

*Nimrof*

# Nimrof AT550-3

Electro-acoustic water leak detection

[www.nimrof.com](http://www.nimrof.com)



# *Nimrof* AT550-3: The Choice of Professionals!

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## **Perfect Solution for Water Pipe Leak Detection**

Nimrof AT550-3 is designed for fast and precise water leak detection in pipelines. With advanced microphone technology and filtering capabilities, it captures leak sounds clearly while minimizing background noise. Its durable design and user-friendly operation make it a dependable solution for fieldwork.

## **The Most Reliable Leak Detection Solution**

This advanced system offers ease of use, versatility, and a durable ergonomic design for superior leak detection performance. Nimrof AT550-3 is designed for both pre-location and precise pinpointing of leaks, ensuring accurate and safe excavation. Suitable for all your leak detection needs, this device helps you locate water leaks quickly and reliably.

## **The Measurement Principle**

Water escaping from a pipeline creates vibrations in the pipe material. These vibrations travel along the pipeline and can be detected as structure-borne noise at distant contact points, such as fittings. Additionally, the leak sound propagates through the ground as ground-borne noise, though it is typically weaker.

Nimrof AT550-3 amplifies these vibrations, making them audible to the human ear, ensuring accurate and reliable leak detection.

## **Prelocating Leaks**

Place the Nimrof AT550-3's sensitive microphone on pipeline fittings to assess noise levels along the line. By comparing sound levels at different points, you can accurately determine the section most likely to contain the leak.

## **Accurate Leak Localization**

Nimrof AT550-3 utilizes advanced acoustic detection technology to precisely locate pipeline leaks. By systematically moving the sensitive ground microphone along the pipeline, variations in noise levels can be analyzed, allowing for quick identification of the loudest point. The device's audio and visual intensity indicators provide accurate guidance, ensuring a confident excavation process.

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## Precision Leak Detection with Electrode System

The Nimrof Electrode System is an advanced technology that detects leaks by measuring electrical conductivity variations. It is highly effective in deep pipelines, under concrete, and porous surfaces, where acoustic methods may be insufficient. With high-precision measurement capabilities, it pinpoints leaks accurately, minimizing unnecessary excavation and ensuring reliable detection results.



## Optimized Filtering for Precise Leak Detection

Nimrof AT550-3 offers advanced filtering options to isolate leak noises from background interference, ensuring crystal-clear detection. Users can optimize their leak detection process with the following filter settings:

- ◆ Low-Frequency Filters: 0-350 Hz, 0-800 Hz, 0-1500 Hz
- ◆ Broadband Filters: 350-4000 Hz, 800-4000 Hz, 1500-4000 Hz
- ◆ Special Modes: ALL (Full frequency range) and LOW (Focused on low frequencies)

These settings allow users to effectively detect both low-frequency leaks in deep pipelines and higher-frequency leaks near the surface, enhancing accuracy and efficiency in leak detection.

## Adjustable Gain Control for Precise Leak Detection

Nimrof AT550-3 features an advanced gain control function, allowing users to detect even the smallest leaks with precision. By manually adjusting the gain level, users can amplify weak leak noises, making it easier to locate leaks in low-pressure or deep pipelines. This feature is especially useful in noisy environments or on different surfaces, ensuring accurate detection by isolating leak sounds from background noise.





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The Dove-D1 ground microphone is designed for accurate leak detection on hard surfaces. Its robust construction isolates the microphone capsule from external disturbances, ensuring clear sound capture. A specialized mechanism maintains steady ground contact, allowing effective detection even on uneven surfaces.



The RS16SK contact microphone is specifically engineered for pre-location at pipeline fittings. Its broad frequency range allows it to accurately capture both subtle leak noises in plastic pipes and high-frequency leak sounds in metal pipelines. With interchangeable probe tips and adjustable extension rods, it seamlessly adapts to various pipeline structures for versatile application. Its durable design and high-precision detection technology help users locate leaks quickly and accurately.



The Under-Counter Listening Sensor (Mouse Probe Sensor) is a specialized acoustic detection tool designed for locating water leaks in areas where RS16SK cannot reach. Its compact and ergonomic design allows precise detection in tight spaces such as under sinks, inside cabinets, and narrow plumbing sections. Equipped with a high-sensitivity microphone, it effectively minimizes background noise and isolates leak sounds for accurate detection. The Mouse Probe Sensor provides a flexible and reliable solution for pinpointing leaks in confined and hard-to-access areas.



The Electrode Sensor is an advanced technology that detects water leaks not only through acoustic listening but also by analyzing electrical conductivity variations in the surrounding medium. This method is especially effective in underground leaks where acoustic detection alone may be insufficient, as it identifies changes in conductivity caused by water seepage. By measuring the conductivity difference between two electrodes, the system determines the direction and spread of the leak. This approach is particularly useful for porous surfaces, leaks under concrete, or pipelines with low acoustic transmission, significantly improving detection accuracy. The electrode method helps pinpoint leaks precisely, minimizing unnecessary excavation and reducing repair costs.