



Ultrasonic Pulse Echo Tester

Structural Imaging

Pundit PD8050





Advanced quality inspection for concrete structures

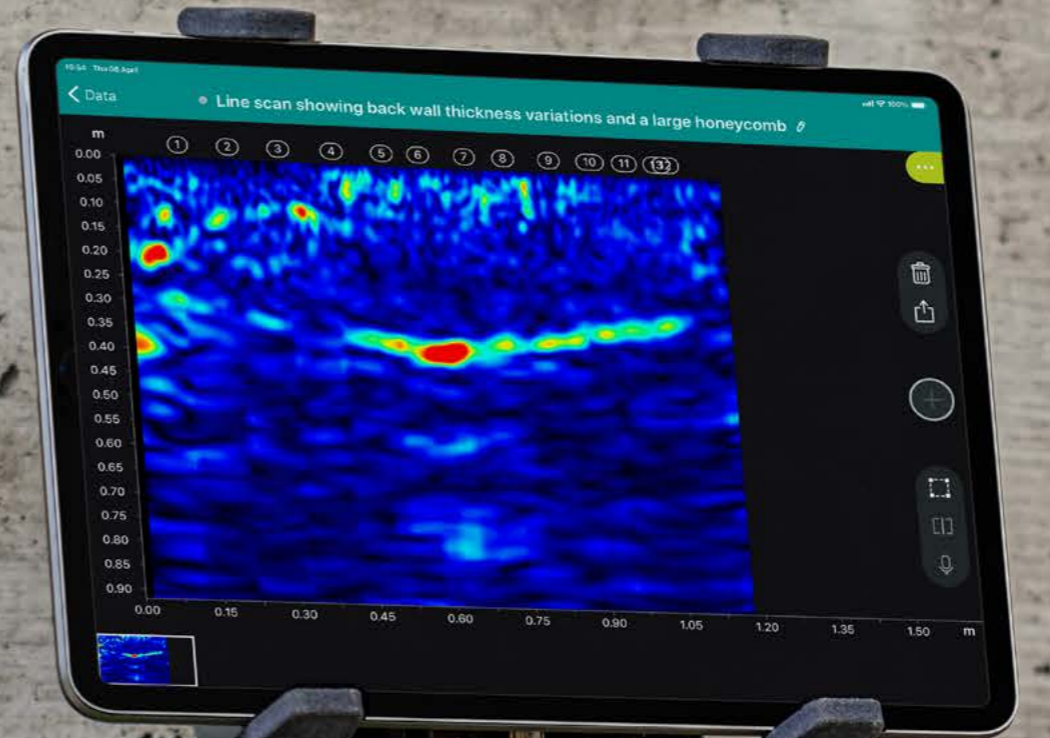




Pundit PD8050

Wireless sensor for object & defect detection

Ultrasonic Pulse Echo Imaging



Efficient

Enhanced wireless inspections with on-site, 2D, heatmap and high-resolution 3D imaging.



Innovative

Powered by ever-evolving software with AI and AR, to expand your inspection capabilities.



Productive

Real-time feedback of probe controls, immediate data visualization and easy report creation.



PD8050 Overview

Modular design to combine with a second unit for 16 channel operation



Easy configuration for dual or single-handle operation

Tablet holder to keep your iPad and data results in sight while scanning

AI positioning camera for increased scanning speeds

Laser pointer for precise positioning

USB-C for Wi-Fi restricted areas



Dry point contact Transducer elements – no coupling gel required!



Technology

Ultrasonic Pulse Echo



One sensor, one person, one solution

Wirelessly measure from only one side of the component for high performance concrete quality assessment.





Software

FIELD APP  

Pundit Array
On-site generation of line scans and 3D imaging



Unique visualization

Create large scale 2D and 3D images and view with augmented reality directly onsite.



