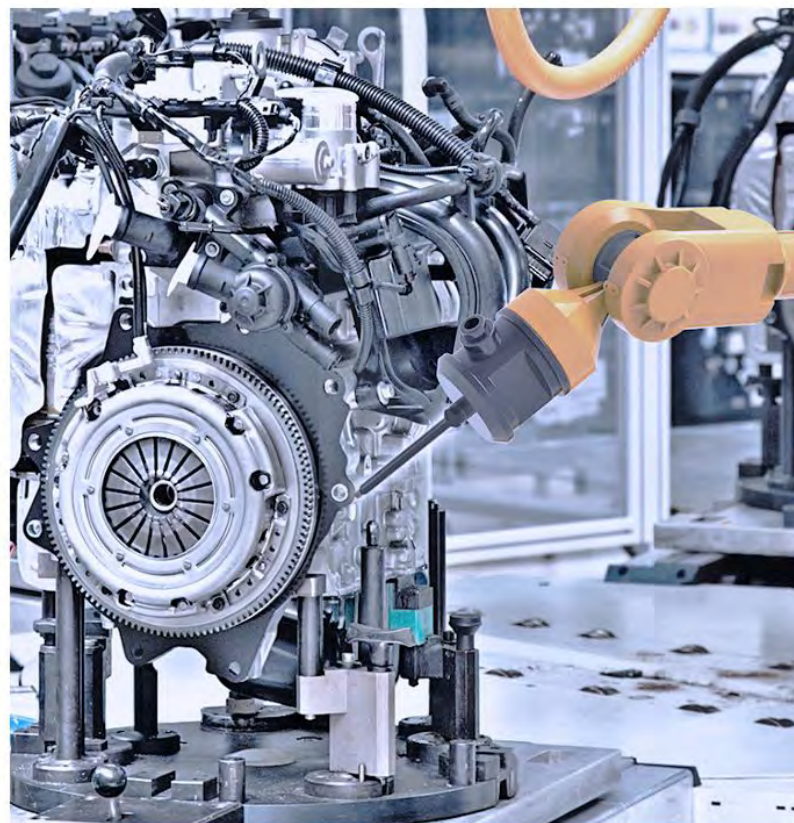


Leak Detection Catalog 2020-2021

Leak Detectors and Accessories



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| | | ELT3000 | XL3000flex | Protec P3000 (XL) | Sensistor Sentrac | Sensistor ISH / ILS | EXTRIMA | Sensistor XRS9012 | Ecotec E3000 | Ecotec E3000A | HLD6000 | UL3000 & UL1000 Series | UL5000 | LDS3000AQ | UL1000 | LDS3000 | Modul1000 | T-Guard 2.0 | Contura S400 /S600 | Pernicka 700H | IRwin | D-Tek Stratus | |
| APPLICATIONS | | | | | | | | | | | | | | | | | | | | | | | |
| Semiconductor production | ✓ | | | | | | | ✓ | | | | ✓ | ✓ | | | | | | | | ✓ | | |
| Automotive industry | | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | |
| Aircraft industry | | | | | ✓ | ✓ | ✓ | | | ✓ | | | | | | | | | | | | | |
| Air conditioning | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | | | | | ✓ |
| Refrigeration | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | ✓ |
| Systems engineering | | | | | ✓ | ✓ | | | | | | | | ✓ | | ✓ | ✓ | ✓ | | | | | |
| Public utilities | | | | | | | ✓ | ✓ | | | | | | | | | | | | | | ✓ | |
| Food packaging | | | | | | | | | | | | | | | | | | | ✓ | | | | |
| Garage service | | | | | | | | | | | | | | | | | | | | | | | ✓ |

Leak Detectors

Leak Detectors

Leak Detectors for Battery Cells

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Service Tools for HVAC and Automotive

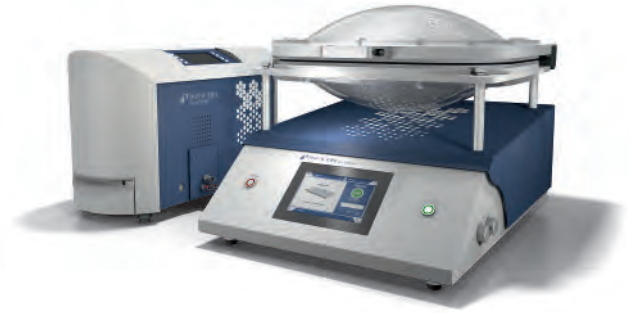
D-TEK® Stratus Refrigerant Leak Detector B65

Leak Detectors for Battery Cells

ELT3000

Sensitivity, reliability and innovation – the modular ELT3000 system sets a new benchmark for battery leak testing. Lithium-ion batteries are used in a wide range of emerging technologies including prismatic cells, round cells, and pouch cells. The latter are used in many industries, for example by smartphone and tablet manufacturers or in the booming industry for e-mobility.

With the ELT3000, INFICON offers a unique test system for battery cells that helps you comply with the ISO 9000 standard. It is the only system that determines leakage directly, rather than indirect parameters (like pressure changes). Based on mass spectrometer technology it can find leaks 1,000 times smaller than the ones found with traditional pressure test methods. The new ELT3000 helps you to guarantee battery lifetimes of up to 10 years.



ADVANTAGES

- **RELIABLE LIFETIME**

Leaks 1,000 times smaller than with traditional methods can be detected by the use of mass spectrometer technology allowing a battery cell lifetime of up to 10 years.

- **FUTURE-PROOF INVESTMENT**

The ELT3000 system is well-suited for prismatic cells, round cells and pouch cells. Even if you decide to go to different cell geometries, you can continue testing with the ELT3000.

- **SIMPLE TO USE AND TO INTEGRATE**

The easy testing procedure and the touch display make the ELT3000 simple and intuitive to use. No costly training courses are needed. The system can be fully integrated into automated production.

- **HIGHLY EFFICIENT**

Both test chamber designs allow for simultaneous testing of several cells in one testing cycle. In combination with short cycle times, the system allows for fast throughput testing.

APPLICATIONS

- Smartphone and tablet manufacturers
- E-mobility industries

ELT3000

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| Basic Leak Detector | |
| ELT3000 (Gas Detection Unit + Control Unit) 230 V, 50 Hz | 600-001 |
| ELT3000 (Gas Detection Unit + Control Unit) 110 V, 60 Hz | 600-002 |
| Test Chambers | |
| TC3000S Rigid Chamber (180 mm × 180 mm × 27 mm) | 600-100 |
| TC3000L Rigid Chamber (400 mm × 210 mm × 120 mm) | 600-101 |
| FTC3000 Flexible Chamber (400 mm × 350 mm) ¹⁾ | 600-102 |
| Calibration Leaks | |
| E-Check (DMC) | 600-105 |
| ACCESSORIES | |
| I/O1000 Module (input / output module) | 560-310 |
| Data cable (I/O1000 / BM1000 to ELT3000) | |
| 2 m | 560-332 |
| 5 m | 560-335 |
| 10 m | 560-340 |
| BM1000 Profibus module | 560-315 |
| BM1000 PROFINET I/O module | 560-316 |
| BM1000 Device Net module | 560-317 |
| BM1000 Ethernet/IP | 560-318 |

¹⁾ Coming soon

SPECIFICATIONS

| | |
|--------------------------------------|--|
| Minimum detectable leak rate | 1×10^{-6} mbar l/s (Helium equivalent leak rate) |
| Measurement range | Three decades |
| Leak rate units | mbar l/s, atm cc/s, Pa m ³ /s |
| Detection sensor | Quadrupole mass spectrometer (2 cathodes) |
| Time until ready for measurement | <180 s |
| Serial interfaces | USB 2.0; M12 (for connection I/O1000); RJ45 (network connection) |
| Interface via I/O1000 Modul | 10 digital inputs; 8 digital outputs; RS232 |
| Operating temperature | 10° C to 40° C (50° F-104° F) |
| Type of protection | IP20 |
| Dimensions Gas Detection (L × W × H) | 610 × 300 × 380 mm (24 × 12 × 15 in.) |
| Dimensions Control Unit (L × W × H) | 700 × 540 × 250 mm (27.6 × 13.7 × 6.4 in.) |
| Weight | 65 kg (144.5 lbs) |
| Operating language | English, German, Korean, Chinese, Japanese |

Helium Sniffer Leak Detectors

XL3000flex

The XL3000flex is a high-precision, innovative sniffer leak detector for the refrigeration, air conditioning and automotive industries. The INFICON High Flow Technology with 3,000 sccm, together with the worldwide unique mass spectrometer, guarantees the highest measuring sensitivity, even at longer distances. As a result, even with imprecise handling, leaks can be reliably detected, even if they are located in hard-to-reach places. When combined with various industry-standard communication interfaces, the XL3000flex is also ideal for robotics applications.



ADVANTAGES

- **EXCEPTIONAL RELIABILITY**

Leaks are detected reliably even when the device is used imprecisely - through the INFICON high-flow Sniffer Leak Detector with 3000 sccm.

- **HIGH LEVEL OF PLANT AVAILABILITY**

Thanks to the highly sensitive mass spectrometer system, downtime due to sensor contamination is virtually ruled out even at high tracer gas concentration in the production environment.

- **MAXIMUM PRODUCTION RELIABILITY**

Our high-quality stainless-steel mass spectrometer sets new quality standards - with a 3-year warranty on the cathodes.

- **COST EFFICIENCY**

It is possible to reduce the helium concentration or use cheaper forming gas - thanks to the highly sensitive stainless steel mass spectrometer.

