

TECHNICAL DATA

# Fluke ii910 and ii900 Acoustic Imagers



**The all-in-one tool you have been looking for to visualize leaks, partial discharge, and mechanical issues.**

**Leaks: hidden costs due to leaks in compressed air, gas, steam, and vacuum systems**

While most manufacturers know that these types of leaks exist, it has been too time consuming and tedious to address them until now. With the Fluke ii900 or ii910 and minimal training, your maintenance technicians can begin checking for leaks during their typical maintenance routine—even during peak operation hours.

The ii900-series acoustic imagers let technicians see sound as they scan hoses, fittings, and connections for leaks. Its built-in acoustic array of tiny sensitive microphones generates a spectrum of decibel levels per frequency. Based on this output, an algorithm calculates a sound image, known as SoundMap™ that is superimposed on a visual image. The SoundMap is automatically adapted depending on the frequency level selected so that background noise is filtered out, making it incredibly simple to detect compressed gas leaks.

Finally a better way to detect compressed air, gas, steam and vacuum leaks. Plus, the ii910 provides increased sensitivity to detect leaks that are smaller or farther away.

**Mechanical: first-line inspection to locate potential mechanical issues early and avoid unplanned downtime**

Conveyor systems are a daunting maintenance problem because of the size and scope of the equipment and the nearly endless number of components that have the potential to disrupt production and cause unplanned downtime. Until now, it has been almost impossible to inspect the systems properly. The Fluke ii900 with MecQ revolutionizes inspection by enabling efficient scanning of large areas to detect and document potential issues for more targeted maintenance. With contactless scanning and advanced noise filtering, the Fluke ii910 Precision Acoustic Imager with MecQ™ Mode ensures safety and delivers clear images even in high-noise environments. By detecting areas of concern early on, it enables proactive measures to prevent costly problems, surpassing traditional methods. For professionals seeking seamless operation and proactive maintenance of large conveyance systems, the Fluke ii910 Precision Acoustic Imager with MecQ™ is the ultimate choice.

## SOUNDSIGHT™ TECHNOLOGY

### Acoustic Imaging

Blended live SoundMap™ with visual image

### Frequency Range

ii900: From 2 kHz to 52 kHz

ii910: From 2 kHz to 100 kHz

### Detection Range

.5 m to >70 m (1.6 to >230 feet)\*

.5 m to >120 m (1.6 to >393 feet)\*

### Display

7 inch 1280 x 800 LCD with capacitive touchscreen

### LeakQ™ Mode

Leak quantification: on-device estimated leak size and cost indication

### MecQ™ Mode

Mechanical inspection: on-device feature to detect mechanical issues

### PDQ Mode™

Partial discharge: on-device PD classification

SoundSight™ refers to the Fluke technology of converting sound waves to a visual image.

\*Depending on ambient conditions

## Partial discharge: the invisible threat... now you can see

Partial discharge is a serious issue that left unchecked can lead to arc flash fires, blackouts, explosions and danger to life. Whether you are inspecting insulators, transformers, switch gears or high voltage powerlines you need to be able to locate a problem quickly and easily. The Fluke ii910 Precision Acoustic Imager with PDQ Mode™

is a perfect tool for high voltage electricians, electrical test engineers, and grid maintenance teams because it translates the sound of partial discharge into visuals which pinpoint the location. The ii910's extended frequency range of 2-100Khz enables detection early of a potential problem to aid maintenance planning and prevention of catastrophic events.

