

SONOCHEK

The ultrasonic testing device



Listen to the asset, it's got stories to tell!

Imagine ...

When water is boiling in your teapot the steam will make sound as soon as the pressure exceeds a certain limit. But not all pressure leaking systems produce audible noise. Some leaks are so small that you won't hear them at all. Their sound spectrum rests in the ultrasonic region. However, these leaks exist and they can be costly if you detect them too late – or not at all!



SONOCHEK is primarily used to detect leaks in any industrial air and gas pressure systems. The ultrasound testing device is able to detect and classify leaks on conductions, pipes and their connections.

Its detecting range reaches from 20 up to 100 kHz. These frequencies are inaudible to human ears, but SONOCHEK can detect them and make them audible and visible, while specifying the leak and the total amount of loss.

SONOCHEK is entirely digital. It instantly converts all sound data into digital signals. They can be heard, seen and saved in a report on the device. An integrated camera and microphone enable the engineer to comment on his findings and refine the final report.

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if you detect them too late – or not at all!*

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Detect and analyze with two apps

SONOCHEK comes with two apps for the detection and analysis of leaks and other anomalies:

SONOLEVEL

SONOLEVEL digitally records and converts ultrasound within 20-100 kHz. Many different pieces of information can be attached to the report, including voice recordings. SONOLEVEL is used for the following maintenance tasks:

- Leak Detection
- Condition Monitoring
- Electrical Inspection
- Steam Trap Inspection

SONOLEAK

SONOLEAK uses a patented algorithm to analyze and rate the amount of loss caused by the leakage. Five different rating levels show the degree of urgency from level 1 (lowest level) to level 5 (highest level). By holding the sensor close to the leak, you can record the ultrasound. By entering pressure and gas type, the measurement is automatically classified. All information can be combined into a full report.

Tools and Accessories

SONOCHEK is an ultrasonic testing device to detect inaudible waves and frequencies in the air or in a metal machine frame. Several high-performance airborne and structure-borne sensors help locate leaks and monitor ultrasound emission of rotating machine parts.

Airborne sound sensor DBS10 (leak detection)

The airborne sound sensor DBS10 with extensive accessories is used in conjunction with the SONOCHEK to:

- ▶ Detect and evaluate leaks on compressed air, gas and vacuum systems
- ▶ Detect leaks at windows, doors, cabins, vehicles or containers
- ▶ Detect electrical partial discharges and insulation damage

Structure-borne sensor DBS20 (machine condition monitoring)

The structure-borne sound and temperature sensor DBS20 with exchangeable attachments is used in conjunction with the SONOCHEK to:

- ▶ State monitoring of machines and systems
- ▶ Functional check of condensate drains and valves
- ▶ Monitor ultrasound emitted by rotating machine parts e.g. bearings
- ▶ Monitoring of lubrication states

Parabolic long-range sensor DBS30 (optional)

The parabolic sensor is used to precisely detect ultrasound from a distance of up to 25 m. It is specifically designed for the following measurement tasks in conjunction with the SONOCHEK:

- ▶ Detect leaks on compressed air, gas and vacuum systems
- ▶ Detect leaks at windows, doors, cabins, vehicles or containers
- ▶ Detect electrical partial discharges and insulation damage



Making ultrasound audible, visible and evaluable

SONOCHEK for preventive maintenance

With the structure-borne sensor, the device can also be used for the preventive maintenance of rotating machines. Like a doctor listening to heart rate, the maintenance engineer can visualize the intensity and frequency emitted by rotating machine parts – some characteristic frequencies being the result of a specific component’s wear.

Badly maintained bearings may cause severe damage to any machine or at least increase the possibility of unplanned downtime. SONOCHEK helps to decrease failure rates in machinery assets while reducing downtime and maintenance costs.

Great features

- ▶ Large frequency bandwidth: 20 – 100kHz
- ▶ Digital processing: different levels, spectral analysis, audio converting
- ▶ Visualization of ultrasound phenomena
- ▶ Built-in camera, microphone and speaker
- ▶ Internal and external SD-card for file/data storage
- ▶ 5" TFT touch-display for easy and intuitive operation
- ▶ Instant reporting to PDF or CSV



SONOCHEK technical data

SONOCHEK ultrasonic testing device			
Display	5" TFT display, resolution WVGA 800 x 480 pixels		
Memory	16 GB flash internal measurement data memory		
Connections and interfaces	Lemo adapter; internal speaker; USB 2.0 Micro-B; 3.5 mm headphone jack; slot for micro SD card (up to 32 GB)		
Operating system	Android 4.4.2		
Others	5 megapixel camera; integrated microphone; integrated position sensor		
Dimensions (W x H x D)	90 x 174 x 25 mm		
Weight (incl. batteries)	370 g [13.1 oz]		
Battery	Rechargeable; type: Lithium polymer; 3.7 V; 4.05 Ah (7.75 Wh)		
Power supply	Charger with micro USB connection (5 V, 2A)		
Operating duration	8... 12 h in practical use, 4 h in continuous operation		
Charge duration	Typically 4 hours		
Languages	German, English, Spanish, French, Portuguese, Turkish, Italian, Chinese, Dutch, Russian, Polish, Japanese		
Sensors	DBS10	DBS20	DBS30
Frequency range	20-100 kHz		
Measurement resolution	1 dB		
Power supply and communication	Lemo: Cable connection with the SONOCHEK (Spiral 160 cm)		
Dimensions (W x H x D)	30 x 155 x 30 mm [1 3⁄16" x 6 1⁄8" x 1 3⁄16"]	30 x 155 x 30 mm [1 3⁄16" x 6 1⁄8" x 1 3⁄16"]	270 x 440 x 390 mm [10 5⁄8" x 17 5⁄16" x 15 3⁄8"]
Mirror diameter	N.A.	N.A.	270 mm [10 5⁄8"]
Weight (without accessories)	80 g [2.8 oz]	140 g [4.9 oz]	750 g [26.5 oz]
Ambient conditions			
Standard and guidelines	EMC directive 2014/30/EU; WEEE directive 2012/19/EU; ROHS directive 2011/65/EU; ASTM E1002-2005		
Operating temperature	-10... +40° C [14° F to 104° F]		
Storage temperature	-20... +60° C [-4° F to 140° F]		
Degree of protection	IP40		

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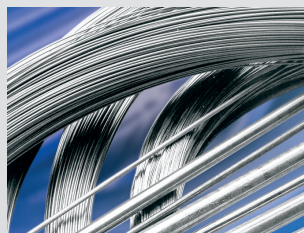
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