APPLICATIONS

Manual or automatic leak-testing of subassemblies and during production of:

- Refrigerators
- Freezers
- Air conditioning systems
- Vehicle air conditioning systems
- Heating and ventilation systems
- Components for refrigeration and air conditioning systems
- Vehicle components and similar products

XL3000flex

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| XL3000flex | 520-200 |
| Sniffer line | |
| SL3000XL-3: 3 m length | 521-011 |
| SL3000XL-5: 5 m length | 521-012 |
| SL3000XL-10: 10 m length | 521-013 |
| SL3000XL-15: 15 m length | 521-014 |
| Adapter for external sniffer line PROTEC P3000XL | 521-015 |
| Oil/water protection tip for SL3000XL | 521-016 |
| Filter oil/water protection tip | 521-017 |
| Sniffer tip | |
| ST312XL | 521-018 |
| FT312XL | 521-019 |
| ST385XL | 521-020 |
| FT385XL | 521-021 |
| FT250XL | 521-022 |
| Special filter cartridge for SL3000XL (25 units) | 521-023 |
| BM1000 bus module | |
| Profibus | 560-315 |
| Profinet | 560-316 |
| DeviceNet | 560-317 |
| EtherNet/IP | 560-318 |
| IO1000 module | 560-310 |

SPECIFICATIONS

| | |
|---|--|
| Min. detectable leak rate for helium/hydrogen | |
| High flow | 2×10^{-6} mbar l/s |
| Low flow | 2×10^{-7} mbar l/s |
| Gas flow | |
| High flow | 3,000 sccm |
| Low flow | 300 sccm |
| Response time for high flow/low flow | <1 s |
| Ion source | Two longlife iridium filaments coated with yttrium oxide |
| Run-up time | 150 s |
| Measurable gases | Helium, hydrogen |
| Power rating | 280 VA |
| Power supply demand | 100-120 V(ac) 50/60 Hz 230 V(ac) 50/60 Hz |
| Main fuses | 2 × T6, 3 A 250 V |
| Type of protection | IP30 |
| Interfaces | USB, RS232, RS485, fieldbus systems |
| Dimensions (L × W × H) | 544 × 404 × 358 mm |

Helium Sniffer Leak Detectors

Protec® P3000(XL)

INFICON Protec P3000 and Protec P3000XL helium sniffer leak detectors are specifically designed for full-time sniffing applications in demanding production environments.

The Protec P3000 (XL) enables sustained increase in productivity and reliability in the testing of subassemblies and tests during running production. Numerous features increase its user-friendliness and make it less sensitive to careless use and operator errors. It is also fast to make the best use of your available cycle time.



ADVANTAGES

- **FAST AND RELIABLE**

Reliable localization of even the smallest leaks, with fast response times and without faulty measurements. Even short cycle times are used optimally.

- **COST EFFICIENCY**

The INFICON Wise Technology helium sensor does not need a vacuum, turbopump or maintenance. This lowers your operating costs and avoids downtimes.

- **LOW MAINTENANCE**

Maintenance efforts depend on the type of the Protec P3000 Series. For setup and maintenance work, the Protec P3000RC can be connected to an external control unit, while the sniffer line display is sufficient for daily operation. The Protec P3000XL is maintenance-free.

- **RELIABLE LEAKAGE DETECTION**

The INFICON High Flow at 3000 sccm reliably detects leakages, even in the case of imprecise handling.

- **COMPLETE OPERATOR GUIDANCE**

The I-Guide mode can be used to define the leak positions to be checked with time sequences and repetition rates. As a result, even the most inexperienced operator can efficiently detect leakages.

Protec[®] P3000(XL)

APPLICATIONS

The Protec P3000(XL) is ideal for all helium sniffing applications of pressurized components that need to be leak-tested.

Refrigerating/air conditioning industries

- Evaporators
- Condensers
- Valves
- Compressors
- Testing of pre-assembled air conditioning systems, heat pumps and refrigerators and freezers before filling with refrigerant

Automotive industry

- Brake lines
- Fuel lines
- Hydraulic components
- Motors
- Testing of pre-assembled air conditioning systems before filling with refrigerant

Protec® P3000(XL)

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| Protec P3000 (base unit), 230 V, 50 Hz | 520-001 |
| 100/115 V, 50/60 Hz | 520-002 |
| Protec P3000XL (base unit), 230 V, 50 Hz | 520-003 |
| 100/115 V, 50/60 Hz | 520-004 |
| Remote-controlled version without display unit | |
| Protec P3000, RC, 230 V, 50 Hz | 520-103 |
| Protec P3000, RC, 110/115 V, 50/60 Hz | 520-104 |
| Protec P3000XL, RC, 230 V, 50 Hz | 520-105 |
| Protec P3000XL, RC, 110/115 V, 50/60 Hz | 520-106 |
| Display unit for Protec P3000RC | |
| Table top version | 551-100 |
| Rack version | 551-101 |
| Connecting cable for display unit | |
| 5 m length | 551-102 |
| 0.7 m length | 551-103 |

Protec is a trademark of INFICON.

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| Sniffer line for Protec P3000 with integrated display and push-buttons | |
| SL3000-3, 3 m length | 525-001 |
| SL3000-5, 5 m length | 525-002 |
| SL3000-10, 10 m length | 525-003 |
| SL3000-15, 15 m length | 525-004 |
| Sniffer line for Protec P3000XL with integrated display and push-buttons | |
| SL3000XL-3, 3 m length | 521-011 |
| SL3000XL-5, 5 m length | 521-012 |
| SL3000XL-10, 10 m length | 521-013 |
| SL3000XL-15, 15 m length | 521-014 |
| Sniffer line adapter for system integration | |
| for Protec P3000 | 525-005 |
| for Protec P3000XL | 521-015 |
| Sniffer tips for SL3000 (Protec P3000) | |
| ST 312, 120 mm, rigid | 12213 |
| FT 312, 120 mm, flexible | 12214 |
| ST 200, 200 mm, rigid | 12218 |
| FT 250, 250 mm, flexible | 12266 |
| ST 385, 385 mm, rigid | 12215 |
| FT 385, 385 mm, flexible | 12216 |
| FT 600, 600 mm, flexible | 12209 |
| ST 400, 400 mm, 45° angled | 12272 |
| Sniffer tips for SL3000XL (Protec P3000XL) | |
| ST312XL, 120 mm, rigid | 521-018 |
| FT312XL, 120 mm, flexible | 521-019 |
| ST385XL, 385 mm, rigid | 521-020 |
| FT385XL, 385 mm, flexible | 521-021 |
| FT250XL, 250 mm, flexible | 521-022 |

Protec® P3000(XL)

| ITEM | PART NUMBER |
|---|-------------|
| PRO-Check test leak - optional (not included with delivery of Protec P3000) | 521-001 |
| Spare reservoir for PRO-Check | 521-010 |
| Calibrated leak with helium reservoir | |
| S-TL 4, leak rate range 1.0 - 1.2×10^{-4} mbar l/s | 122 37 |
| S-TL 5, leak rate range 2.0 - 6.0×10^{-5} mbar l/s | 122 38 |
| S-TL 6, leak rate range 6.0 - 8.0×10^{-6} mbar l/s | 122 39 |
| Holder for sniffer line SL3000(XL) | 525-006 |
| Cover for test leak port | 525-007 |
| Water protection tip for SL3000 | 122 46 |
| Oil/water protection tip for SL3000XL | 521-016 |
| Replacement filter for oil/water protection tip (100x) | 521-017 |
| Special filter cartridge for SL3000XL | 521-023 |

SPECIFICATIONS

| | PROTEC P3000 | PROTEC P3000 (XL) |
|--------------------------------------|-----------------------------|---|
| Minimum detectable leak rate | 1×10^{-7} mbar l/s | 1×10^{-6} mbar l/s @ 3000 sccm 1×10^{-7} mbar l/s @ 300 sccm |
| Measurement range | Five decades | Four decades @ 3000 sccm Five decades @ 300 sccm |
| Sensor response time | | 450 ms |
| Response time including sniffer line | | <0.7 s |
| Leak rate units | | mbar l/s; Pa m ³ /s; ppm |
| Refrigerant equivalent leak rates | | g/a; oz/yr; lb/yr |
| Start-up time | | approx. 5 min |
| Dimensions (W × D × H) | | 610 × 265 × 370 mm (24 × 10.4 × 14.6 in.) |
| Weight | | 27 kg (60 lb.) |
| Gas flow | 300 sccm | 300/3,000 sccm |
| Ambient temperature range | | +10° to 45°C |

Hydrogen Sniffer Leak Detectors

Sensistor[®] Sentrac

The Sensistor Sentrac Hydrogen Leak Detector is a modern leak detector for industrial use. The instrument, which uses a low-cost forming gas (5% hydrogen and 95% nitrogen) as the test gas, offers leak locating in a variety of situations both on the production and repair lines. Thanks to its unique ability to handle small and large leaks as well as high background levels of tracer gas, this leak detector is highly adaptable.

For added flexibility, the Sensistor Sentrac leak detector is available in both desktop and battery-operated models.



ADVANTAGES

- **HIGHLY EFFICIENT**

Detect a wide range of leaks thanks to the unique combination of high sensitivity, high selectivity, great dynamic range and fast recovery time.

Suitable for both manual and robot-assisted leak detection.

- **COST EFFICIENCY**

Low total cost of ownership (TCO).

- **SIMPLE TO USE AND TO INTEGRATE**

Lightweight and easy to carry.

Intuitive interface.

Ergonomically designed.

- **LOW MAINTENANCE**

No pump, no maintenance.

Sensistor[®] Sentrac

APPLICATIONS

The combination of inexpensive tracer gas, flexible testing procedures and high reliability makes Sensistor Sentrac the optimal solution for applications in production, repair lines and maintenance.

- Automotive industry
- Aerospace
- RAC
- Packaging
- Medical
- Process

Sensistor® Sentrac

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| Sensistor Sentrac, desktop unit including hand probe P60 and 3 m probe cable C21 | 590-900 |
| Sensistor Sentrac, portable unit including hand probe P60 and 3 m probe cable C21 | 590-910 |
| ACCESSORIES | |
| Hand Probe P60 | 590-890 |
| Hand Probe P60 Flex | 590-892 |
| Robot Probe R50 | 590-921 |
| Probe tip protection caps, 50 pack | 591-273 |
| Probe tip protection caps, 500 pack | 590-625 |
| Probe tip filter, 50 pack | 591-234 |
| Tracer gas filler TGF11, for controlled filling and evacuation of tracer gas in the object | |
| Standard version | 590-558 |
| Low pressure version | 590-559 |
| Sensistor ILS500 F leak detection filler | 590-596 |
| Probe cables C21 | |
| 3 m (9.8 ft) | 590-161 |
| 6 m (19.6 ft) | 590-175 |
| 9 m (29.5 ft) | 590-165 |
| Insert sensor H65, replaces the standard hand probe in automated tests, requires a Combox | 590-250 |
| Test leaks ¹⁾ | on request |
| Combox60 for connecting PK50, H65, R50 to Sentrac | 590-821 |

¹⁾ Please contact us for our range of matching test leaks.

