage and the receiver gain ensures an optimum received signal level, ensuring accurate and stable measurements.

The waveform can be viewed either via an external oscilloscope connection or directly on a connected PC screen.

Full remote control capability completes the package.

Benefits to the Customer

Remote Control; A USB connection and the PunditLink application allow full remote control of all Pundit Lab features, on-line data acquisition, waveform analysis, manual triggering and data upload.

Versatility; Basic measurements of pulse velocity or path length. Compound measurements of crack depth and surface velocity. Non volatile storage and download to PC is ideal for uniformity testing.

Multiple Power Supply Options; Pundit Lab runs on battery supply, mains supply via AC adaptor and can also be powered from a PC via the USB connection.

Wide range of transducers; Pundit Lab supports a wide range of transducers from 24 kHz up to 500 kHz, making it suitable not only for concrete and rock, but also for other materials such as graphite, ceramics, wood etc.

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Made in Switzerland

... more than 50 years of know-how you can measure!

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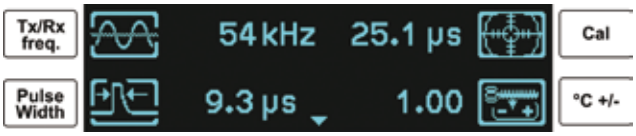
User Interface

Input parameters

Complete control of all system settings via soft keys



Resulting data on display

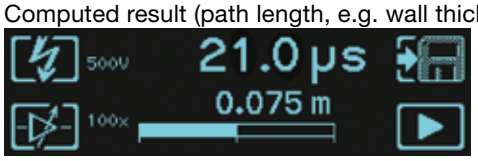
Measured transmission time
Computed result (e.g. pulse velocity)
Received signal strength

Save the result or adjust the transmission parameters and restart the measurement

Measurement Example

Input: Pulse velocity

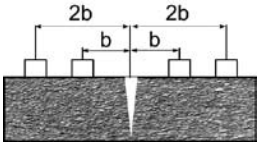
Measured transmission time
Computed result (path length, e.g. wall thickness)

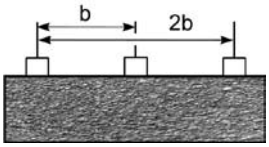


Ultrasonic instruments are mainly used to measure the pulse velocity. In addition to this, the Pundit Lab can also determine the path length (e.g. wall thickness) as in the above example where the pulse velocity is known.

Compound Measurements

Compound measurements are made simple by automatic calculation of surface velocity and perpendicular crack depth.





Functionality that grows with your needs

Proceq is commited to a full development program for the Pundit family of instruments, aimed at bringing new features and new applications to the user.

Simply register on www.proceq.com to take advantage of free software and firmware upgrades that will increase the functionality of your Pundit Lab.

Keep track of the latest hardware developments intended to increase the range and performance of the transducers available.

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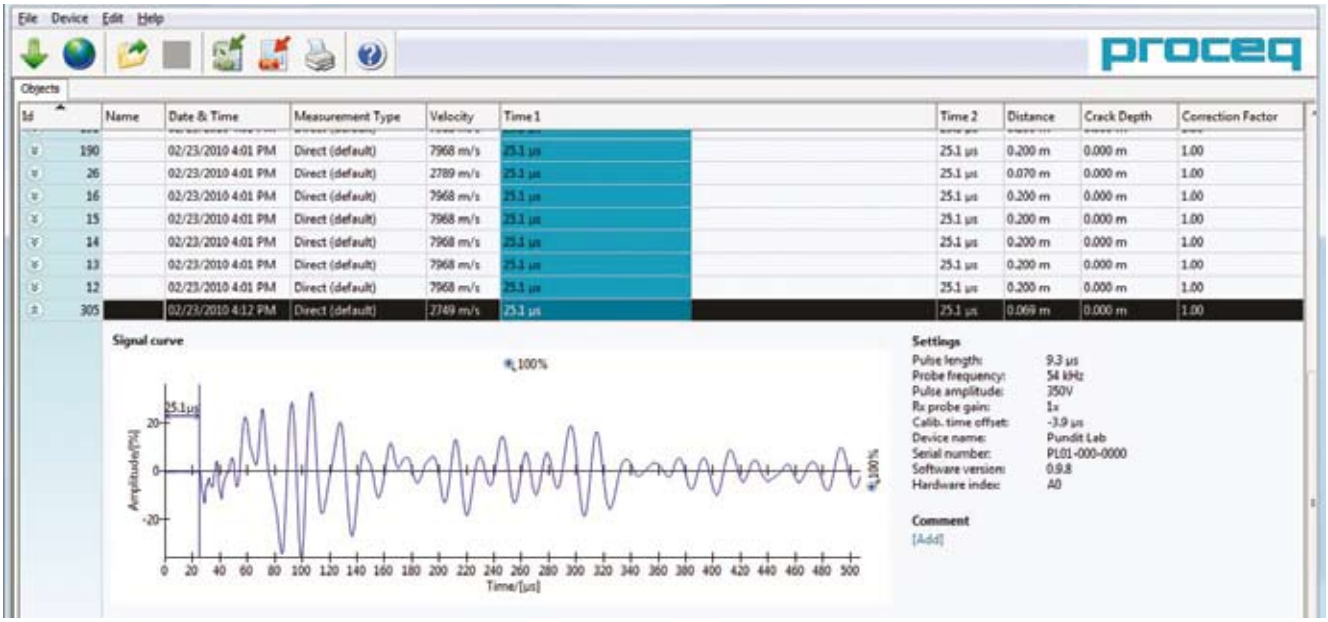
Pundit Link Analysis Software