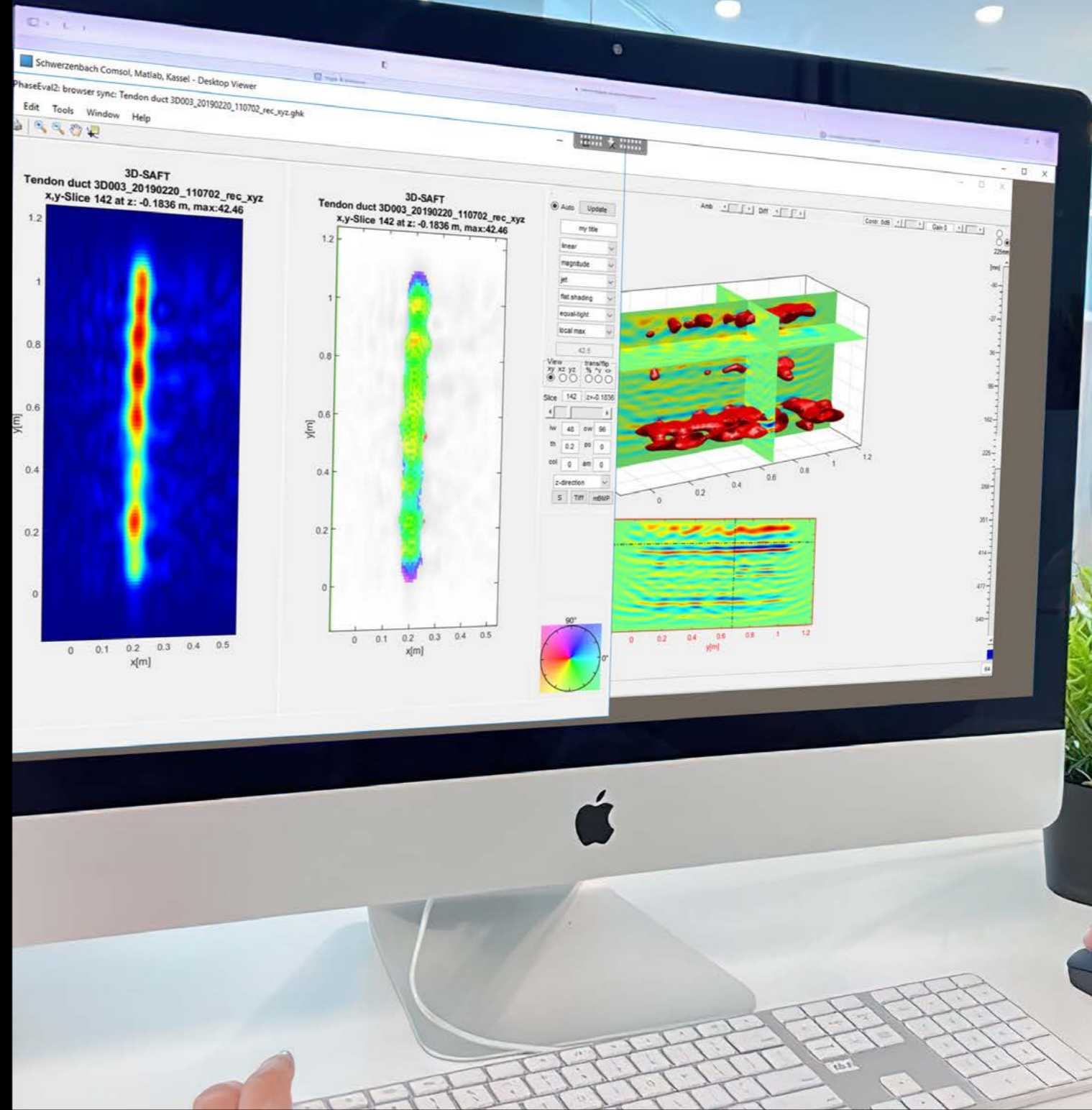
