adixen
by Alcatel Vacuum Technology

HYDROGEN LEAK DETECTOR
ASH 2000

ASH 2000

H2 SENSISTOR

ADVANCED TECHNOLOGY MADE EASY

Sensistor was the pioneer that introduced hydrogen-based leak detection. The unique Sensistor sensor technology is at the very heart of Adixen's hydrogen leak detectors and ensures unsurpassed selectivity, sensitivity and reaction time.

The ASH 2000 Hydrogen Leak Detector – a faster and easier method for industrial leak detection

Miniscule leaks caused by material defects or failings in the manufacturing process create major and expensive problems in industrial production. The fact that leak testing and leak detection in production can be quite a challenge makes the situation even more complex. Since the introduction of the first leak detectors based on Sensistor's unique sensors – in combination with diluted hydrogen as tracer gas – everything has become much simpler. Adixen has continued to develop spearhead technology in the field of leak detection and has converted this into revolutionary methods and products that quickly contribute to improved productivity and profitability. The ASH 2000, the new generation leak detector, is one of the results.

ASH 2000 – FLEXIBLE AND VERSATILE FOR EVERY TEST ENVIRONMENT

The ASH 2000 is a benchtop instrument for rapid leak detection in a multitude of environments. The model is delivered with the P 50 hand probe for exact measurement and locating of leaks.

P/N	AS90750

ASH 2000 P – PERFECT FOR AUTOMATIC LEAK TESTING

The ASH 2000 P has the same functions as the benchtop model but is designed for panel mounting into fully or semi-automatic systems for leak testing and leak detection.

P/N	AS90760

ASH 2000 C – BATTERY POWERED AND TOUGH – FOR ROUGH ENVIRONMENTS

The ASH 2000 C is portable and battery powered for maximum freedom in leak detection processes. With the battery charger connected, this model functions as well as a stationary instrument.

P/N	AS90770

ADVANCED TECHNOLOGY MADE EASY

ASH 2000 – with extra equipment as standard

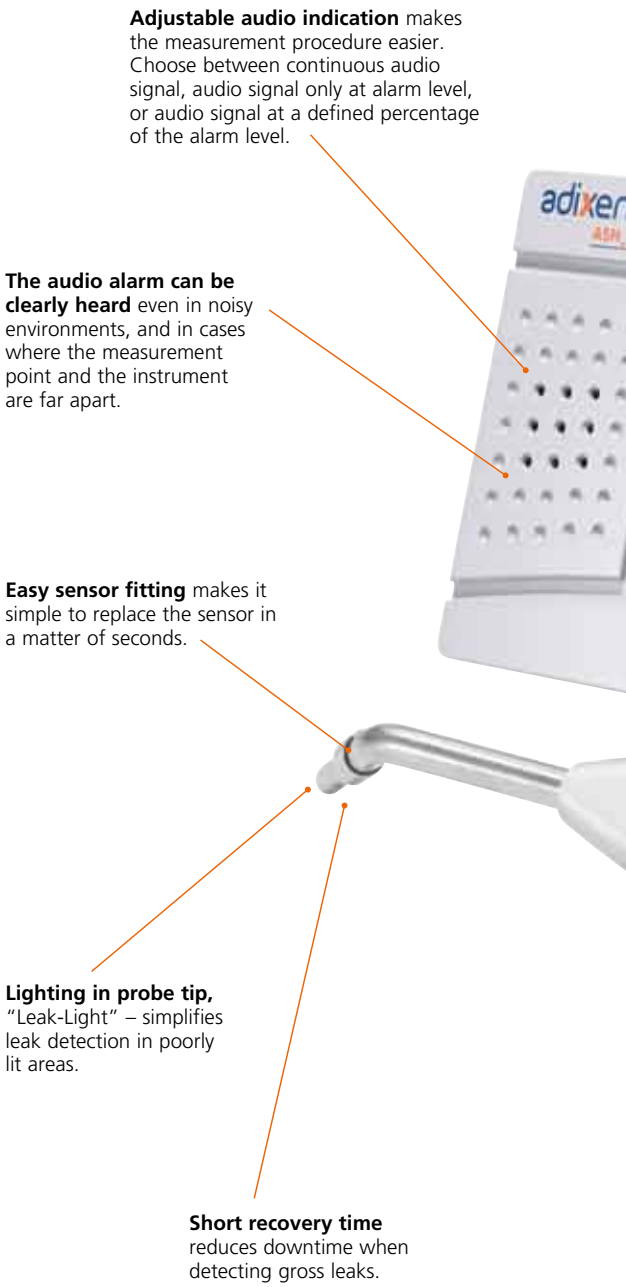
The principal component in the ASH 2000 is the fully electronic, ultra-sensitive hydrogen sensor. Together with diluted hydrogen as tracer gas, this provides the perfect conditions for rapid and reliable detection of everything from large to very small leaks – right down to a size of $1x10^{-7}$ mbarl/s.

