



Sensistor ILS500

Leak Detection System

**THE ALL-IN-ONE LEAK TESTING SOLUTION FOR
IMPROVING YOUR QUALITY CONTROL**

The new Sensistor ILS500 Leak Detection System makes it even easier to set up a complete test station

The new generation Sensistor ILS500 Leak Detection System provides increased leak testing capacity in your production line, without the complexity associated with setting up an advanced test station. The Sensistor ISH2000 Hydrogen Leak Detector is built in to the ILS500 system so the entire test procedure is streamlined, providing even faster set-up and more accurate test results. Production, automotive, packaging, RAC and medical industries are typical application areas.

The extremely compact ILS500 is equipped with computer capacity for tooling control, tracer gas handling, test sequencing and leak testing – all behind an easy to use touchscreen interface. The system comprises three main modules in a common cabinet. The Controller Unit incorporates the central processing unit, the gas filling unit, and the machine and tooling interfaces. The Detector Unit, Sensistor ISH2000 Hydrogen Leak Detector, is based on the revolutionary Sensistor technology utilizing inexpensive forming gas (5 % hydrogen and 95 % nitrogen) as tracer gas. The Operator Interface Unit is equipped with a color touchscreen for intuitive and straightforward set-up and measurement dialogues.

FEATURES AT A GLANCE

- **Fully integrated leak testing system**
– approved for demanding industrial testing
- **Improved hand probe** – multi function button, LED indicators and LED illumination
- **Dual probe capability** – detect and pinpoint a leak in one single operation
- **Reliable leak detection** – highly selective and sensitive hydrogen sensor
- **Fast sensor reaction and recovery**
– for fast testing and short cycle times
- **Easy service and sensor change**
– for minimum down time
- **Faster and easier test set-up** – pre-installed drivers, picture menu of accessories
- **Color touchscreen** – improved user interface for set-up and measurement dialogues

MODELS



SENSISTOR ILS500

Standard version includes the ISH2000 Hydrogen Leak Detector with dual probe connection. Provides tooling control, tracer gas handling, test sequencing and leak testing.



SENSISTOR ILS500 F

Complete filler version without leak detector unit, with options for helium leak detection. Compatible with Sensistor ISH2000 Hydrogen Leak Detector and INFICON T-Guard Leak Detection Sensor (helium).

Both models are available in high pressure versions – ILS500 HP and ILS500 FHP.

Reject level is displayed on screen during operation

Create sum of multipoint testing and compare with an overall reject level

Combined Mode: locate and measure on the same screen

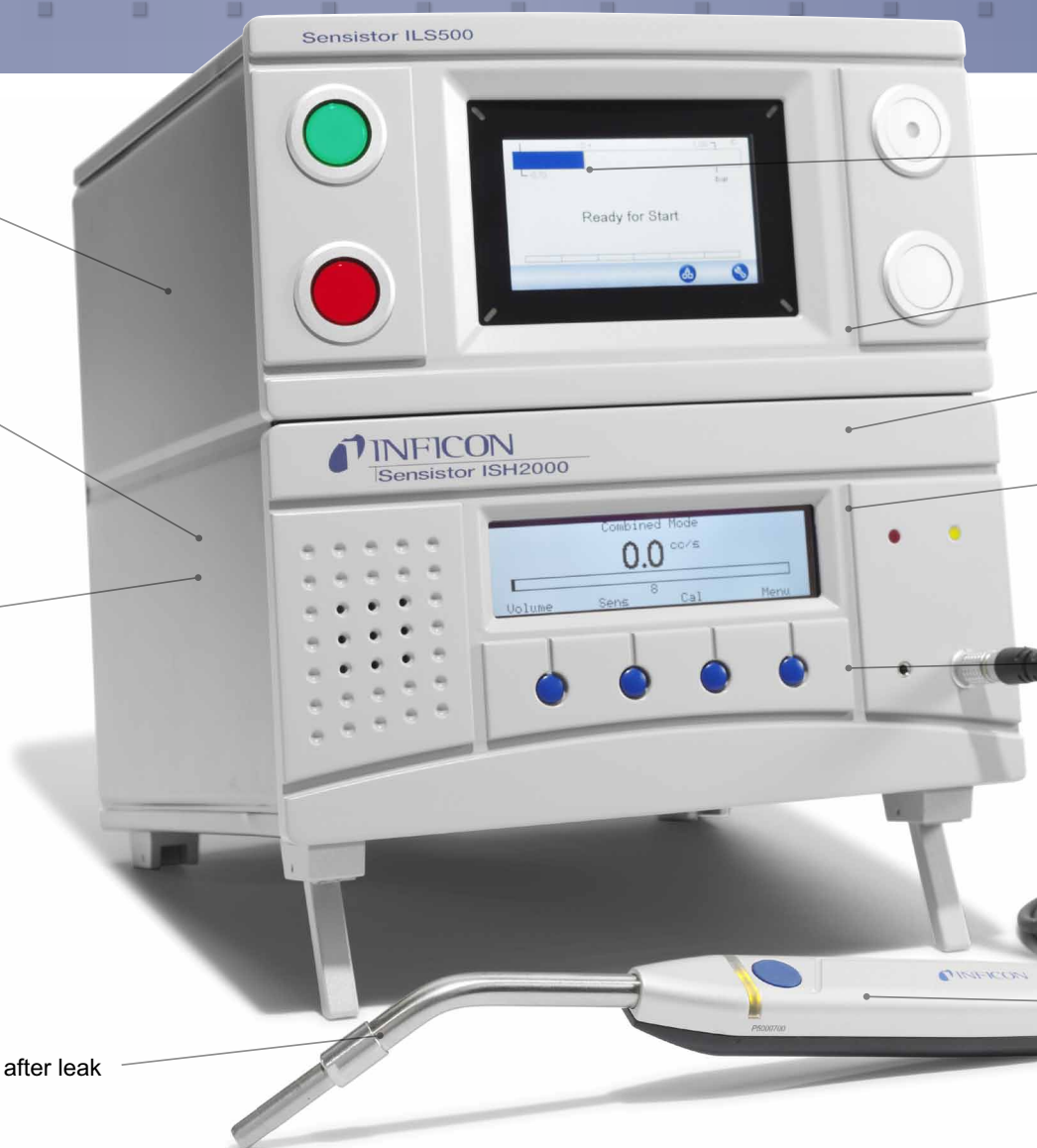
Possible to store an unlimited number of parameter settings (recipes) for different test objects. Fast change of recipe. Store and copy recipes via USB port