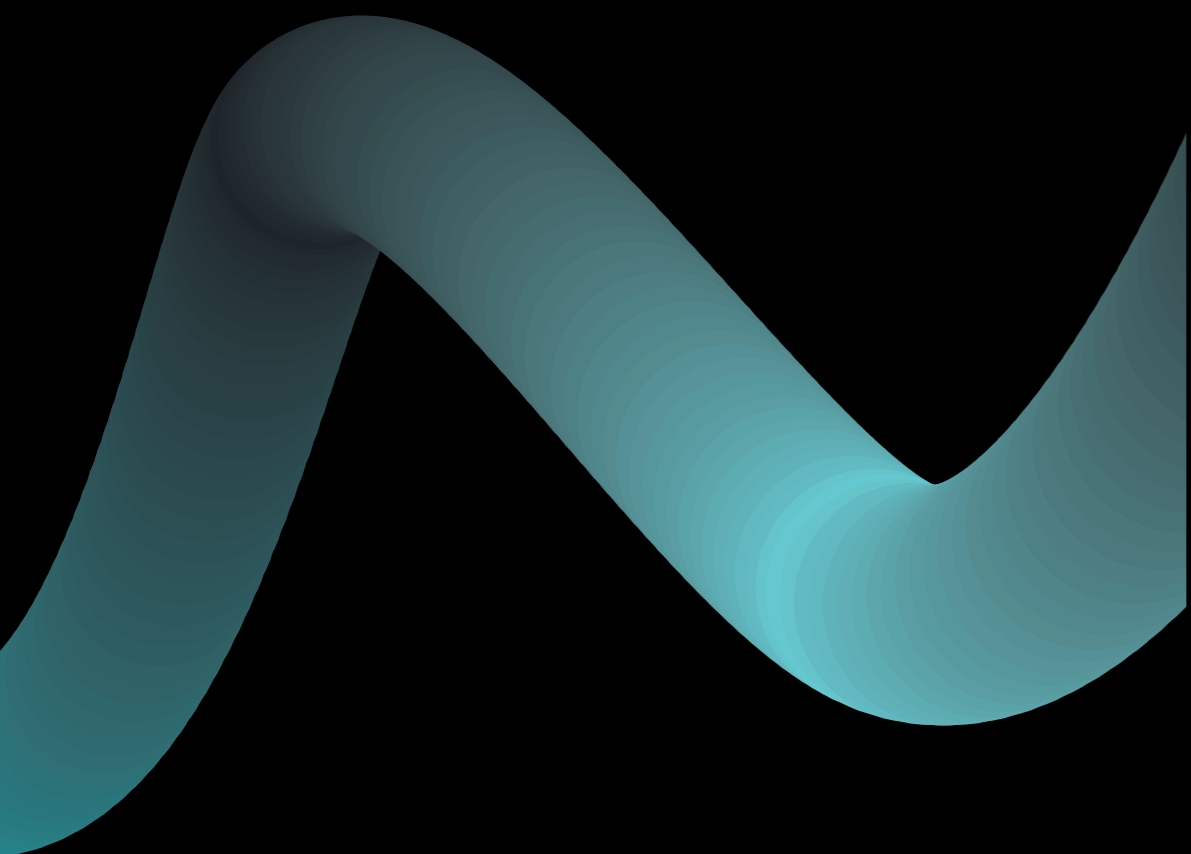
Streamlined workflows