SPECIFICATIONS

| | | |
|--|--------------------------------|---|
| Minimum detectable leak rate | | |
| Detection Mode with P60 standard probe | | 5×10^{-7} mbar l/s or cc/s with 5% H ₂ |
| Analysis Mode with P50 standard probe | | 0.5 ppm H ₂ ; 5×10^{-7} mbar l/s or cc/s with 5% H ₂ |
| Start time | | 1 min |
| Calibration | | External test leak or calibration gas |
| Operating time (Sentrac portable) | | 12 h at 20°C (68°F) |
| Charging time (Sentrac portable) | | 6.5 h at 20°C (68°F) |
| Inputs/outputs | | 25 pin, D-Sub with following interface: RS232, Audio line out, Analog out, Digital 3 in/4 out, USB (Slave), SD card reader |
| Maintenance | | Maintenance-free |
| Power supply | Sensistor Sentrac desktop unit | 100 – 240 V(ac), 50/60 Hz, 2 A |
| | Sensistor Sentrac portable | Internal, rechargeable battery ¹⁾ (Li-Ion) |
| Dimensions (W × H × D) | Sensistor Sentrac desktop unit | 305 × 165 × 182 mm (12 × 6.6 × 7.2 in.) |
| | Sensistor Sentrac portable | 330 × 200 × 280 mm (12.9 × 7.8 × 11 in.) with case |
| Weight | Sensistor Sentrac desktop unit | 4.2 kg (9.2 lb.) |
| | Sensistor Sentrac portable | 4.8 kg (10.5 lb.) |

¹⁾ Charged, using adapter supplied, 100-240 V, 50/60 Hz, 0.3 A

Sensistor® ISH2000

The Sensistor ISH2000 Hydrogen Leak Detector is a robust instrument for professional leak detection. It is the best choice in environments where large leaks occur occasionally. For this unique test method, a low-cost forming gas (5% hydrogen and 95% nitrogen) is used as the test gas. This allows unsurpassed measuring properties to be combined with user-friendly technology, low cost, and low maintenance. The Sensistor ISH2000 is therefore the best choice for a wide range of production and maintenance applications. It is particularly suitable for detecting leaks from which fluids such as water, fuel or oil escape. With its unique capability to handle high gas concentrations, the Sensistor ISH2000 is superior in precisely pinpointing leak location, irrespective of leak size.



ADVANTAGES

- **HIGHLY EFFICIENT**

With its unique tolerance to high gas concentrations, the Sensistor ISH2000 is superior in precisely pinpointing leak location, irrespective of leak size.

- **COST EFFICIENCY**

The unique method involving the use of inexpensive forming gas (5 % hydrogen and 95 % nitrogen) as tracer gas combines unmatched measuring properties with user-friendly technology and low costs.

- **SIMPLE TO USE AND TO INTEGRATE**

INFICON provides a range of detectors, probes and instruments for tracer gas filling and fixture control that make it quick and simple to build 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 Sensistor ISH2000 to start locating leaks..

- **LOW MAINTENANCE**

Low maintenance effort due to minimal service requirements.

Sensistor® ISH2000

APPLICATIONS

The combination of inexpensive tracer gas, flexible testing procedures and high reliability makes Sensistor Sentrac the optimal solution for a variety of demanding applications – both in production, repair lines and maintenance.

- Industry
- Automotive industry
- Aerospace
- Packaging
- RAC
- Medical
- Process

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| Sensistor ISH2000, desktop unit, including hand probe P50 | 590-750 |
| Sensistor ISH2000P, unit for panel mounting, for full or semi-automatic leak detection | 590-760 |
| ACCESSORIES | |
| Hand Probe P50 | 590-780 |
| Hand Probe P50 Flex | 590-790 |
| Robot Probe R50 | 590-920 |
| Sampling probe AP29ECO, for automatic leak-testing | |
| 3 cc/s sample flow | 590-035 |
| 1 cc/s sample flow | 590-036 |
| Tracer gas filler TGF11, for controlled filling and evacuation for controlled filling and evacuation of tracer gas in the object | |
| Standard version | 590-558 |
| Low pressure version | 590-559 |
| Sensistor ILS500 F leak detection filler | 590-596 |
| Probe cables C21 | |
| 3 m (9.8 ft.) | 590-161 |
| 6 m (19.6 ft.) | 590-175 |
| 9 m (29.5 ft.) | 590-165 |
| Insert sensor H65, replaces the standard hand probe in automated tests, requires a Combox | 590-250 |
| Test leaks ¹⁾ | on request |
| Combox for connecting AP29ECO, H65 to ISH2000 | 590-820 |

¹⁾ Please contact us for our range of matching test leaks.

Sensistor[®] ISH2000

SPECIFICATIONS

| | |
|------------------------|---|
| Start time | One min |
| Calibration | External test leak or calibration gas |
| Inputs/outputs | 25 pin, D-Sub with status signals: 24 V(dc)/0.5 A, 9 pin, D-Sub with RS232 probe connector (Sensistor ISH2000P) |
| Maintenance | Maintenance-free |
| Power supply | |
| Sensistor ISH2000 | 100 – 240 V(ac), 50/60 Hz, 2 A |
| Sensistor ISH2000P | 24 V(dc), 3 A |
| Dimensions (W × H × D) | |
| Sensistor ISH2000 | 275 × 155 × 170 mm (11 × 6 × 7 in.) |
| Sensistor ISH2000P | 275 × 140 × 75 mm (11 × 6 × 3 in.) |
| Weight | |
| Sensistor ISH2000 | 3.9 kg (8.6 lb.) excl. probe and probe cable |
| Sensistor ISH2000P | 1.8 kg (4.0 lb.) |

Hydrogen Sniffer Leak Detectors

Sensistor® ILS500

The Sensistor ILS500 is a fully integrated leak-testing system controlling tooling, tracer gas handling, test sequencing and leak-testing—all behind an easy-to-use touch screen interface. The instrument is extremely compact but also detachable for optimal testing conditions, shorter cycle times and increased operator convenience according to the specific test situation.

Equipped with a wide range of accessories, the ILS500 meets all test requirements and offers a large variety of test possibilities. It is available in Standard, High Pressure and Filler version.

The Filler version excludes the Hydrogen Detector and can be used in combination with other INFICON gas detectors.



ADVANTAGES

- Fully integrated leak-testing system: includes gas handling, tooling control and leak detection
- Fast test procedure set up: guided installation on touch screen
- Reliable leak detection: highly selective and sensitive hydrogen sensor
- Fast sensor reaction, fast recovery: for fast testing and short cycle times
- Includes gross leak test prior to tracer gas test
- Available with dual probe function to enable manual leak-locating after automatic chamber test
- Simple user interface: easy to learn and operate
- Easy service and sensor change: for minimum down time
- Detachable components: for optimum performance and operator ergonomics
- Quick commissioning of test system with standard components
- Less operator dependence: full control over all test steps

APPLICATIONS

- Automotive industry, Aerospace
- RAC, Packaging
- Medical
- Process

Sensistor® ILS500

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| Sensistor ILS500 versions, complete with hand probe P50 and 3 m probe cable C21 | |
| Sensistor ILS500 | 590-570 |
| Sensistor ILS500 HP (High Pressure) | 590-572 |
| Sensistor ILS500 F | 590-571 |
| Sensistor ILS500 FHP | 590-573 |
| ACCESSORIES | |
| Hand Probe P50 | 590-780 |
| Hand Probe P50 Flex | 590-790 |
| Robot Probe R50 | 590-920 |
| Sampling probe AP29ECO, for automatic leak-testing | |
| 3 cc/s sample flow | 590-035 |
| 1 cc/s sample flow | 590-036 |
| No-Stop Maintenance Kit | 590-680 |
| SPARE PARTS | |
| Sensor | 590-292 |
| Probe cables C21 | |
| 3 m (9.8 ft) | 590-161 |
| 6 m (19.6 ft) | 590-175 |
| 9 m (29.5 ft) | 590-165 |
| Insert sensor H65, replaces the standard hand probe in automated tests | 590-250 |
| Test leaks ¹⁾ | on request |

¹⁾ Please contact us for our range of matching test leaks.

Sensistor[®] ILS500

SPECIFICATIONS

| | |
|--|---|
| Minimum detectable leak rate | |
| Detection Mode with P50 standard probe | 5×10^{-7} mbar l/s or cc/s with 5% H ₂ |
| Analysis Mode with P50 standard probe | 0.5 ppm H ₂ ; 5×10^{-7} mbar l/s or cc/s with 5% H ₂ |
| Start time | One min |
| Calibration | External test leak or calibration gas |
| Power supply | |
| Line voltage | single phase, 85-260 V(ac)/47-63 Hz |
| Current | A @ 100 V(ac)/0.45 A @ 230 V(ac) |
| Power rating | 120 W max/33 W typical average |
| Compressed air supplies | |
| Pressure | 0.35 – 0.7 MPa (50 – 100 psi) |
| Peak consumption | @ 0.6 MPa (87 psi): 240 l/min (508 SCFH) |
| Tracer gas supplies | |
| Recommended composition | 5% H ₂ /95% N ₂ |
| Pressure | 0.005 – 1.0 MPa (0.72 to 145 psi) |
| 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) |
| 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) |
| Tooling output valves | |
| Valve type | Normally closed, 3/2 valve, Qn 160 std l/min., Cv 0.16 USGPM/psi |
| Gas and air connection | Female ISO 3/8 in (ISO to NPT 3/8 in, adapters included) |
| Temperature | +10° to 40°C (50° to 100°F) |
| Humidity | 85% RH (non-condensing) |
| Dimensions (H × W × D) | 295 × 275 × 330 mm (12 × 11 × 13 in.) |
| Weight | 17.6 kg (38.8 lb.) |
| Communication ports | Ethernet: RJ45; RS232: male, 9 pin, D-sub |
| Output capacity | Max 0.5 A/output (max 2.5 A total), 24 V(dc) logic |

EXTRIMA®

The portable Extrima Ex certified hydrogen leak detector is the ultimate explosion-proof instrument for leak-testing in the toughest of environments, including hazardous locations such as Zone 0 (corresponding to Division 1). It is certified for use in Zone 0, classification Ex ia, IIC T3 with ATEX, IECEx, NEPSI and CSA certificates.

