SONOTEC

NEW!
2nd Generation

Acoustic Camera

SONASCREEN® 2

For Preventive Maintenance

MADE IN GERMANY

Preventive Maintenance

# SONASCREEN® 2
## The most advanced acoustic camera on the market



**Areas of application**
Leak detection, partial discharge detection, tightness testing, and bio-acoustics

**Most sensitive camera available**
176 microphones with 200 kHz for capturing acoustic signals

**Wide frequency range**
Up to 100 kHz for the detection of audible and ultrasonic signals

**High acoustic frame rate**
Capture fast events with a frame rate of 100 fps

**Intuitive operation**
Different application modes with preset settings for intuitive operation without extensive training

**Audio converting**
For precise monitoring of the visually displayed ultrasonic signal

**In-depth recording and analysis**
The only camera that enables further processing of the recorded raw data

**Flashlight function**

**2-in-1 device**
Acoustic camera and thermal imaging camera in one device

**Touch display**
7" multi-touch display with very high resolution

**GPS module**
For easy positioning and orientation during partial discharge measurements*

**IP54 protection class**
Ideally suited for both indoor and outdoor industrial applications

Any technician can use
**SIMPLE**

Visual presentation of defects
**INTUITIVE**

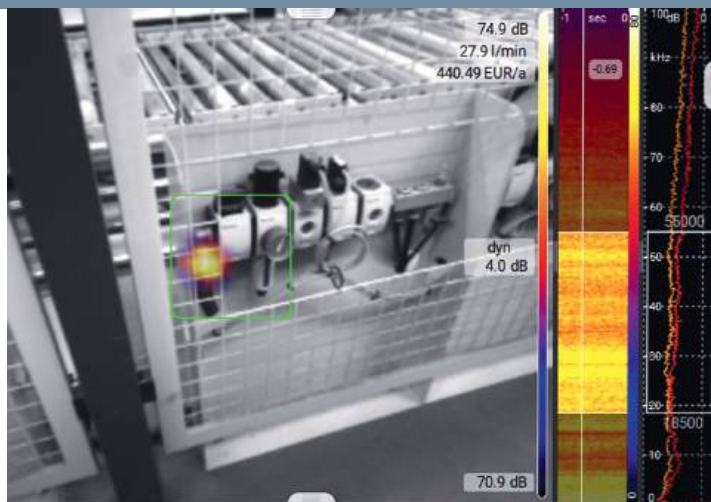Real-time acoustic results at 100 frames per second
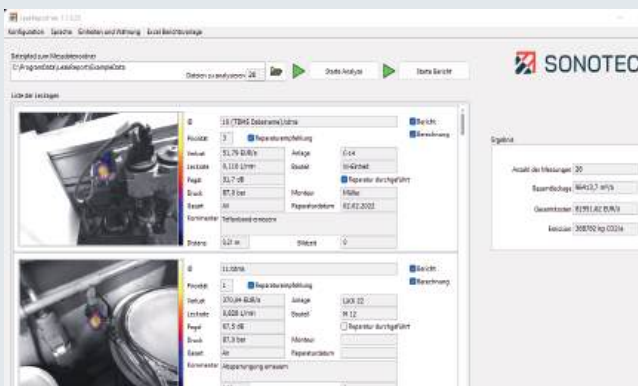**FAST**

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# Leak Detection
## Increase your energy efficiency!



→ Quick and easy localization of leaks

→ Visualization of several leaks in one image

→ Customizable live loss display, e.g. in l/min and $/year

→ Leakage detection in compressed air, gas and vacuum systems

→ See and hear leaks at the same time



## LeakReport Software



- Free software to create and edit reports, with location description, loss assessment, and repair status