Choose from pre-set leak flow options or create your own unit

Sound indication only above a specified percentage of the reject level

Display values only above a percentage of the reject level

Short recovery time after leak



ACCESSORIES

With a broad range of accessories, the Sensistor ILS500 can be easily adapted to any leak testing situation.



P50 HAND PROBE

The ergonomic hand probe, a standard accessory to ILS500, allows exact pinpointing of the leak. With built-in intelligence, facilitates the operator's control of the instrument. Simple sensor change in a matter of seconds.



P50 FLEX HAND PROBE

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

Large color touchscreen
with intuitive user interface

Easy set-up with pre-installed drivers
and picture menu of accessories

Multilingual operator dialogue

Incorporates the latest model of
Sensistor ISH2000 Hydrogen Leak
Detector. Improved functionality, including
new shortcuts, reminders and functions
for minimizing errors

Dual probe connection combines
automatic leak testing and manual leak
locating (AP29ECO Sampling Probe
and P50 Hand Probe)

Improved hand probe

- rigid or flexible neck
- simple sensor change
- LED indicators for leak/no leak
- LED illuminated probe tip
- multi-function probe button. e.g., for
zero adjustment in areas with high
background levels of tracer gas



Flexible connections

Sensistor ILS500 provides a wide range of
connections for gas handling and tooling control,
making it easy to create a complete leak testing
system with a minimum of external equipment.



C21 PROBE CABLES

In lengths of 3, 6 and 9 meters
(9.8, 19.6 and 29.5 ft.) for a variety
of test situations.



CALIBRATION LEAKS

For calibration and function tests
of the Sensistor ILS500.



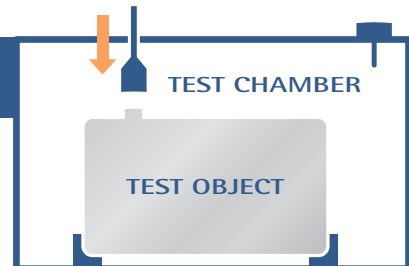
AP29ECO SAMPLING PROBE

For automatic leak testing of entire
products or parts of products. It takes
samples from the test chamber or local
test point and analyzes them.

... for fast, simple and reliable leak testing

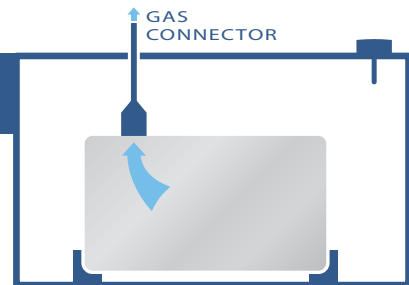
1 TOOLING CONNECTION

ILS500 activates the tooling outputs (optional), thereby pressing the gas connectors and plugs towards the test object.



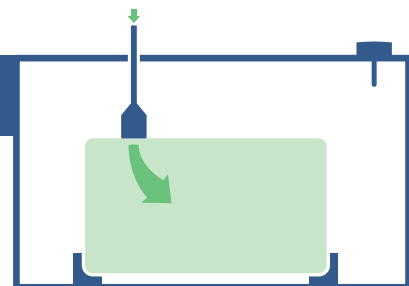
2 PRE-EVACUATION AND GROSS LEAK TEST

To facilitate the tracer gas filling, the test object is pre-evacuated. Optional procedures are available to detect gross leaks, making further testing unnecessary.