Extrima is designed to withstand rough handling in the field and has a shoulder strap for easy carrying. The ergonomically designed hand probe with a built in leak/no leak LED indicator, together with the auto-range function and short recovery time, allows for fast homing in on suspected leak areas and exact leak pinpointing and quantification. The recommended tracer gas is a low cost standard forming gas (5% hydrogen and 95% nitrogen). It is non-flammable, non-corrosive, non-toxic and environmentally friendly.



ADVANTAGES

- **HIGHLY EFFICIENT**

High sensitivity and fast recovery allow for efficient operation.

Robust enclosure for demanding field use.

- **COST EFFICIENCY**

Extrima minimizes expensive downtime and reduces the average time by more than 50% for identifying, locating and repairing a leak on a fighter jet during maintenance

- **SIMPLE TO USE AND TO INTEGRATE**

Portable, battery operated (more than 8 hours of use per charge).

Sensor change in less than a minute.

- **LOW MAINTENANCE**

Low and easy maintenance.

APPLICATIONS

- Process industry—e.g., pipe systems, valves and containers
- Aerospace—complete fuel systems, oxygen supply and fire extinguishing systems, both in production and maintenance
- Power production—hydrogen-cooled generators and fuel cells
- Offshore

EXTRIMA®

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| EXTRIMA | |
| Ex certified hydrogen leak detector, complete with detector, probe cable CX21 3 m (9.8 ft), hand probe with flexible neck PX57 Flex, shoulder strap, charger 100-240 V(ac), transport case, antistatic sensor caps, water-protective tape | 590-600 |
| ACCESSORIES | |
| Hand probe (rigid neck) PX57 | 590-606 |
| Flex hand probe (flexible neck) PX57 | 590-607 |
| Probe cable CX21, | |
| 3 m (9.8 ft.) | 590-260 |
| 5 m (16.4 ft.) | 590-265 |
| Antistatic Sensor Caps (50 pack) | 590-270 |
| Injection pads (10 pack) | |
| Small, 60 mm (2.3 in.) | 590-615 |
| Large, 150 mm (5.9 in.) | 590-616 |
| Injection fix kit | 590-618 |
| Injection panel | 590-619 |
| Complete gas injection kit | 590-621 |
| Sensor | 590-292 |
| Battery charger | 591-656 |
| Test leaks ¹⁾ | on request |

¹⁾ Please contact us for our range of matching test leaks.

SPECIFICATIONS

| | |
|---------------------------------------|--|
| Ex classification | Ex ia IIC T3 |
| Temperature | -20° to 50°C |
| Humidity | 95% RH (non-condensing) |
| Chemical resistance | JET-fuel and most common petroleum products |
| IP protection type | IP67, 30 min@1m (IEC 60529) |
| Dimensions (H × W × D) | 128 × 240 × 167 mm (5.03 × 9.44 × 6.57 in.) |
| Weight (hand probe excluded) | 4.5 kg |
| Application (mines and dust excluded) | Zones 0, 1 and 2/Division 1 and 2 (hydrogen, JET-fuel, and other T1, T2 and T3 gases) |
| Sensitivity | |
| Analysis mode | 0.5 PPM - 0.2% H ₂ |
| Leak detection mode | 5 × 10 ⁻⁷ cc/s (using 5% H ₂ tracer gas) |
| Battery capacity | Up to 8 h (full charge) |

Sensistor® XRS9012

The Sensistor XRS9012 Hydrogen Leak Detector is a fast, reliable and robust instrument for utilities leak detection such as telecom cables and water pipes. The Sensistor XRS9012 offers a highly sensitive and flexible leak detection system in a heavy-duty, smart and ergonomically designed package. For leak detection, a low-cost forming gas (5% hydrogen and 95% nitrogen) is used as the test gas. This unique test method combines unsurpassed localization properties with user-friendly technology, low cost, and low maintenance.



ADVANTAGES

- **HIGHLY EFFICIENT**

- Quick detection through high and adjustable sensitivity.
 - Highly selective hydrogen sensor for reliable detection.

- **COST EFFICIENCY**

- Proven method involving the use of inexpensive forming gas (5% hydrogen and 95% nitrogen) as tracer gas.

- **SIMPLE TO USE AND TO INTEGRATE**

- Easy to carry and handle.
 - Quick charging in the car (5 minutes for 20 minutes of operation).

- **LOW MAINTENANCE**

- No moving parts, almost maintenance-free.

APPLICATIONS

- Telephone cables—pressurized cables, buried or ducted
- All types of gas—and water pipelines
- Gas-filled power cables
- Gas stations
- Heating systems

Sensistor[®] XRS9012

ORDERING INFORMATION

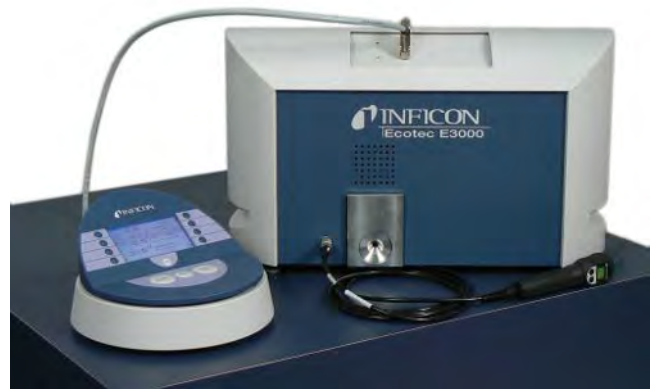
| ITEM | PART NUMBER |
|---|-------------|
| Sensistor XRS9012 | |
| Hydrogen Leak Detector, complete with nylon case, Probe H21, 3 m (9.8 ft.) cable, line voltage input cable, waist belt, shoulder strap, earphones and cigarette lighter cable | 590-012 |
| ACCESSORIES | |
| Hand probe H21 | 590-200 |
| Hand probe extension P12 | 590-080 |
| Surface probe 8612 | 590-040 |
| Wheel unit M12, accessory to 8612 | 590-070 |
| Ground probe 8212 | 590-020 |
| Duct probe 8712 | 590-051 |
| Cable C21, | |
| 3 m (9.8 ft.) | 590-161 |
| 6 m (19.6 ft.) | 590-175 |
| 9 m (29.5 ft.) | 590-165 |
| Battery (order three units for complete change) | 591-294 |
| Charger | 591-300 |
| 12 volt charger adapter for cigarette lighter | 591-361 |
| Earphones | 591-443 |

SPECIFICATIONS

| | |
|---------------------------|--|
| Sensitivity | 0.7 ppm H ₂ in air |
| Response time | <1 s |
| Warm-up time | <10 s |
| Outputs | 10-LED bar graph indicator, speakers, earphone, standard 3.5 mm (1/8 in) jack, >8 ohms |
| Battery type | rechargeable lead batteries (gel electrolyte) |
| Battery capacity | 13 hours at +20°C (68°F), 6 hours at -20°C (-4°F) |
| Maintenance | maintenance-free |
| Chargers | AC charger [100 – 240 V(ac)] car charger [9 – 15 V(dc)] |
| Casing | Aluminum |
| Protection | Waterproof (IP55) |
| Dimensions | 250 × 120 × 85 mm (9.85 × 4.75 × 3.35 in.) |
| in carrying case: | 260 × 220 × 95 mm (10.25 × 8.70 × 3.75 in.) |
| Weight | 1.9 kg (4.2 lb.) |
| in carrying case: | 2.5 kg (5.5 lb.) |
| Ambient temperature range | -20° to 50°C |

Ecotec[®] E3000

The Ecotec E3000 leak detector brings new levels of productivity and reliability to the final testing of refrigerators, freezers, automotive air conditioners and similar products. It is specifically designed for demanding production environments. Numerous features increase its user-friendliness and make it less sensitive to careless use and operator errors. It is also fast to make the best use of your available cycle time. Innovative design and robustness keep the cost of ownership down and ensure very high up-time.



Ecotec® E3000

ADVANTAGES

• HIGHLY EFFICIENT

Short cycle times: Thanks to high sensitivity all micro leaks can be found fast.

No cross sensitivity: IGS Mode (interfering gas suppression) ensures only leaks are detected.

Fast function check and calibration: The reference leak -ECO-Check- can be used either for function check or calibration of the E3000 at any anytime.

• COST EFFICIENCY

Low total cost of ownership (TCO). All components used in the Ecotec E3000 have been chosen for high reliability and long life.

• SIMPLE TO USE AND TO INTEGRATE

The operator is free to concentrate on the sniffing process after the initial set-up, since there is no need to access the base unit. All relevant messages will appear on the probe display, and all operator commands can be entered via the two push buttons on the probe handle.

A function check can easily and quickly be made at any time with the help of the built-in ECO-Check reference leak.

Easy and comfortable access to all leak testing sites thanks to the sniffer tip ergonomic design.

• LOW MAINTENANCE

Preventive maintenance can be performed with very little down time and is required very infrequently.

APPLICATIONS

- Refrigerators and freezers
- Transportation refrigeration
- Cooling and refrigeration systems
- Air conditioning systems
- Water coolers
- Compressors and evaporators
- Halogen lamps
- Gas panels

Ecotec® E3000

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| Ecotec E3000 Multigas Leak Detector | |
| 230 V, 50 Hz | 530-001 |
| 100/115 V, 50/60 Hz | 530-002 |
| Ecotec E3000, RC version | |
| 230 V, 50 Hz | 530-103 |
| 100/115 V, 50/60 Hz | 530-104 |
| Sniffer line with integrated display and push-buttons | |
| SL3000-3, 3 m length | 525-001 |
| SL3000-5, 5 m length | 525-002 |
| SL3000-10, 10 m length | 525-003 |
| SL3000-15, 15 m length | 525-004 |
| Sniffer line adapter for system integration | 525-005 |
| Sniffer tips | |
| ST 312, 120 mm, rigid | 12213 |
| FT 312, 120 mm, flexible | 12214 |
| ST 200, 200 mm, rigid | 12218 |
| FT 250, 250 mm, flexible | 12266 |
| ST 385, 385 mm, rigid | 12215 |
| FT 385, 385 mm, flexible | 12216 |
| FT 600, 600 mm, flexible | 12209 |
| ST 500, 500 mm, 45° angled | 12272 |
| Holder for sniffer probe | 525-006 |
| ECO-Check test leak, R134a ¹⁾ | 531-001 |
| External display unit for Ecotec E3000RC | |
| Table top version | 551-100 |
| Rack version | 551-101 |
| Connecting cable for display unit, 5 m | 551-102 |
| Test leaks for refrigerants (2-5 g/a, 0.07-0.18 oz/y) | |
| R134a | 12220 |
| R600a | 12221 |
| R404A | 12222 |
| R152a | 12227 |
| R407C | 12228 |
| R410A | 12229 |
| R401a | 12230 |
| R1234yf | 12235 |
| R32 (2-8 g/a, 0.07-0.24 oz/y) | 12236S |
| R290 (7-8 g/a, 0.25-0.28 oz/y) | 12231 |
| Test leaks for H ₂ /forming gas (1.0-1.1 × 10 ⁻⁴ mbar l/s) | 12322 |
| Test leaks for refrigerants (10-14 g/a, 0.36 - 0.49 oz/yr) | |
| R134a (10-14 g/a, 0.36 - 0.49 oz/yr) | 12240 |
| R600a (14-18 g/a, 0.49 - 0.63 oz/yr) | 12241 |
| R404A (13-17 g/a, 0.46 - 0.60 oz/yr) | 12242 |
| R744 (CO ₂) | 12275 |