- Individual processing of leaks possible

- Export as PDF

## Reports



- Overview of all leaks for the compressed air audit

- Necessary repairs can be then carried out from the documented leaks
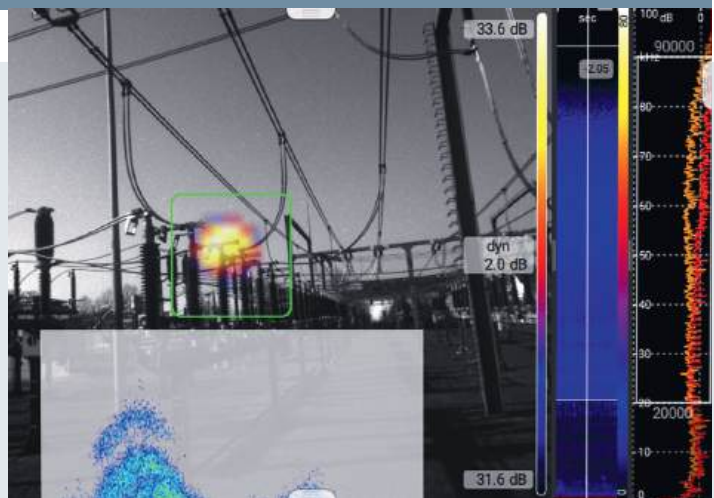
- Energy savings can be be documented
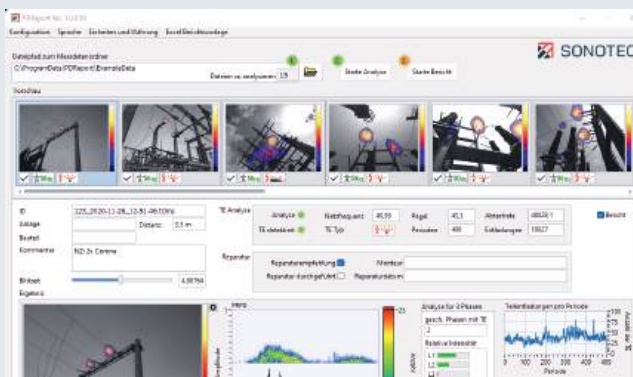
## Detection of Partial Discharges
### Increase your operational safety and system reliability!



→ Detect and differentiate electrical partial discharges in the ultrasonic range at the earliest stage

→ Phase-resolved display of different partial discharge types as live PRPD

→ Visualization of several partial discharges in one image

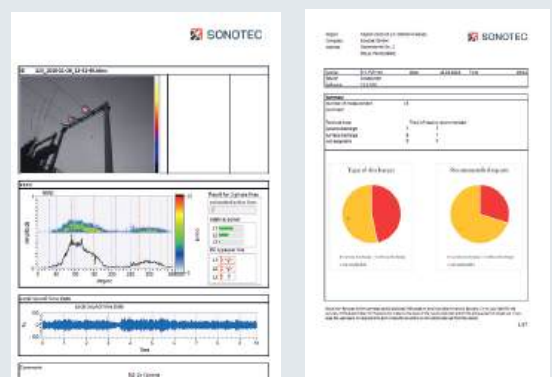→ Detection of partial discharges from a safe distance, even over long distances



## PDReport Software



- Free software for the analysis and rating of electrical partial discharges

- Automatic line frequency detection
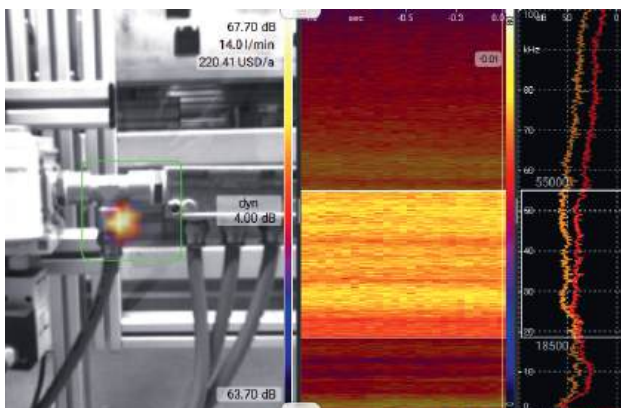
- Export as PDF

## Reports



- Documentation of defects and creation of repair orders

- Automatic differentiation between corona and surface partial discharge

- Display of the acoustic signal as PRPD

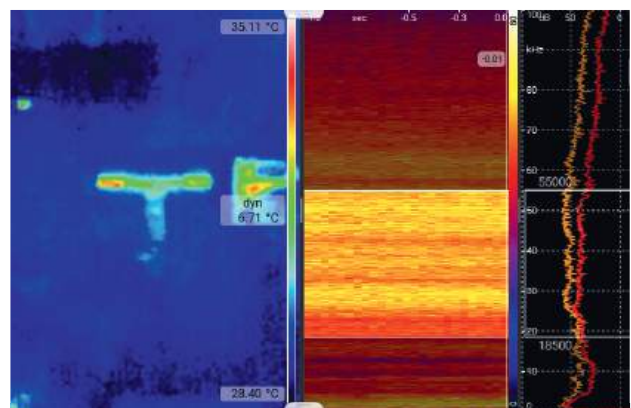SONOTEC

# SONASCREEN® 2 Acoustic Camera
## Setting new standards in hardware, performance, and accessibility

→ The SONASCREEN® 2 acoustic camera generates acoustic images from the audible and ultrasonic frequency range