Scan wide areas with the grid scan mode and create heat maps to localize variations in thickness or quality.



AI assisted

Make measurements a breeze with AI assisted positioning and data interpretation.



Software

POST-PROCESS

Pundit Vision (available separately)

Outstanding visualization and analysis of ultrasonic pulse echo data, empowering inspections with first of its kind capabilities.



Phase evaluation

Obtain more information about material composition based on phase evaluation.



Gain more insights

Achieve a grand overview of the inspection job by combining your stripe scans or line scans.



All powered by Workspace

Cloud-connected workflow & services

Collect
Sync
Share



Convenience

Have all your measurements automatically stored in one place for fast and secure access, admin and reporting.



Collaboration

Enhance collaboration on the team and share field data with colleagues and stakeholders anywhere, at anytime with a simple url link.





Applications

Concrete quality checks & defect detection

Accurate concrete quality variation mapping and detection of defects and delaminations in concrete, precast elements and PPVC structures.



Inspection of prestressed and post-stressed ducts

Fast verification of the presence or absence of voids in the post-tension ducts, grouting, and prestressing channels.



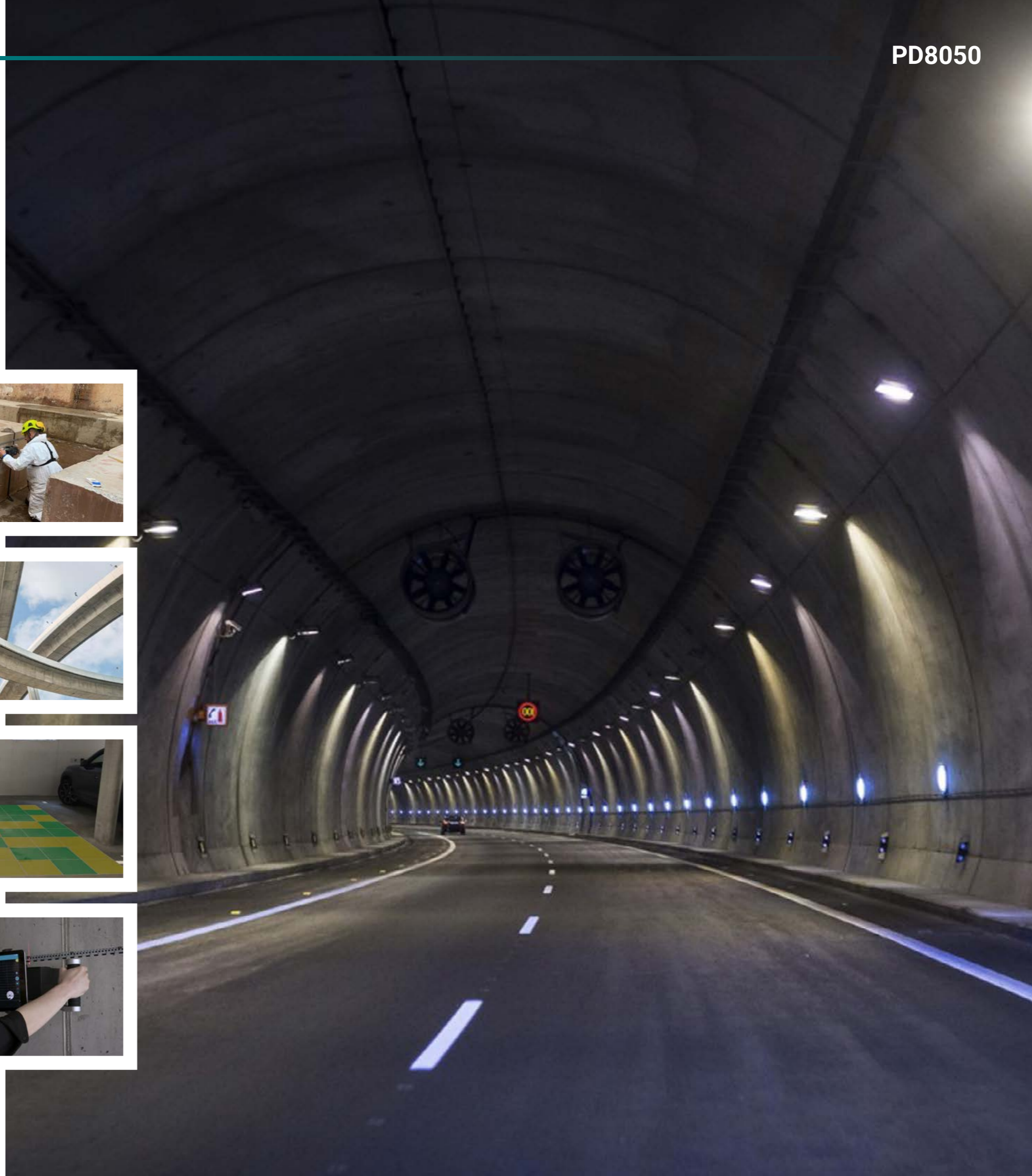
Measurement of concrete thickness

Precise uniformity and thickness testing for rapid identification of problematic areas in large concrete elements like slabs and tunnel linings.



Strength estimation

Pulse velocity determination with single side access for non-destructive concrete quality assessment and in-situ compressive strength estimation.