The Windows based software Pundit Link, developed by Proceq SA, unlocks the full capabilities of the Pundit Lab, providing the user with:

- waveform visualization and analysis
- interactive adjustment of trigger point
- on-line time data acquisition
- full remote control of the instrument
- Export of data to third party applications



Technical Information Pundit Lab

Transit time measurement	
Range	0.1 – 9999 µs
Resolution	0.1 µs
Display	79 x 21 mm passive matrix OLED (256 x 64 pixel)
Transmitter	Optimized energizing pulse 125V, 250V, 350V, 500V, AUTO
Receiver	
Selectable gain steps	1x, 10x, 100x, AUTO
Bandwidth	20 kHz – 500 kHz
Memory	Non volatile, > 500 measured values
Regional Settings	Metric and imperial units supported
Power Supply	
Battery	4 x AA batteries, primary or recharchable (>20 hours continuous use)
Power ratings	3,6 to 6 volt
Mains	Via USB charger
PC	Directly via USB cable
Analog output	Combined trigger and waveform ($2V_{pp}$) output for oscilloscope, BNC
Mechanical	
Dimensions	172 x 55 x 220 mm
Weight	1.316 kg (incl. batteries)
Environmental conditions	
Operating temperature	-10° to 60°C (0° to 140°F)
Humidity	<95% RH, non condensing

Technical Information PunditLink Software

System requirements: Windows XP, Windows Vista, Windows 7, USB port
An Internet connection is necessary for future software and firmware updates.

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Ordering Information

Unit Pundit Lab, Part number: 326 10 001

Pundit Lab consisting of: Display unit, 2 transducers (54 kHz), 2 BNC cables 1.5 m, couplant, calibration rod 25 µs, USB charger with USB-cable, 4 x AA (LR6) batteries, data carrier with software, documentation and carrying case

Parts and Accessories

326 01 022	Carrying case
325 40 026	Transducer 24 kHz (Two required for operation)
325 40 130	Transducer 54 kHz (Two required for operation)
325 40 029	Transducer 150 kHz (Two required for operation)
325 40 033	Exponential transducer 45 kHz (Two required for operation), waveform display required
325 40 060	Amplifier for long cables (>10 m) and exponential transducer
325 40 021	Cable with BNC-plug, L=1.5 m (5 ft)
711 10 005	Cable with BNC-plug, L=3.0 m (10 ft)
325 40 022	Cable with BNC-plug, L=10 m (33 ft)
325 40 024	Cable with BNC-plug, L=30 m (98 ft)
710 10 031	Ultrasonic couplant, 250 ml bottle
710 10 028	Calibration rod 25 µs for Pundit
710 10 029	Calibration rod 100 µs for Pundit
351 90 018	USB cable 1.8 m
341 80 112	USB charger, global

Service and Warranty Information

Proceq is committed to providing complete support for the Pundit Lab by means of our global service and support facilities. Furthermore, each instrument is backed by the standard Proceq 2-year warranty and extended warranty options.

Standard warranty

- Electronic portion of the instrument: 24 months
- Mechanical portion of the instrument: 6 months

Extended warranty

When acquiring a Pundit Lab, max. 3 additional years of warranty coverage can be purchased (for the electronic portion of the instrument). The additional warranty must be requested at time of purchase or within 90 days of purchase.

Applicable Standards

Pundit Lab complies with the following standards:

EN12504-4 (Europe)

ASTM C 597-02 (North America)

BS 1881 Part 203 (UK)

ISO1920-7:2004 (International)

IS1311 (India)

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ISO 9001 proceq