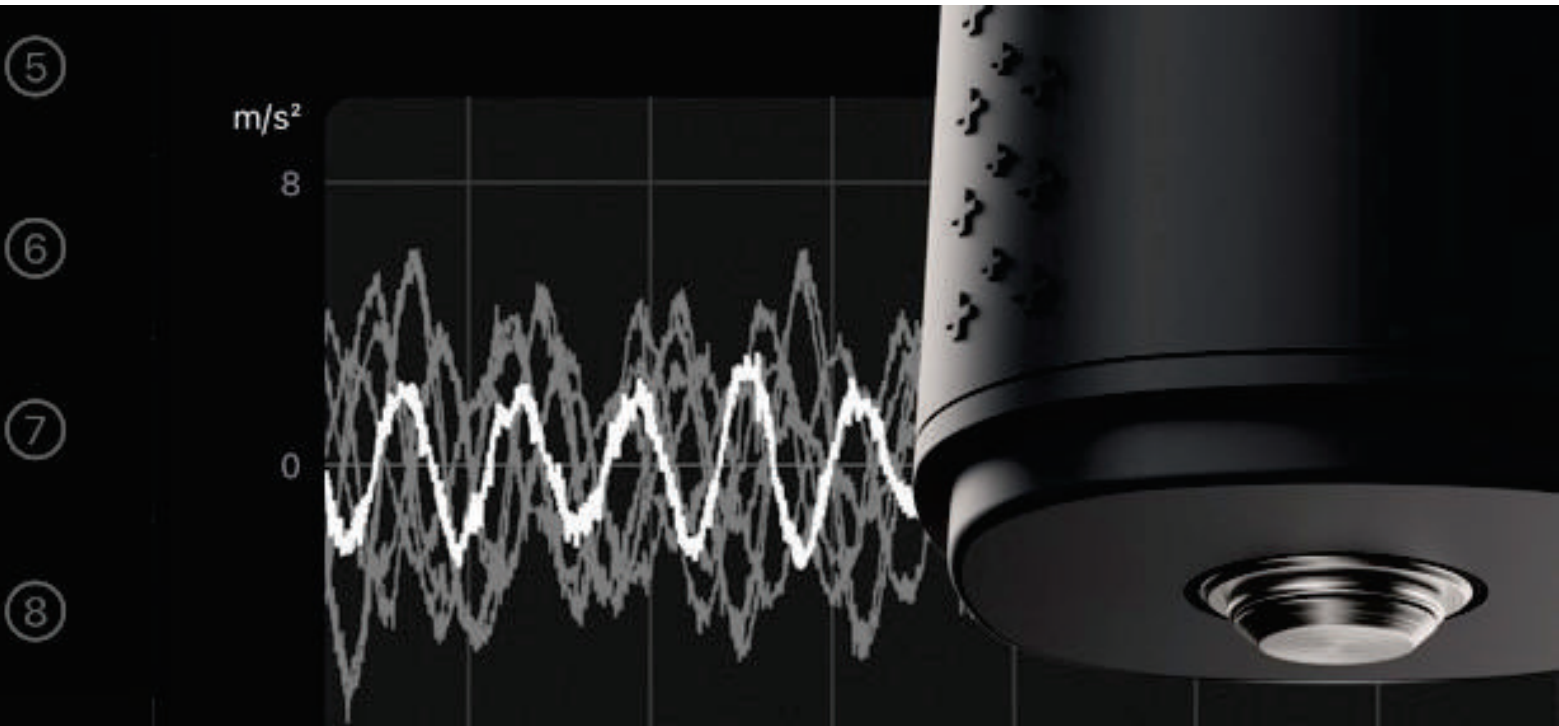




# PUNDIT PI 8000

## Pile Integrity + Impact Echo Tester



# Pundit PI 8000



## Pile Integrity + Impact Echo Tester



The Pundit PI8000 is a combined **Sonic Echo pile integrity and impact echo** test system supports both pile integrity testing and impact echo testing in a single probe for increased versatility and efficiency.

The Pundit PI8000 was **designed for defect detection, slab thickness measurements, and low strain testing of concrete piles with a single sensor and a single app**. Rapidly check the quality of installed piles using low strain technology.

The Pundit PI 8000 standard kit includes a Sensor, Hammer for pile integrity test & Impactors for impact echo test (3 types, i.e 7.5mm, 10mm & 15mm)

Analysis of long piles is possible with fixed 3000 samples @ 100KSPS for > 45m pile @ 3000m/s

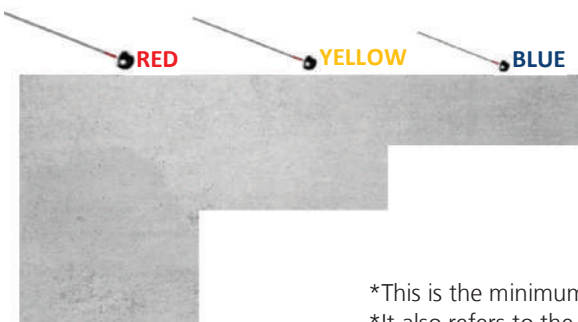
## Hammer

Ball Diameter, mm	Approximate Contact Time, $\mu$ s	Maximum useable Frequency, kHz	Minimum Measurable Depth, mm
5	22	47	43
6	26	39	52
7	30	33	60
8	34	29	69
9	39	26	77
10	43	23	86
12	52	19	103
15	65	16	129
20	86	12	172

Hammer for pile integrity test



Impactors for impact echo test  
7.5 mm, 10mm and 15mm



\*This is the minimum thickness of a structural element than can be measured

\*It also refers to the minimum depth of a flaw that can be detected. All flaws above this depth will not be visible



## Pile Integrity + Impact Echo Tester

Wireless sensor for more freedom, 2-in-1 application for maximum productivity.