→ The device locates (ultra)sound sources in real time and displays the results on the screen

→ In addition, the camera provides acoustic feedback via headphones

→ At the same time, the built-in IR module adds the functionality of a thermal imaging camera to the device

→ Thus, ultrasound becomes both audible and visible - and the detection of anomalies and damaged parts is enhanced by combining acoustic and thermal images



Visualization of a leak in the acoustic image

→ The combination of acoustic and thermo-graphic imaging enables a deeper under-standing of the recorded events



Visualization of the same leak in the thermal image

→ The parallel evaluation of acoustic and thermal images allows a more comprehen-sive diagnosis and analysis

# Different Modes
## Equipped for any application

**Easy**
Simplified mode with reduced range of functions for easier operation

**Pro**
Expert mode with extended range of functions and adjus-table measurement parameters

**Leakage**
Optimised mode for quick and easy detection of leaks incl. live loss indicator

**Partial Discharge**
Optimised mode for the detection of different types of partial discharges incl. live PRPD display

**Network**
Remote control of the camera via the included PC soft-ware*

# Technical Data

| General Data | |
|---|---|
| Size | 31 × 16 × 5.5 cm (12.2 × 6.3 × 2.2 inch) |
| Weight | 1.5 kg (3.3 lb) |
| Protection Class | IP54 |
| Operation | One- or two-handed |
| Battery | ~3,5 h; fully charged in 1,5 h; additional ~6,5 h with external battery (optional) |
| Buttons | 8 configurable + power on/off |
| Tripod Mount | 1/4" |
| Operating Temperature | -20 °C to 50 °C (-4 °F to 122 °F) |
| Display Size | 7" / 15 cm × 9.4 cm |
| Resolution | 1280 px × 800 px |
| Touch Display | 10 finger capacitive touch |
| Internal Storage | 1 TB M.2 SSD |

| Ports | |
|---|---|
| USB A 3.0 | Data export |
| Ethernet | LAN (to run the PC software)* |
| Audio | 3.5 mm jack for headphones |
| USB C | Charging and data export* |

| Sensors | |
|---|---|
| Microphones | 176 digital MEMS |
| Frequency Range | 1 Hz to 100 kHz |
| Sample Rate | 200 kHz |
| Acoustic Image Resolution | 100 fps |
| Sound Pressure | Max. 120 dB |
| Resolution | 24 bit |
| Detection Range | Up to 150 m (492 feet) |

| Optical Camera | |
|---|---|
| Type | Digital |
| Resolution | 640 × 480 px with 56 fps |
| Lighting | 4 LEDs |
| Aperture Angle | 70° × 55° (FoV horizontal × vertical) |
| Shutter | Global Shutter |

| Additional Sensors | |
|---|---|
| ToF (Time of Flight) | Distance measurement for <1.5 m* |
| GPS | Position incl. orientation* |

| Power Supply | |
|---|---|
| Input | 19 V with power adapter |

| Functions | |
|---|---|
| Features Camera | Acoustic images, optical images, FFT and spectrogram; listening to local sound (broadband or frequency-filtered); placing markers during measurement; buffer recording, trigger recording (SPL or frequency-triggered); long-term measurements (average and peak hold); time evaluation: fast, slow, impulsive |
| Features PC-Software | Display acoustic results frame by frame; save and reload; replay in real time or in slow motion; listen to local sound. slow motion; listen to the local sound |
| Export | Photo, video, audio, measured data |
| Intuitive Usability | Distance setting; frequency filter (narrow band, 1/3 octave and octave), Dynamic filter and lower cut-off frequency; 3 scaling modes: Off, Auto, Smart (CREST factor) |
| Languages | German, English, Spanish, Croatian, Italian, Japanese, Korean, Polish, Turkish, Chinese |

| Thermal Imager | |
|---|---|
| Sensor Technology | Microbolometer |
| Spectral Range | Long-wave infrared, 8 µm to 14 µm |
| Resolution | 160 × 120 px |
| Effective Frame Rate | 8.7 Hz |
| Thermal Sensitivity | <50 mK |
| Measurement Range | -10 °C to 400 °C (Room temperature) |

* This function will be activated in a future software update.

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