Applications

CASE STUDIES

Click on image or read QR code




Detecting Cavities in a Tubular Bridge with Prestressing Channels



How to Inspect Precast Concrete Elements with Minimal Drilling



Multi-technology Inspection for Increased Productivity in PPVC Construction



Revealing hidden voids and unexpected findings on the post-tensioning ducts of concrete bridges



 **Tech Hub**

Case Study
Identifying Potential Damage to PT Ducts on the Theodore Roosevelt Bridge, Florida

See how a combination of Ground Penetrating Radar and Ultrasonic Pulse Echo technologies were used to successfully identify and assess damage on this major





HW Specs



PD8050

2.4 kg
5.3 lbs
(excl. battery pack)



43 x 15.35 x 16.25 cm
16.9 x 6 x 6.4 in

PD8050 HW specs

Bandwidth

20 - 80 kHz

Technology

Multi-channel Ultrasonic Pulse Echo

Measuring Resolution

0.1 us

Pulse Voltage

±50 to ±150 V
(UPE)

Receiver Gain

1 to 10'000
(0 to 80 dB)

Report Generation

Cloud synchronization
Share via URL
Cloud-enabled logbook
Cloud-based raw data export
Cloud-based HTML export
Cloud-based report generation

Measurement Modes

Line scan
Stripe Scan
Grid Scan

Measuring Range

Up to 2 m / 6.6 ft depending on concrete quality

Review modes

A-scan (incl. envelope)
B-scan (Line view)
C-scan (Time-Slice view)
Heat map (depth)
Heat map (pulse velocity)

Battery

Battery pack, 6x AA (NiMH), flight-safe

Display

Any compatible Apple® iPad (iOS 11.0 and higher)

Memory

Apple® iPad specified

Connections

Encrypted Wi-Fi connection to Apple® iOS tablet
USB port for Wi-Fi module
USB-C for Wi-Fi restricted areas



SW Specs



Pundit App

Workspace Integration

- App synchronization
- Share via URL
- Automatic logbook
- Raw data export
- HTML export
- Instant report generation

Special Features

- Depth of field – variable frequency and voltage
- Wide panoramic B-scan
- Augmented Reality
- 3D view
- AI-assisted positioning
- AI-assisted feature interpretation
- Image stabilizer

Display Unit

Any compatible Apple® iPad (iOS 11.0 and higher)¹

Display Unit Specs²:

- Screen size: From 7.9" to 12.9"
- Resolution: Up to 2732-by-2048
- Memory: Up to 2TB
- Weight: Down to 301 g / 10.6 oz
- Camera: Up to 12MP Wide and 10MP Ultra Wide
- Optional: USB-C, 5G, Face ID

Report Generation

- Cloud synchronization
- Share via URL
- Cloud-enabled logbook
- Cloud-based raw data export
- Cloud-based HTML export
- Cloud-based report generation

