



SENSEVEN



Valve Sense

The mobile inspection system
for leak detection



WE EMPOWER EVERYONE TO INSPECT INDUSTRIAL ASSETS





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We turn your Smartphone into a smart mobile inspection solution

Valve Sense is based on the industry-wide established and standardized acoustic emission technology (see DIN EN1330-9), combined with new, digital features



- 1** Acoustic emission sensors collect AE signals between the frequencies of 20 and 500 KHz.
- 2** The Seven one device digitizes the AE signal and performs a background noise check. It is directly connected to a Smartphone via a USB interface.
- 3** The Senseven App on the Smartphone guides the user through the inspection process, visualizes the signals and calculates the result within seconds.



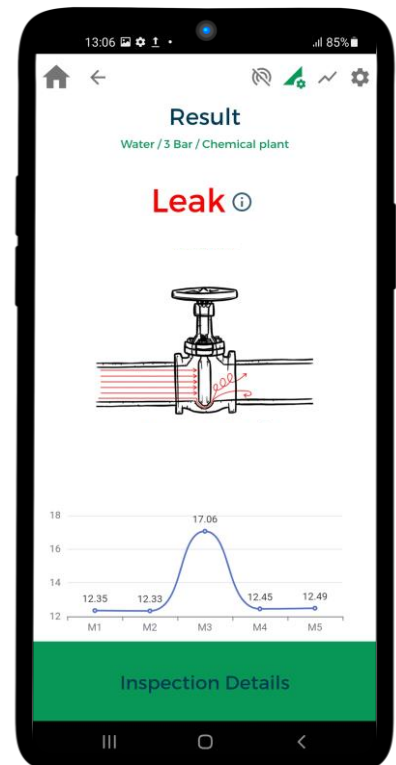
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The first digital leak detection tool: fast, independent, cost effective



- > RFID tags to scan valve data quickly and easily
- > Step by step software guided process
- > Automated background noise detection
- > Immediate result on site
- > Compare your inspection with historical inspections and tag reference values

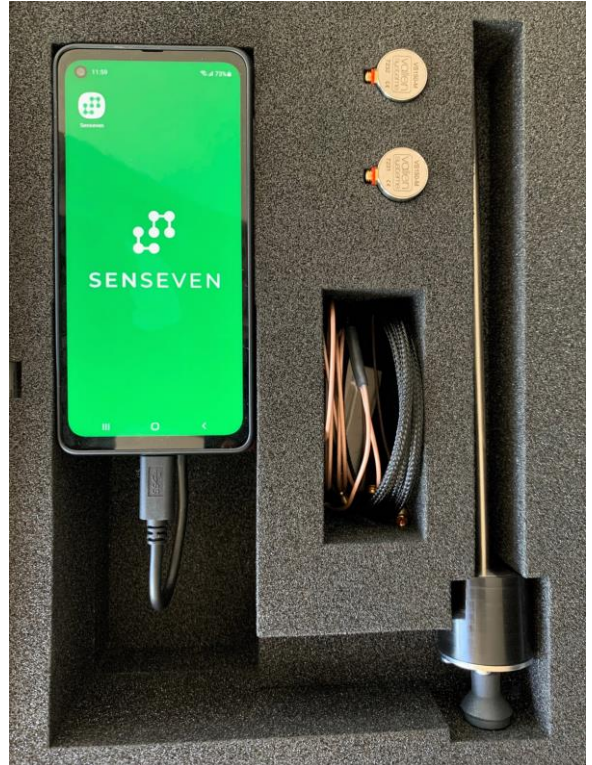
- > Visualization of RMS values
- > Live view for experts
- > Add more details e.g. pictures of the measured valve, meta data
- > Immediate auto generated reports based on ISO 18081
- > Direct connection to other software systems





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Valve Sense components



Valve Sense is delivered in a hard product shell case consisting of:

- > 1 Smartphone Samsung Galay xCover Pro including the Senseven inspection App
- > 2 acoustic emission sensors
- > 1 Seven one - single channel AE measurement device
- > Waveguide for hot and cold surfaces (>100° C and < 0° C)



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Technical specifications

Component	Technical Details
Samsung Galaxy XCover Pro	Operating system: Android 9.0 Pie
	Size and weight: 165.2 x 76.5 x 9.94 mm, 217 g
	IP-certified: IP68 und Mil-810G
	Display: 6.3. Inch, LCD
	Working memory: 4 GByte
	Device memory: 64 GByte
	Back Camera : 25 Megapixel Front Camera: 13 Megapixel
On-board measurement software	Senseven developed measurement software, measuring RMS values of acoustic emission signals including live view for experts
	Language: German, English and Mandarin
AE sensors	Passive piezoelectric AE –Sensor
	Frequency range (f_{Peak}) [kHz] 100 to 450 (150)
	Capacity [pF] 350
	Operating Temperature [° C] -50 to + 100
	Ingress Protection Rating IP 40
	Size and weight: 20.3 mm x 14.3mm , 24 g
Seven one	Analogue Bandwidth: 20 to 500 kHz
	Input range: 100 dB _{AE} (opt. 94/134 dB _{AE})
	Noise floor (VS 150-M): <12 μV_{RMS} (95 – 300 kHz)
	Sampling rate / Res. : 2 MHz / 16 Bit
	Power consumption: < 0.7 W
	Power supply: 5V (USB powered)
	Degree of protection: IP 40
	Operating Temperature: -20 °C to + 60 ° C
Size and Weight: 80,5 mm x 26,5 mm x 58 mm, 107 g	



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Disclaimer

The material contained in this document is provided “as is” and is subject to being changed, without notice, in future editions.

Senseven GmbH purchases parts for the inspection system from its suppliers and assumes no liability for components from other companies.

The instructions for use and safety of the product manufacturers apply.

Senseven GmbH shall not be liable for any direct, indirect, consequential or incidental damage arising out of the use or inability to use of the equipment delivered.