The ASH 2000 is equipped for both data communication and manual control of inputs and outputs that facilitate the work to automate leak testing.

Developed for a flying start towards simpler and more reliable leak detection

The ASH 2000 has been developed with the focus on simplicity. Not only does it facilitate everyday use for the operator, but it also makes it extremely simple to start working with the revolutionary method of using diluted hydrogen as tracer gas. All you need is:

- The ASH 2000 Hydrogen Leak Detector
- A bottle of tracer gas – an inexpensive standard mix of 95% nitrogen and 5% hydrogen
- A device for injecting the tracer gas at the right pressure into the product to be tested.



Combined screen display for "Measure" and "Locate" improves the efficiency of the operator's work.

Alternative alarms through different types of audio signals and/or visual indicators on the screen.

High sensitivity – detects smaller leaks and shortens the time for each test cycle.

A choice between pre-defined measurement units for leak flow, PLUS programmable unit, supports the setting up of the instrument for different measurement situations.

Multi-point measurement with accumulation of the values makes it possible to add multiple leaks and compare with the total threshold value.

Long autonomy – fast charging (for battery-powered model).

Ergonomic hand probe with built-in intelligence facilitates the operator's control of the instrument.

LED Leak/Tight indication in the hand probe provides the operator with fast information during the leak detection process.

Automatic and manual zero setting eliminates problems with high background levels of tracer gas. Simply push a button to eliminate background disturbance.

ACCESSORIES

AP 29 Sampling Probe

P/N	AS90029 (3cc/sec sample flow)*

For automatic leak testing of entire products or parts of products. Can also be used for testing permeability of materials.

AP 55 Sniffer Probe

P/N	AS90550

For fast manual leak location in hard-to-reach places. Active probe that sniffs the sample air past the hydrogen sensor in the probe tip.

AP 57 Counter Flow Probe

P/N	AS90555

For leak detection in enclosed spaces or in environments with a high background level of tracer gas. An adjustable air flow from the probe tip provides a protective air curtain against tracer gas in the surroundings.

P 50 Flex Hand Probe

P/N	AS90290

With a flexible neck. Facilitates leak detection in hard-to-reach places.

H 65 Insert Sensor

P/N	AS90250

Replaces the standard hand probe in automated tests.

C 21 Probe Cables

P/N	AS90161 (3m)*

In lengths of 3, 6 and 9 metres for comfortable leak detection in every situation.

TGF 10 Tracer Gas Filler

P/N	AS90557

For controlled filling and evacuation of tracer gas in the test object. Controlled by the ASH 2000.

ILS 500 Leak Testing System

P/N	AS90590 (standard)*

For integration in automated systems, with advanced control of fixtures and tracer gas filling/evacuation.

Reference Leaks

P/N	AS90420 (Type A)*

Large and small, with certificate, for calibration and function tests of the ASH 2000.

*Contact your Adixen distributor for other options

ADVANCED TECHNOLOGY MADE EASY

Leak detection and leak testing in production and maintenance

The Adixen ASH 2000 is a universal instrument – in the true sense of the word – for professional leak detection. The unique method involving the use of diluted hydrogen as tracer gas combines peerless measuring properties with user-friendly technology, low costs and minimal service requirements. This makes the ASH 2000 the best option for a wide range of industrial applications. With the Adixen range of detectors, probes and instruments for tracer gas filling and fixture control, it is quick and simple to build up tailor-made stations for leak testing and leak detection. For many applications, you do not even need to make any adjustments – it is simply a matter of pressing the start button on the ASH 2000 and start locating leaks.

AUTOMOTIVE

Components and systems in vehicles have to be able to withstand tough stresses and strains for long periods while maintaining function and safety. Ensuring that fuel tanks, AC systems, oil pipes, gearboxes and light fittings are absolutely tight demands fast and efficient leak testing. The Adixen method that uses diluted hydrogen as the tracer gas is the optimal choice for achieving both higher sensitivity and shorter cycle times. The method also supplements existing tests and makes it possible to locate minor leaks more quickly without complicating the test procedure.

- Simple leak location without using fluids
- Higher sensitivity than pressure decay measurement
- The test method is unaffected by temperature variations
- The test method can be automated
- NIST traceability
- Accurate leak size measurements

AEROSPACE

An aircraft on the ground is always an expensive aircraft. Leaks in the fuel, oxygen or cooling systems are serious problems that often result in long and unpredictable repair times because such leaks are usually difficult to locate and repair. The Adixen instrument has proved peerless as regards simplicity and reliability both for maintenance and assembly situations. It saves a great deal of time compared to conventional methods that involve the use of compressed air or soap sprays.