¹⁾ Optional, not included with delivery of Ecotec E3000

Ecotec[®] E3000

SPECIFICATIONS

| | | |
|---|--------|---|
| Minimum detectable leak rate | R134a | 0.05 g/a (0.002 oz/yr) |
| | R600a | 0.05 g/a (0.002 oz/yr) |
| | Helium | 1×10^{-6} mbar l/s |
| Measurement range | | 0.05 – 999.99 g/a (0.002 – 99.999 oz/yr) |
| Sensor response time | | 0.3 s |
| Response time including sniffer line | | 0.8 s |
| Maximum number of simultaneously detectable gases | | Four |
| Leak rate units | | g/a; oz/yr; mbar l/s; Pa m ³ /s; ppm |
| Start-up time | | <2 min |
| Dimensions (W × H × D) | | 610 × 370 × 265 mm (24 × 14.6 × 10.4 in.) |
| Weight | | 34 kg (75 lb.) |
| Gas flow | | 160 sccm |
| Ambient temperature range | | +10 to 45°C |

Ecotec® E3000A

The Ecotec E3000A multigas leak detector is the reliable and low-cost solution for testing cooling circuits in airplanes. Simpler and measurably faster than conventional leak-testing methods, the Ecotec E3000A does not require evacuation. It simply “sniffs” for refrigerant leaks while the system is in use, reducing downtime and waste.

It comes with a library of more than 100 detectable gases including all refrigerants and heat transfer fluids used in Airbus airplanes as well as many other commonly used gases.

The Ecotec E3000A is officially recommended for use in the A340.



ADVANTAGES

- **HIGHLY EFFICIENT**

Short cycle times: Thanks to high sensitivity all micro leaks can be found fast.

No cross sensitivity: IGS Mode (interfering gas suppression) ensures only leaks are detected.

Fast function check and calibration: The reference leak -ECO-Check- can be used either for function check or calibration of the E3000 at any anytime.

- **COST EFFICIENCY**

Low total cost of ownership (TCO). All components used in the Ecotec E3000 have been chosen for high reliability and long life.

- **SIMPLE TO USE AND TO INTEGRATE**

The operator is free to concentrate on the sniffing process after the initial set-up, since there is no need to access the base unit. All relevant messages will appear on the probe display, and all operator commands can be entered via the two push buttons on the probe handle.

A function check can easily and quickly be made at any time with the help of the built-in ECO-Check reference leak.

Easy and comfortable access to all leak testing sites thanks to the sniffer tip ergonomic design.

- **LOW MAINTENANCE**

Preventive maintenance can be performed with very little down time and is required very infrequently.

APPLICATIONS

Leak-testing of

- Galley systems
- Transfer lines
- Main chiller system
- Air conditioning system and Fire extinguishing system

Ecotec[®] E3000A

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| Ecotec E3000A including: 5 m sniffer line, power plug adapter for all major regions, 120 mm rigid sniffer tip, 385 mm flexible sniffer tip, built-in ECO-Check test leak, transportation case | |
| 230 V, 50 Hz | 530-101 |
| 100/115 V, 50/60 Hz | 530-102 |

SPECIFICATIONS

| | |
|---|---|
| Minimum detectable leak rate | 0.05 g/a (0.02 oz/yr) |
| Measurement range | 0.5 – 50 g/a (0.02 – 1.76 oz/yr) |
| Response time | <1 s |
| Leak rate units | g/a; oz/yr; lb/yr; mbar l/s; Pa m ³ /s |
| Start-up time | <2 min |
| Max. no. of gases detected simultaneously | Four |
| Interfaces | RS232 |
| Dimensions | 580 × 260 × 350 mm (22.8 × 12.2 × 13.8 in.) |
| Weight | 34 kg (75 lb.) |
| Gas flow | 160 sccm |
| Ambient temperature range | +10 to 45°C |
| Software available in | English, German, Spanish, French, Italian, Portuguese, Chinese, Japanese (Katakana) |
| Warranty | Two years |

HLD6000

INFICON is taking a further step toward leak detection at the highest level with the HLD6000 refrigerant leak detector. It is setting new standards in user-friendly handling, reproducibility of measuring results and integration into local networks.

The newly developed, slim and ergonomically shaped sniffer line allows for more efficient leak detection. Furthermore, with its intuitive touchscreen display, the HLD6000 is even easier to operate than its predecessor the HLD5000. The HLD6000 also delivers the maximum in communication diversity. A USB interface as well as an optional I/O module and an optional fieldbus module are available for acquiring and using measurement data and integrating that data into local networks.



ADVANTAGES

• HIGHLY EFFICIENT

Detection system: The long-life infrared sensor offers both greater sensitivity and an extremely short response time, and has been specifically developed for the detection of refrigerants. This helps eliminate false alarms due to water, solvents or other contaminants.

Dual inlet system: The proven dual inlet system continually compares the background concentration and the measured gas flow, thus reducing false alarms to a minimum.

Optimized sniffer probe: The HLD6000 can be equipped with sniffer probes individually optimized to the gases to be detected. In addition to sniffer probes for CO₂ and for R600a/ R290, a universal Smart sniffer probe for halogen-based refrigerants is available.

• COST EFFICIENCY

Low total cost of ownership (TCO) for service and maintenance. The HLD6000 uses a wear-free sensor which maximizes user uptime.

• SIMPLE TO USE AND TO INTEGRATE

Especially slim and ergonomically designed sniffer probe with status and LED lights.

Intuitive touchscreen with leakage rate graph.

Newly designed COOL-Check holder to easily exchange internal test leak.

• LOW MAINTENANCE

The redesigned COOL-Check holder allows you to replace the built-in test leak quickly, precisely, and is easily changed by hand.

APPLICATIONS

- Air conditioning systems
- Automotive air conditioning units
- Heat pumps, RAC components and similar products

HLD6000

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| BASE UNITS: | |
| HLD6000 with R744 (CO ₂) sniffer line and adapter for R744 (CO ₂) calibration ¹⁾ | 510-025 |
| HLD6000 with R600a/R290 sniffer line ¹⁾ | 510-028 |
| HLD6000 with Smart sniffer line and COOL-Check® test leak | 510-027 |
| The base units contain a sniffer line (4.8 m/15.5 ft.) and a standard sniffer tip (100 mm/3.9 in.). | |
| Sniffer lines to exchange with sniffer line (4.8 m/15.5 ft.) | |
| R744 (CO ₂) sniffer lines | 511-045 |
| Smart sniffer lines | 511-047 |
| R600a/R290 sniffer lines | 511-048 |
| OPTIONS, ACCESSORIES | |
| I/O1000 module (input/output module) | 560-310 |
| BM1000 bus module | |
| Profibus | 560-315 |
| Profinet | 560-316 |
| DeviceNet | 560-317 |
| EtherNet/IP | 560-318 |
| Data cable (HLD6000-I/O1000) | |
| 2 m cable length | 560-332 |
| 5 m cable length | 560-335 |
| 10 m cable length | 560-340 |
| Sniffer tip (100 mm/3.9 in.) | 511-021 |
| Sniffer tip (400 mm/15 in.) | 511-024 |
| Sniffer tip (400 mm/15 in.) pre-bent to half circle | 511-022 |
| Extension for sniffer tip: | |
| 400 mm/15.7 in. | 511-020 |
| 500 mm/19.7 in., 45° offset | 511-029 |
| Water protection tip | 511-025 |
| Extension for line cable, 4.8 m/15.5 ft. | 511-040 |
| Adapter for R744 (CO ₂) calibration, included in HLD6000 base unit with R744 (CO ₂) sniffer line | 511-042 |
| External test leaks | |
| R134a, (2-5 g/a, 0.07-0.18 oz/yr) | 122 20 |
| R600a, (2-5 g/a, 0.07-0.18 oz/yr) | 122 21 |
| R290, (7-8 g/a, 0.25-0.28 oz/yr) | 122 31 |
| R744(CO ₂), (2-3.5 g/a, 0.07-0.12 oz/yr) | 122 32 |
| R1234yf, (2-5 g/a, 0.07-0.18 oz/yr) | 122 35 |
| R32, (2-8 g/a, 0.07-0.24 oz/yr) | 122 36S |
| CONSUMABLES: | |
| Set of tip filter holders (20 units) | 511-027 |
| Set of filter cartridges (20 units) | 511-018 |
| Replacement COOL-Check® test leak ²⁾ | 511-010 |

¹⁾ Without COOL-Check

²⁾ Only for HLD6000 with universal Smart line; limited shelf life, purchase only when needed.

HLD6000

SPECIFICATIONS

| | |
|--|---|
| Detectable refrigerants: | |
| with sniffer line for single gas detection | R600a/R290, R744 (CO ₂) |
| with universal Smart sniffer line | Halogen-based refrigerants |
| Minimum detectable leakage rate: | |
| with sniffer line for single gas detection | 1.0 g/a/0.03 oz/yr |
| with universal Smart sniffer line | 0.5 g/a/0.014 oz/yr |
| Response time | <1 s |
| Leakage rate units | g/a, mbar l/s, oz/yr, lb/yr, Pa m ³ /s |
| Warm-up time | <30 s |
| Digital inputs/outputs | 10 inputs, eight outputs (for use with I/O1000 module) |
| Serial interface | RS232 (for use with I/O1000 module) or field bus systems (for use with Profibus module) |
| Dimensions (diameter; height) | 266 mm, 365 mm (10.25 in, 14.4 in) |
| Weight | 4.5 kg |
| Allowed operating temperature | +5 to 50°C (40 to 120°F) |
| Gas flow | 320 sccm |
| Warranty | 3 years |

Mobile Vacuum Leak Detectors

UL3000 Fab, -PLUS, -ULTRA

No errors when maintaining your processing facilities. With the latest smart generation of our successful UL Series, you will reduce the maintenance for your processing facilities—and even more safely than ever before. Your processing equipment will remain free from contaminants during the leak detection. All the leaks will be reliably detected. After maintenance, the time-consuming pressure rise test will be passed with certainty.