3 TRACER GAS FILLING

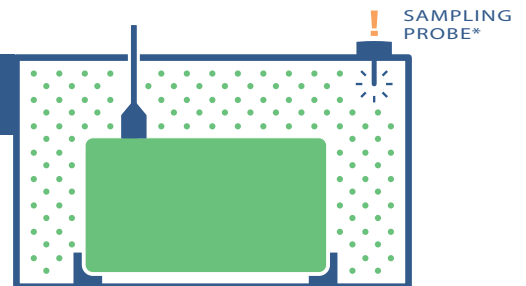
The test object is filled with tracer gas to a specified pressure. Pressure decay test is an optional procedure for early detection of mid-size leaks.



4 TRACER GAS LEAK TEST

Leaking tracer gas in the test chamber is measured by an automatic sampling probe during a specified time interval.

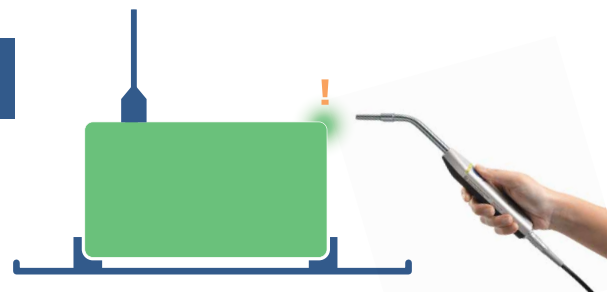
*Requires the accessory AP29ECO Sampling Probe



5 MANUAL LEAK LOCATING

If the test result is "fail," it is possible to continue with a manual leak search using the hand probe for exact pinpointing of the leak.

If the tracer gas test result is "pass," the ILS500 begins the evacuation of tracer gas and the disconnection of the gas connectors.



SPECIFICATIONS

Minimum detectable leak rate	
Locating Mode with P50 standard probe	1x10 ⁻⁷ mbarl/s or cc/s with 5% H ₂
Measuring Mode with P50 standard probe	0.5 ppm H ₂ ; 5x10 ⁻⁷ mbarl/s or cc/s with 5% H ₂
Start time	1 min
Calibration	External calibration leak or calibration gas
Supplies	<p>Electrical: Mains Voltage: Single Phase, 85-260 V (ac) / 47-63 Hz Current: 1.0 A @ 100 V (ac) / 0.45 A @ 230 V (ac) Power Rating: 120 W max / 33 W typical average</p> <p>Compressed Air: Pressure: 0.35 – 0.7 MPa (50 – 100 psi). Peak Consumption @ 0.6 MPa (87 psi): 240 l/min (508 SCFH)</p> <p>Tracer gas: Recommended Composition: 5% H₂ / 95% N₂ Pressure: 0.005 – 1.0 MPa (0.72 – 145 psi)</p>
Pneumatic	<p>Evacuation: Max Vacuum: -85 kPa (-12.3 psi) Capacity: 0.4 s/l to -50 kPa (-7.2 psi), 1.5 s/l to -80 kPa (-11.6 psi)</p> <p>Filling: Capacity at 1 MPa supply: 0.1 s/l to 0.1 MPa (14.5 psi), 0.5 s/l to 0.6 MPa (87 psi)</p> <p>Tooling Output Valves: Valve type: Normally closed, 3/2 valve Qn: 160 std l/min. Cv: 0.16 USGPM/psi</p> <p>Gas and Air Connection: Female ISO 3/8 in. (ISO to NPT 3/8 in. adapters included)</p>
Environment	<p>Temperature: 10° - 40°C (50° - 100°F) Humidity: 85% RH (non condensing) IP class: IP30</p>
Dimension (H x W x D)	295 x 275 x 330 mm (12 x 11 x 13 in.)
Weight	15.2 kg (33.5 lb.)
Communication Ports	<p>Ethernet: RJ45 RS232: male, 9 pin, D-sub</p>
I/O Port Signals	Output Capacity: Max 0.5 A / output (max 2.5 A total), 24 V (dc) logic

ORDERING INFORMATION

	Part no.		Part no.
ILS500 versions		Accessories	
Sensistor ILS500*	590-570	AP29ECO Sampling Probe	590-035 (3cc/sec sample flow)
Sensistor ILS500 HP* (high pressure version)	590-572		590-036 (1cc/sec sample flow)
Sensistor ILS500 F	590-571	No-Stop Maintenance Kit	590-680
Sensistor ILS500 FHP (high pressure version)	590-573	Spare Parts	
Accessories		Sensor	590-292
Hand Probe P50	590-780	C21 Probe Cables	590-161 (3 m, 9.8 ft.)
Hand Probe P50 Flex	590-790		590-175 (6 m, 19.6 ft.)
Robot Probe R50	590-920		590-165 (9 m, 29.5 ft.)
Active Holder for Hand Probe	590-635	Calibration Leaks	See separate data sheet

*complete with Hand Probe P50 and 3 m Probe Cable C21



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Due to our continuing program of product improvements, specifications are subject to change without notice.

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