- Clean and dry test method
- Exact location of invisible leaks
- High sensitivity
- Inexpensive tracer gas
- Complete system for gas injection

MEDICAL

The production of medical technology products makes exceptionally high demands on quality control. This makes the ASH 2000 an attractive solution for leak testing of items such as implants, blood pumps, fluid bags, catheters and other types of consumables. The test method is completely dry and the tracer gas does not affect the material tested in any way.

- Higher sensitivity than pressure decay measurement
- Not affected by elastomeric creep
- Exact detection of the position of the leak.
- Accurate leak size measurements

PACKAGING

Leak testing of packaging is part of the quality assurance procedure intended to result in longer and more predictable shelf life. The ASH 2000 opens the door to a completely dry test method that can easily be adapted – automatically or manually – to both flexible and hard packaging material. The tracer gas contains approved packaging gases – hydrogen (E 949) and nitrogen (E 941) – which live up to the demands of the foods industry.

- Exact detection of the position of the leak
- Higher sensitivity than conventional methods

INDUSTRY

There is an appreciable need for leak testing in the manufacturing industry – plastic containers, hoses, valves and hydraulic components are just some examples of products that Adixen hydrogen leak detectors are already being used to test. The sensitivity of the ASH 2000 and, above all, the flexible test procedures associated with it make this instrument the natural choice for a very wide range of applications in the field of industrial leak detection – for both large and small manufacturing batches.

- High sensitivity
- Simple and accurate location of leaks
- Suitable for both automatic and manual measurement
- Inexpensive tracer gas
- Accurate leak size measurements

PROCESS

Extremely high demands on tightness are often made in the process industry. Pipe systems, valves and containers for the chemical and petrochemical industry, hydrogen-cooled generators in the electricity generation sector, fuel cells and other systems in the area of hydrogen energy are just some examples. In the context of both production and service, Adixen hydrogen leak detectors provide a fast and reliable method for tightness control and leak detection.

- Leak detection with portable equipment
- High sensitivity
- Superior method to bubble testing

RAC

Leak testing using tracer gas is a standard procedure in the manufacture of both components and entire cooling systems for white goods and air conditioning units before they are filled with the refrigerant. The use of hydrogen as tracer gas provides a cost-efficient alternative to conventional helium-based leak detection. The unique dissemination capacity of hydrogen also minimises the risk of the detector being "blinded" by background gas in the event of major leaks. Systems that are operating can advantageously be checked using a hydrogen leak detector, which makes it possible to detect ALL leaks and then repair and refill the system.

- Inexpensive tracer gas
- Maintenance-free test equipment
- < 0,5 g/y equivalent refrigerant sensitivity (< 0.1 oz/y)
- No risk of the measurement probe becoming clogged
- Eliminates cloud hunting

TECHNICAL SPECIFICATIONS

Sensitivity	Detection Mode with P 50 standard probe*: $1x10^{-7}$ mbarl/s or cc/s with 5% H_2 (eq. to 0,02 g/a or $7x10^{-4}$ oz/yr R134a) Analysis Mode: 0,5 ppm H_2 ; $5x10^{-7}$ mbarl/s or cc/s with 5% H_2 (eq. to 0,2 g/a or $7x10^{-3}$ oz/yr R134a)		
Accuracy	± 15 %		
Start time	1 minute		
Calibration	External reference leak or calibration gas		
Front panel	Illuminated 256 x 64 pixel LCD Speaker Earphone socket Green LED for status Red LED for alarm		
Rear panel	D-Sub with status signals 24V DC / 0.5A		
Hand probe	Green LED for ACCEPT Red LED for REJECT LED flashlights to illuminate the area where the probe tip is pointing		
Maintenance	Maintenance-free		
	ASH 2000	ASH 2000 P	ASH 2000 C
Power supply	100–240V AC, 50/60 Hz, 2 A	24V DC, 3 A	Internal, rechargeable battery**
Dimensions (W x H x D)	275 x 155 x 170 mm (11 x 6 x 7 inch)	275 x 140 x 75 mm (11 x 6 x 3 inch)	275 x 190 x 170 mm (11 x 7 x 7 inch)
Weight	3.9 kg (8.6 lb) excl. probe and probe cable	1.8 kg (4.0 lb)	4.0 kg (8.8 lb) excl. probe and probe cable

*For other probes see respective datasheet

**charged using adapter supplied, 100–240V AC, 50/60 Hz, 0,3 A

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