## Specifications

Key features	ii910	ii900	Definitions
<b>Sensors</b>			
Frequency band	2 kHz to 100 kHz	2 kHz to 52 kHz	
Detection range	.5 m to >120 m (1.6 to >393 feet)*	.5 m to >70 m (1.6 to >230 feet)*	
Field of view	63°± 5°		
Nominal frame rate	25 FPS		The number of Frames Per Second (FPS) indicates the number of times the image on the screen is refreshed each second
<b>Built-in digital camera (visible light)</b>			
Field of view (FOV)	63°± 5°		
Focus	Fixed lens		
Zoom	3 x digital zoom		
Resolution	5 MP	1.2 MP	
<b>Display</b>			
Size	7" LCD with backlight, sunlight readable		
Resolution	1280 x 800 (1,024,000 pixels)		
Touchscreen	Capacitive		Extremely precise and quick responding
Acoustic image	Yes, SoundMap™ image		A SoundMap™ is a visual map of noise sources using an acoustical array
<b>Image storage</b>			
Storage capacity	20GB (>5000 pictures / >999 videos)		
Image format	Blended visual and SoundMap™.JPG or .PNG		
Video format	Blended visual and SoundMap™.MP4		
Video length	Up to 5 minutes		
Digital export	USB-C for data transfer		
<b>Acoustic measurements</b>			
Measurement range (typical)	12.1 to 114.6dB SPL (±1dB SPL 2kHz) 4.4 to 101.2dB SPL (±2dB SPL 19kHz) 12.8 to 119.2dB SPL (±1dB SPL 35kHz) 19.8 to 116.1dB SPL (±3dB SPL 52kHz) 41.4 to 129.0dB SPL (±1dB SPL 80kHz) 54.4 to 135.5dB SPL (±1dB SPL 100kHz)	15.4 to 115.2dB SPL (±1dB SPL 2kHz) 5.6 to 102.5dB SPL (±2dB SPL 19kHz) 28.4 to 131.1dB SPL (±1dB SPL 35kHz) 41.8 to 133.1dB SPL (±3dB SPL 52kHz)	Sound pressure level (dB SPL) or acoustic pressure is the local pressure deviation from the ambient-decible and sound pressure level
Auto max/min dB gain	Auto or manual, user selectable		
Frequency band selection	User selectable through user-made presets or manual entry		
Classification and quantification	LeakQ™, MecQ™, and PDQ Mode™ Leak size and cost estimation / Mechanical inspection / Partial discharge type classification	LeakQ™ Leak size and cost estimation	

Key features	ii910	ii900	Definitions
<b>Software</b>			
Ease of use	Intuitive user interface		
Trend graphs	Frequency and dB scale		
Spot markers	dB level reading at center point of the image		
Asset ID	QR code based asset ID identification		
Asset inspection status	'As left'; 'As found'; 'Undetermined'		
Photo notes	Up to 4 photos notes for reference		
Source	Show single or multiple sources		
Profile	Preset capture profiles		
Annotation	Asset name; Asset ID; Asset type; Leak type; Gas type; Pressure.		
Other	Operating conditions; Weather notes		
Leak values	Leak costs; Leak volume; LeakQ™ scale		
Actions	Action requirements; Action priority level; Action notes		
<b>Battery</b>			
Batteries (field-replaceable, rechargeable)	2 x Rechargeable Li-ion		
Battery life	6 hours/battery (product includes spare battery)		
Battery charging time	3 hours		
Battery charging system	External charger		
<b>General specifications</b>			
Standard palettes	3: Grayscale, Ironbow and Blue-Red		
Operating temperature			
ii900	-10 °C to 45 °C (14 °F to 113 °F)		
ii910	-10 °C to 40 °C (14 °F to 104 °F)		
Storage temperature	-20 °C to 70 °C (-4 °F to 158 °F) without batteries installed		
Relative humidity	10 % to 95 % non-condensing		
Size (H x W x L)	186 mm x 322 mm x 68 mm (7.3 inches x 12.7 inches x 2.7 inches)		
Weight (battery included)	2.15 kg (4.7 pounds)		
Ingress Protection (IP)	IP40		Protection against particles 1 mm or greater and dripping water
Warranty	2 year		
Fluke Premium Care	Premium Care Standard**		<a href="http://www.fluke.com/premiumcare">www.fluke.com/premiumcare</a>
Self-diagnostic notification	Array-health test to identify when microphone array needs attention		
Supported languages	Dutch, English, Finish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese		
RoHS compliant	Yes		
<b>Safety</b>			
General Safety	IEC 61010-1		
Electromagnetic Compatibility (EMC) International	IEC 61326-1: Portable Electromagnetic Environment IEC 61326-2-2 CISPR 11: Group 1, Class A		
Korea (KCC)	Class A Equipment (Industrial Broadcasting and Communication)		
USA (FCC)	47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103		

\*Depending on ambient conditions

\*\* Subject to regional availability



Image taken of the ii910 Precision Acoustic Imager detecting partial discharge in a high voltage application.



Image taken with the ii900 Industrial Acoustic Imager of an air leak in an industrial environment.

## Ordering information

**FLK-ii910** Precision Acoustic Imager

**FLK-ii900** Industrial Acoustic Imager

### Included

Imager; AC power supply and battery pack charger (including universal AC adapters); two rugged lithium ion smart battery packs; USB cable; rugged, hard carrying case; one rubber array cover; adjustable hand strap and adjustable neck strap.

Visit your local Fluke website or contact your local Fluke representative for more information.

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