The UL3000 Fab helium leak detector is designed for every application where the greatest degree of cleanliness is required, such as the maintenance and production of semiconductor manufacturing equipment in cleanrooms.



ADVANTAGES

- **SAVE TIME**

Save Time with I-CAL software algorithm for fast measurements in the range of 10^{-9} to 10^{-12} mbar l/s.

- **HIGHLY EFFICIENT**

I-ZERO 2.0 for fast background suppression. Minimize leak checking efforts through quick evacuation and response time.

- **COST EFFICIENCY**

Low total cost of ownership (TCO) enabled by robust ion source and counterflow vacuum system.

- **SIMPLE TO USE AND TO INTEGRATE**

Easy to use, operator-guided HMI with full color high resolution rotatable display.

APPLICATIONS

- Semiconductor industry
- Solar industry
- Laser technology
- Medical technology
- And others such as electronics, accelerators, coating systems, gas supply systems, display tools, leak-testing of hermetically sealed electronic devices

UL3000 Fab, -PLUS, -ULTRA

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| ULTRATEST UL3000 Fab | 550-200 |
| ULTRATEST UL3000 Fab PLUS (HYDRO•S, separate sniffer line SL3000 port) | 550-250 |
| ULTRATEST UL3000 Fab ULTRA (HYDRO•S, separate sniffer line SL3000 port) | 550-260 |
| ACCESSORIES | |
| RC1000 remote control, wired, incl. 4 m coiled cable | 560-310 |
| RC1000WL remote control, wireless, incl. wireless transmitter | 560-315 |
| Sniffer line SL200, 4 m length, incl. cable extension for electrical connection | 551-210 |
| Sniffer line SL3000 with integrated display (only for UL3000 Fab PLUS) | |
| 3 m length | 525-001 |
| 5 m length | 525-002 |
| 10 m length | 525-003 |
| IO1000 module (chart recorder, RS232, RS485, Ethernet, digital IO) | 560-310 |
| BM1000 Profibus module | 560-315 |
| BM1000 Profibus IO module | 560-316 |
| BM1000 DeviceNet module | 560-317 |
| BM1000 Ethernet/IP module | 560-318 |
| Data cable (IO1000 to UL3000 Fab / -PLUS) | |
| 0.5 m | 560-334 |
| 5 m | 560-335 |
| 10 m | 560-340 |
| Test Chamber TC1000 | 551-005 |
| Helium bottle holder | 551-201 |

SPECIFICATIONS

| | UL3000 Fab | UL3000 Fab PLUS | UL3000 Fab ULTRA |
|--|--|---|--|
| Min. detectable leak rate for helium (vacuum method) | | $<5 \times 10^{-12}$ mbar l/s | |
| Min. detectable leak rate for helium (sniffer mode) | | $<5 \times 10^{-8}$ mbar l/s | |
| Max. inlet pressure | | | |
| MASSIVE mode | | 1,000 mbar | |
| Pumping speed during evacuation | >32 m ³ /h | >32 m ³ /h | >36 m ³ /h |
| Helium pumping speed (high sensitive mode ULTRA) | | 4 l/s | |
| Response time | | <1 s | |
| Time until ready for operation | | <3 min | |
| Detectable masses | | 2, 3, 4 (H ₂ , ³ He, He) | |
| Ion source | | Two filaments, Iridium/Yttria oxide coated | |
| Test port | | DN 25 KF | |
| Adjustable leak rate setpoints | | Four | |
| Interface | 2 × USB, Ethernet/LAN (prepared for USB WiFi Adapter for remote control with mobile devices) | | |
| Supply voltages | 100 – 240 V 50/60 Hz | | |
| Power consumption | typ. 700 VA, max. 1500 VA | | |
| Dimensions (L × W × H) | 1050 × 472 × 987 mm (42 × 21 × 34 in.) | | |
| Weight | 118 kg | 118 kg | 132 kg |
| Permissible ambient temperature range (during operation) | +10°C to 40°C | | |
| Additional features | - | HYDRO S, separate sniffer line SL3000 port Scroll pump | HYDRO S, separate sniffer line SL3000 port Roots pump |

Mobile Vacuum Leak Detectors

UL5000

The INFICON UL5000 helium leak detector was designed for the most important and demanding leak detection applications. Featuring INFICON proprietary software algorithms I•CAL and Hydro•S in a field-proven vacuum design, the UL5000 provides testing flexibility, high sensitivity and quick accurate results making any leak detection application fast and easy. The UL5000 delivers fast response times in all measurement ranges and extremely short cycle times in reaching test conditions and final results. The specially designed vacuum architecture provides the continuous high helium pumping speeds and the fast response times you demand.



ADVANTAGES

- **HIGHLY EFFICIENT**

Shortest leak testing efforts through quickest pump down and fastest response time enhanced by a booster TMP and HYDRO•S. Avoids need for multiple leak tests by using selectable background suppression (I-ZERO).

- **COST EFFICIENCY**

Low total cost of ownership enabled by robust two hot filament ion source (3 years warranty) and counterflow vacuum system.

- **SIMPLE TO USE AND TO INTEGRATE**

Enable easy access to maintenance areas with restricted space through maneuverable design.

Easy to use with rotatable display, optical and audible leak indication, and optional remote control.

- **LOW MAINTENANCE**

Low maintenance via a built-in test leak with auto calibration procedure.

APPLICATIONS

Leak-testing of:

- Components, Subassemblies
- Larger chambers (>50 l volume)

Used with:

- Semiconductor tools, Flat panel display tools
- Solar Cell manufacturing

UL5000

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| ULTRATEST UL5000, 230 Volts, 50 Hz, EU power supply plug | 550-500A |
| ULTRATEST UL5000, 100/115 Volts, 50/60 Hz, US power supply plug all UL5000 including tool box and ESD mat | 550-501A |
| RC1000C remote control, wired, including 4 m coiled cable | 551-010 |
| RC1000WL remote control, wireless, incl. wireless transmitter | 551-015 |
| Wireless transmitter for connection >2 leak detectors | 551-020 |
| Extension cable, 8 m for RC1000C | 140 22 |
| ACCESSORIES | |
| Helium bottle holder | 551-001 |
| Sniffer line SL200, 4 m | 140 05 |
| Reduction piece 40/25 KF to connect SL200 to UL5000 inlet port | 211-283 |

UL5000

SPECIFICATIONS

| | | PART NUMBER |
|--|--|-------------|
| Min. detectable leak rate for helium (vacuum mode) | $<5 \times 10^{-12}$ mbar l/s | |
| Min. detectable leak rate for helium (sniffer mode) | $<5 \times 10^{-8}$ mbar l/s | |
| Max. detectable leak rate for helium that can be displayed | 30 mbar l/s | |
| Max. inlet pressure | | |
| GROSS mode | 15 mbar | |
| FINE mode | 2 mbar | |
| ULTRA mode | 0.4 mbar | |
| Pumping speed during evacuation | 25 m ³ /h (17.6 cfm) at 50 Hz 30 m ³ /h (21.1 cfm) at 60 Hz | |
| Helium pumping speed | | |
| ULTRA mode | >20 l/s | |
| Time constant of the leak rate signal (blanked off, 63% of final value) | <1 s | |
| Pumpdown time until ready to detect leaks in the range of 10^{-9} mbar l/s | | |
| Without additional volume | <10 s | |
| At a test volume of 10 liters | <48 s | |
| At a test volume of 50 liters | <150 s | |
| Response time (for a leak rate of 10^{-9} mbar l/s) | | |
| Up to a volume of 10 liters | <1 s | |
| Up to volume of 50 liters | <2 s | |
| Venting (with test volume of 100 liters) | approx. 25 s | |
| Time until ready for operation | <3 min | |
| Detectable masses | 2, 3, 4 amu, H ₂ , ³ He, He | |
| Mass spectrometer | 180° magnetic sector field | |
| Ion source | Two filaments, iridium/yttrium oxide-coated | |
| Calibrated leak TL7 (built-in) leak rate in the range | 10^{-7} mbar l/s | |
| Units of measurement (selectable) | mbar l/s, Pa m ³ /s, Torr l/s, atm cc/s, ppm, g/a (only in sniffer mode) | |
| Test port | 40 KF | |
| Adjustable leak rate setpoints | Two | |
| Interface | RS 232 | |
| In/outputs | PLC compatible for control and status information | |
| Chart recorder output | 2 × 10 V | |
| Supply voltage | 230 V (±10%) 50 Hz | 550-500A |
| | 115 V (±10%) 60 Hz | 550-501A |
| | 100 V (±10%) 50/60 Hz | 550-501A |
| Power consumption | 1200 VA | |
| Dimensions (L × W × H) | 1080 × 530 × 1083 mm (42.5 × 21 × 42.6 in.) | |
| Weight | 140 kg (308 lb.) | |
| Type of protection | IP20 | |
| Permissible ambient temperature (during operation) | +10°C to 40°C | |

UL1000 Fab

A new dimension in stability and responsiveness on leaks down to 10^{-12} atm/css. The INFICON UL1000 Fab mobile helium leak detector is specifically designed to meet the requirements of semiconductor applications. Making ease of use, leak detection efficiency and mobility within the fab environment system priorities, the UL1000 Fab provides an extremely fast leak rate response across all measurement ranges. The UL1000 Fab offers never before seen leak rate stability down to $<5 \times 10^{-12}$ atm cc/s through an optimised vacuum architecture that combines high helium pumping speed and high inlet pressures. Proprietary software, I•CAL (Intelligent calculation algorithm of leak rates), allows you to forget long response times in low leak rate ranges as the UL1000 Fab responds quickly to all leak rate ranges. With the addition of the TC1000 Test Chamber accessory, the UL1000 Fab helium leak detector provides easy, fast and accurate testing of hermetically sealed parts like IC packages, quartz crystals and laser diodes (according to MIL-STD 883, Method 1014).