Measurement Modes

- Line scan
- Stripe Scan
- Grid Scan

Measuring Range

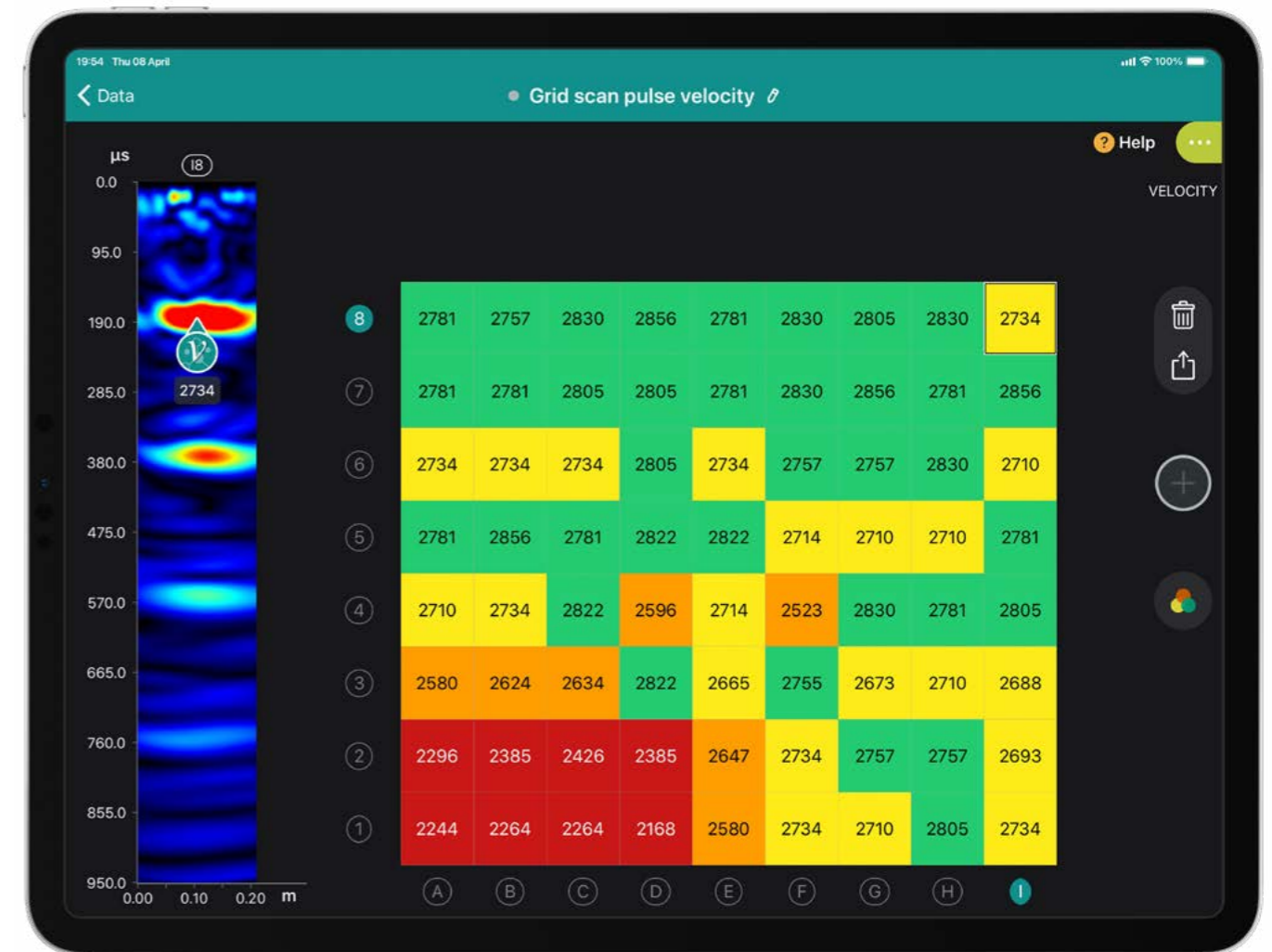
Up to 2 m / 6.6 ft depending on concrete quality

Review modes

- A-scan (incl. envelope)
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Display Unit Sensors³:

- LiDAR Scanner (optional)
- Three-axis gyro
- Accelerometer
- Ambient light sensor
- Barometer
- Built-in GPS/GNSS



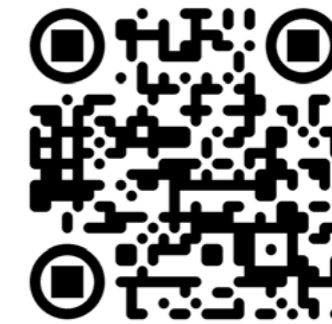
1. Recommendation: The newest models enhance performance, number of sensors and optional capabilities.
 2, 3. Depending on iPad model.



Company

Screening Eagle Technologies is a connected ecosystem of software and sensors for intelligent inspection of the built environment.

Our mission is to protect the built world and enable a society that is safe for all, is of high quality, operates reliably and is truly sustainable. We aim to democratize Built World Data, empower service professionals with easy-to-operate technology, and allow asset owners to make data-driven investment decisions. Together, we contribute to a society that gives back more to nature than it consumes, creating a built world for future generations to enjoy and thrive within.



ScreeningEagle.com





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