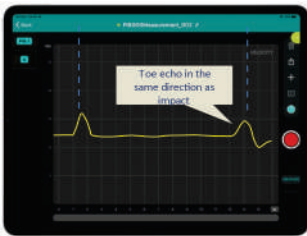
### Pile Integrity:

- Quick measurement of pile length and defect detection.
- Handle large diameter piles with multiple sensor locations.
- Apply filter settings to all piles simultaneously.
- Compare all piles of the same type for quick identification of outliers.

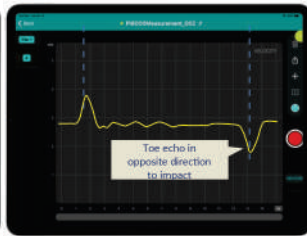


### Pile Integrity Test

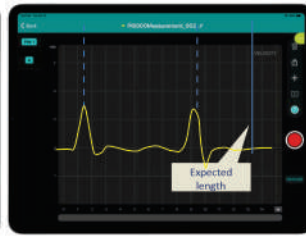
Pile with free end



Toe in bedrock



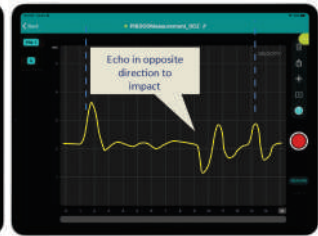
Short pile



Necking-reduction in diameter

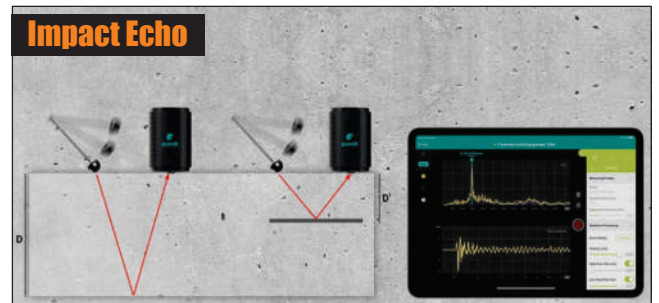


Bulging-increase in diameter



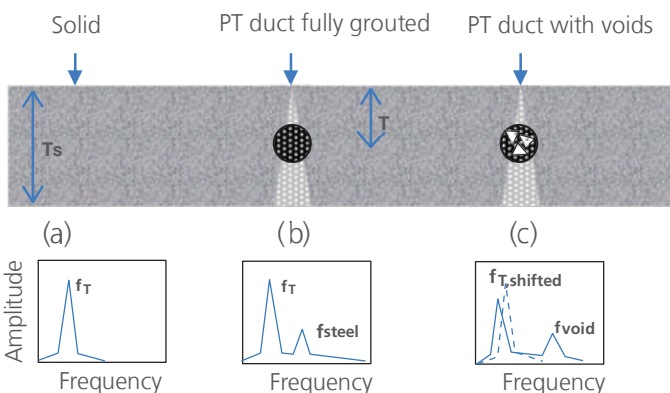
### Impact Echo:

- Concrete thickness measurement and defect detection.
- Automatic selection of the best impact per spot.
- Two methods: spot mode and grid mode.

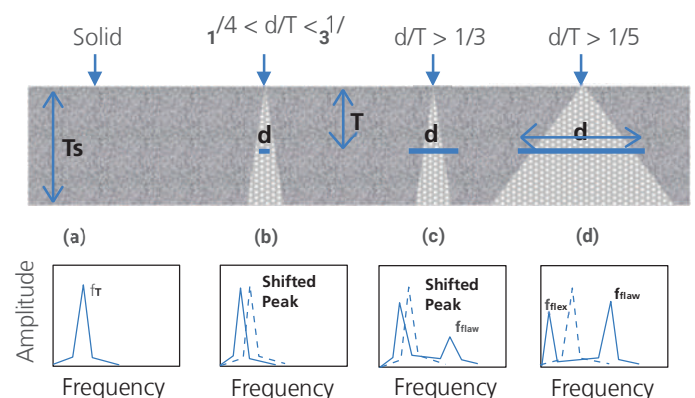


### Impact Echo Test

#### Voids in post tensioning duct



#### Cracks & Delamination



## Specification

Sensor Specifications	
Measuring range	Impact Echo: max thickness = 60 to 80cm depending on concrete quality and selected impactor. Pile Integrity: max ratio Length/Diameter = 30 to 60 depending on the soil conditions.
A/D convertor	14 Bit
Range	>35 kHz, +/- 50 g
Resonant frequency	> 50 kHz
Sampling rate	Pile: 100 kSPS; impact echo 400 kSPS
Analog signal frequency response	>30kHz(-3dB)
Sampling frequency accuracy	0.001%
Connections	Bluetooth
Battery	Standard AA rechargeable battery
Dimensions	85 x 56x 59mm
Weight	144 grams
Pundit Impact App	
Display unit	Any compatible Apple® iPad (iOS 11.0 and higher)
Connections	Wi-Fi connection to Apple® iOS tablet
Workflow features	Single-site comparison of all piles Single-shot or flexible heat map for impact echo Defect / Object tagging Logbook for full traceability of testing and simplified report generation Simultaneous application of filter settings to all piles
Measurements	Impact monitoring Exclude/Include impacts Automated peak detection Automated gain settings Large diameter piles supported
Calibration features	Automated calibration of pulse velocity
Workspace features	Collaboration with off-site colleagues Real-time synchronization Web enabled logbook Instant report generation