ADVANTAGES

- **HIGHLY EFFICIENT**

Minimizes leak testing efforts through quick pump down and response time.

Avoids need for multiple leak tests by using selectable background suppression (I•ZERO).

- **COST EFFICIENCY**

Low total cost of ownership (TCO) enabled by robust two hot filament ion source (3 years warranty) and counterflow vacuum system.

- **SIMPLE TO USE AND TO INTEGRATE**

Enable easy access to maintenance areas with restricted space through maneuverable design.

Easy to use with rotatable display, optical and audible leak indication, and optional remote control.

- **LOW MAINTENANCE**

Low maintenance via a built-in test leak with auto calibration procedure.

UL1000 Fab

APPLICATIONS

Leak-testing of:

- Components
- Chambers
- Subassemblies

Used with:

- Semiconductor tools
- Flat panel display tools
- Leak-testing of hermetically sealed electronic devices

ADVANCED SOFTWARE MENU AUTO LEAK TEST

This function controls the test cycle and allows entering of test parameters like:

- Measuring cycle time
- Leak rate setpoint
- Number of parts tested

The status of the test cycle can always be monitored on the display. The optional test chamber TC1000 (**TC1000 Test Chamber** [► 12]) turns the UL3000 in a user-friendly workstation for the testing of hermetically sealed parts.

The test starts automatically when the chamber lid is closed. Short cycle times are achievable (10^{-9} mbar l/s in <5 sec). The status of the test can always be monitored on the display. After the adjusted cycle time the test stops and the chamber will be vented. A selectable "Standby" mode keeps the chamber under vacuum while discontinuing the leak test. Protective functions prevent helium contamination by big leaks and ensure continuous operation.

UL1000 Fab

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| ULTRATEST UL1000 Fab, 230 Volts, 50 Hz, EU line voltage plug | 550-100A |
| ULTRATEST UL1000 Fab, 100/115 Volts, 50/60 Hz, US line voltage plug | 550-101A |
| TC1000 test chamber incl. ESD wrist band | 551-005 |
| Test leak adapter for TC1000, DN 25 KF flange | 200 001 797 |
| RC1000C remote control, wired, including 4 m coiled cable | 551-010 |
| RC1000WL remote control, wireless, incl. wireless transmitter | 551-015 |
| Wireless transmitter for connection >2 leak detectors | 551-020 |
| Extension cable, 8 m for RC1000C | 140 22 |
| ACCESSORIES | |
| Toolbox with lock, attachable | 551-000 |
| Helium bottle holder | 551-001 |
| ESD mat | 551-002 |
| Sniffer line SL200, 4 m length | 140 05 |

UL1000 Fab

SPECIFICATIONS

| | | PART NUMBER |
|--|--|-------------|
| Min. detectable leak rate for helium (vacuum mode) | $<5 \times 10^{-12}$ mbar l/s | |
| Min. detectable leak rate for helium (sniffer mode) | $<5 \times 10^{-8}$ mbar l/s | |
| Max. detectable leak rate for helium that can be displayed | 0.1 mbar l/s | |
| Max. inlet pressure | | |
| GROSS mode | 15 mbar | |
| FINE mode | 2 mbar | |
| ULTRA mode | 0.4 mbar | |
| Pumping speed during evacuation | 25 m ³ /h (17.6 cfm) at 50 Hz 30 m ³ /h (21.1 cfm) at 60 Hz | |
| Helium pumping speed | | |
| ULTRA mode | 2.5 l/s | |
| Time constant of the leak rate signal (blanked off, 63% of final value) | <1 s | |
| Pumpdown time until ready to detect leaks (background 5×10^{-9}) | | |
| Without additional volume | 5 s | |
| At a test volume of 1 liter | 10 s | |
| At a test volume of 10 liters | 80 s | |
| Response time (for a leak rate of 10^{-9} mbar l/s) | | |
| Up to a volume of 1 liter | <1 s | |
| Up to volume of 10 liters | <2 s | |
| Time until ready for operation | <3 min | |
| Detectable masses | 2, 3, 4 amu, H ₂ , ³ He, He | |
| Mass spectrometer | 180° magnetic sector field | |
| Ion source | Two filaments, iridium/yttrium oxide-coated | |
| Calibrated leak TL7 (built-in) leak rate in the range | 10^{-7} mbar l/s | |
| Units of measurement (selectable) | mbar l/s, Pa m ³ /s, Torr l/s, atm cc/s, ppm, g/a (only in sniffer mode) | |
| Test port | 25 KF | |
| Adjustable leak rate setpoints | Two | |
| Interface | RS 232 | |
| In/outputs | PLC compatible for control and status information | |
| Chart recorder output | 2 × 10 V | |
| Supply voltage | 230 V (±10%) 50 Hz | 550-500A |
| | 115 V (±10%) 60 Hz | 550-501A |
| | 100 V (±10%) 50/60 Hz | 550-501A |
| Power consumption | 1100 VA | |
| Dimensions (L × W × H) | 1068 × 525 × 850 mm (42 × 21 × 33 in.) | |
| Weight | 110 kg (242 lb.) | |
| Type of protection | IP20 | |
| Permissible ambient temperature (during operation) | +10°C to 40°C | |

UL1000

Speed, sensitivity and reliability for demanding leak detection applications. The INFICON UL1000 mobile helium leak detector is suitable for the demanding industrial leak detection applications. Providing fast, accurate and repeatable test results, testing flexibility, and high sensitivity in a low maintenance design, the UL1000 is ready to tackle the toughest leak detection jobs industry can offer. The UL1000 is optimized to provide quick, accurate results in any application from the leak checking of large vessels and systems to high—cycle, repetitive component testing—24 hours/7 days a week—in the toughest industrial environments. With the addition of the TC1000 test chamber accessory, the UL1000 helium leak detector provides easy, fast and accurate testing of hermetically sealed parts like IC packages, quartz crystals and laser diodes (according to MIL-STD 883, Method 1014).



ADVANTAGES

- **HIGHLY EFFICIENT**

Using the special software algorithm I-CAL, the UL1000 provides accurate measurements at unsurpassed speed in all measurement ranges.

While other leak detectors must average the signal over long periods of time to ensure a stable leak rate, the UL1000 with I-CAL responds with unparalleled speed and stability even in the smallest leak rate ranges.

- **COST EFFICIENCY**

Low total cost of ownership (TCO) enabled by robust two hot filament ion source (3 years warranty) and counterflow vacuum system.

- **SIMPLE TO USE AND TO INTEGRATE**

Enable easy access to maintenance areas with restricted space through maneuverable design.

Easy to use with rotatable display, optical and audible leak indication, and optional remote control.

- **LOW MAINTENANCE**

Low maintenance via a built-in test leak with auto calibration procedure:

UL1000

APPLICATIONS

Leak-testing and quality control of all types of components including:

- Automotive components
- Refrigeration and air conditioning components and subassemblies
- Hermetically sealed electronic devices
- Heat exchangers

ADVANCED SOFTWARE MENU AUTO LEAK TEST

This function controls the test cycle and allows entering of test parameters like:

- Measuring cycle time
- Leak rate setpoint
- Number of parts tested

The status of the test cycle can always be monitored on the display. The optional test chamber TC1000 (**TC1000 Test Chamber** [► 12]) turns the UL1000 in a user-friendly workstation for the testing of hermetically sealed parts.

The test starts automatically when the chamber lid is closed. Short cycle times are achievable (10^{-9} mbar l/s in <5 sec). The status of the test can always be monitored on the display. After the adjusted cycle time the test stops and the chamber will be vented. A selectable “Standby” mode keeps the chamber under vacuum while discontinuing the leak test. Protective functions prevent helium contamination by big leaks and ensure continuous operation.

UL1000

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| ULTRATEST UL1000, 230 Volts, 50 Hz, EU line voltage plug | 550-000A |
| ULTRATEST UL1000, 115 Volts, 60 Hz, US line voltage plug | 550-001A |
| ULTRATEST UL1000, 110 Volts, 60 Hz, Japan line voltage plug | 550-002A |
| TC1000 Test Chamber incl. ESD wrist band | 551-005 |
| Test leak adapter for TC1000, DN 25 KF flange | 200 001 797 |
| RC1000C remote control, wired, including 4 m coiled cable | 551-010 |
| RC1000WL remote control, wireless, incl. wireless transmitter | 551-015 |
| Wireless transmitter for connection >2 leak detectors | 551-020 |
| Extension cable, 8 m for RC1000C | 140 22 |
| ACCESSORIES | |
| Toolbox with lock, attachable | 551-000 |
| Helium bottle holder | 551-001 |
| ESD mat | 551-002 |
| Sniffer line SL200, 4 m length | 140 05 |

UL1000

SPECIFICATIONS

| | | PART NUMBER |
|--|---|-------------|
| Min. detectable leak rate for helium (vacuum mode) | $<5 \times 10^{-12}$ mbar l/s | |
| Min. detectable leak rate for helium (sniffer mode) | $<5 \times 10^{-8}$ mbar l/s | |
| Max. detectable leak rate for helium that can be displayed | 0.1 mbar l/s | |
| Max. inlet pressure | | |
| GROSS mode | 15 mbar | |
| FINE mode | 2 mbar | |
| ULTRA mode | 0.4 mbar | |
| Pumping speed during evacuation | 16 m ³ /h (11.2 cfm) at 50 Hz | |
| Helium pumping speed | | |
| ULTRA mode | 2.5 l/s | |
| Time constant of the leak rate signal (blanked off, 63% of final value) | <1 s | |
| Pumpdown time until ready to detect leaks (background 5×10^{-9}) | | |
| Without additional volume | 5 s | |
| At a test volume of 1 liter | 10 s | |
| At a test volume of 10 liters | 80 s | |
| Response time (for a leak rate of 10^{-9} mbar l/s) | | |
| Up to a volume of 1 liter | <1 s | |
| Up to volume of 10 liters | <2 s | |
| Time until ready for operation | <3 min | |
| Detectable masses | 2, 3, 4 amu, H ₂ , ³ He, He | |
| Mass spectrometer | 180° magnetic sector field | |
| Ion source | Two filaments, iridium/yttrium oxide-coated | |
| Calibrated leak TL7 (built-in) leak rate in the range | 10^{-7} mbar l/s | |
| Units of measurement (selectable) | mbar l/s, Pa m ³ /s, Torr l/s, atm cc/s, ppm, g/a (only in sniffer mode) | |
| Test port | 25 KF | |
| Adjustable leak rate setpoints | Two | |
| Interface | RS 232 | |
| In/outputs | PLC compatible for control and status information | |
| Chart recorder output | 2 × 10 V | |
| Supply voltage | 230 V (±10%) 50 Hz | 550-000A |
| | 115 V (±10%) 60 Hz | 550-001A |
| | 100 V (±10%) 50/60 Hz | 550-001A |
| Power consumption | 1100 VA | |
| Dimensions (L × W × H) | 1068 × 525 × 850 mm (42 × 21 × 33 in.) | |
| Weight | 110 kg (242 lb.) | |
| Type of protection | IP20 | |
| Permissible ambient temperature (during operation) | +10°C to 40°C | |

LDS3000

With the LDS3000, INFICON is opening a new chapter in the success story of leak detection systems. The successor to the LDS2010 is setting new standards for accuracy, reproducibility of measurement results and speed of leak detection. The LDS3000 is extremely compact. The small dimensions 330 × 240 × 280 mm (13 × 9.45 × 11.1 in.) make it even easier to integrate it into leak detection systems. More importantly, the space requirements and installation expense have been reduced even further by dispensing with a 19" control module and improving the cabling considerably. In addition, there is an optional touch screen for easy operation and an optional field bus connection.



cTÜVus CERTIFIED
(NRTL APPROVED)

LDS3000

ADVANTAGES

- **HIGHLY EFFICIENT**

Fast and optimized response times due to I-CAL.

- **COST EFFICIENCY**

Low total cost of ownership (TCO) enabled by robust two hot filament ion source (3 years warranty).

- **CLEVER INVESTMENT**

XL Sniffer Adapter converts the LDS3000 into a sniffer leak detector. Versatile communication through numerous analog and digital interface. LDS2010 compatibility mode. Significantly optimized cabling increases usage flexibility, even lengths of up to 30 m are possible.

Versatile communication through numerous analog and digital interface.

LDS2010 compatibility mode.

Significantly optimized cabling increases usage flexibility, even lengths of up to 30 m are possible.

- **SIMPLE TO USE AND TO INTEGRATE**

Fast and easy updates are possible through USB port.

Compact design allows individual, customized integration into leak testing system.

cTÜVus – Certified according to Canadian and US standards (NRTL approved)

APPLICATIONS

The flexibility of the LDS3000 makes the instrument ideal for the integration into complex helium leak detection systems:

- Airbag parts
- Evaporators, condensers, compressors
- Valves, brake lines, fuel lines
- Hydraulic components and Motors

LDS3000

ORDERING INFORMATION (BASIC COMPONENTS)

| ITEM | PART NUMBER |
|-------------------------------|-------------|
| LDS3000 basic unit | 560-300 |
| I/O1000 module (input/output) | 560-310 |
| BM1000 bus module | |
| Profibus | 560-315 |
| Profinet | 560-316 |
| DeviceNet | 560-317 |
| EtherNet/IP | 560-318 |
| Data cable (MSB-I/O1000) | |
| 2 m cable length | 560-332 |
| 5 m cable length | 560-335 |
| 10 m cable length | 560-340 |

NOTE: An I/O1000 module or BM1000 module as well as a data cable are necessary for the operation of an LDS3000. The data cables can be used for connecting to an I/O1000 module or a BM1000 module and the CU1000 control unit.

ORDERING INFORMATION (OPTIONS)

| ITEM | PART NUMBER |
|--|-------------|
| CU1000 Control Unit | 560-320 |
| DIN rail power supply 24 V, 10 A | 560-324 |
| Internal test leak TL7 | 560-323 |
| Pump module (complete, incl. connection accessories) TRIVAC D 4 B, 1-phase motor 230 V, 50/60 Hz | 145 11 |
| Sniffer valve | 145 20 |
| Sniffer line, incl. handpiece, with 200 mm sniffer tip | |
| 3 m cable length | 145 21 |
| 5 m cable length | 145 22 |
| 10 m cable length | 145 23 |
| Replacement sniffer tip, 400 mm cable length | 200 04 642 |
| XL Sniffer Adapter | 560-319 |
| Diaphragm pump ¹⁾ | 560-330 |
| External calibrated leak with 100% H ₂ ²⁾ | 12322 |
| External helium calibrated leak | 12237 |
| Sniffer line to use in combination with the XL Sniffer Adapter | |
| SL3000XL-3, 3 m cable length | 521-011 |
| SL3000XL-5, 5 m cable length | 521-012 |
| SL3000XL-10, 10 m cable length | 521-013 |
| SL3000XL-15, 15 m cable length | 521-014 |

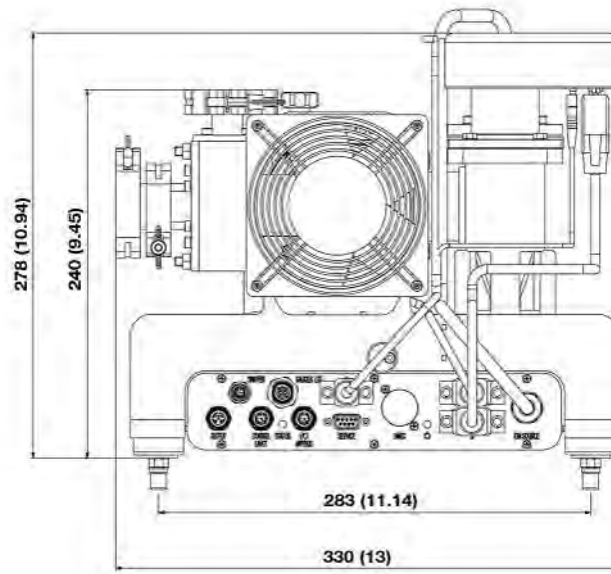
¹⁾ Recommended to use with the XL Sniffer Adapter.

²⁾ Leak rate of calibrated leak corresponds to (95/5) forming gas leak rate.

LDS3000

SPECIFICATIONS

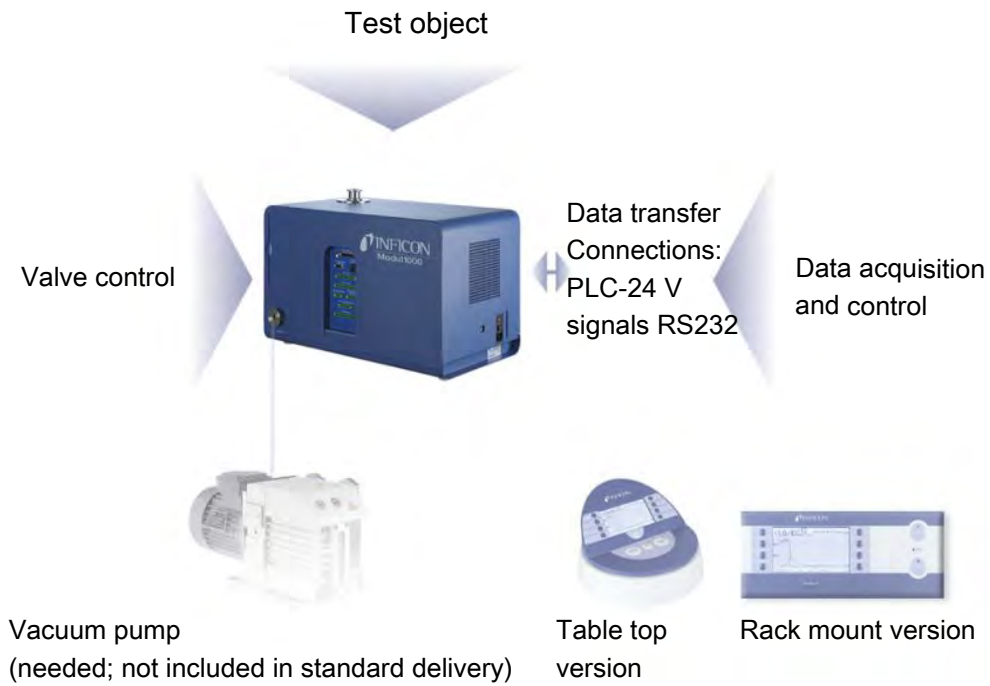
| | |
|------------------------------------|--|
| Minimum detectable leak rate | |
| GROSS mode | $\leq 1 \times 10^{-11}$ mbar l/s (> 5 l/s Helium pumping speed) |
| FINE mode | $\leq 5 \times 10^{-11}$ mbar l/s (1.7 l/s Helium pumping speed) |
| ULTRA mode | $\leq 1 \times 10^{-9}$ mbar l/s |
| SNIFFER mode | $\leq 1 \times 10^{-7}$ mbar l/s |
| Units of measurement (selectable) | mbar l/s, Pa m ³ /s, atm cc/s, g/a, ppm |
| Maximum permissible inlet pressure | |
| GROSS mode | 18 mbar |
| FINE mode | 0.9 mbar |
| ULTRA mode | 0.2 mbar |
| Response time | <1 s |
| Ion source | Two longlife iridium filaments, yttrium-oxide coated |
| Vacuum connections | DN 16 KF/DN 25 KF |
| Digital inputs/outputs | 10 inputs, eight outputs (when used with I/O1000) |
| Control input | PLC compatible (max. 35 V) |
| Chart recorder output lin/log | 0 – 10 V |
| Interface | RS232, RS485 or field bus systems |
| Dimensions (L × W × H) | 330 × 240 × 280 mm |



Dimensional drawing of the mass spectrometer module in mm (in)

Modul1000

Building up a leak test bench was never easier. The Modul1000 is the world's first leak detector that fulfills jobs which are normally done by a PLC. The detector itself provides all necessary valves for a vacuum leak test and controls the complete leak test process from charging the test object with helium until venting of the test chamber.



Modul1000

ADVANTAGES

- **HIGHLY EFFICIENT**

Wide range detection system: from 0.1 to $<5 \times 10^{-12}$ mbar l/s.

Software algorithm I.CAL provides accurate test results in all measurement ranges.

Wide range power supply and integrated test leak.

- **COST EFFICIENCY**

Low cost of ownership. The ion source filament is designed for long life and is supported with a 3-year replacement guarantee to minimize costly unscheduled downtime and maintenance expenses.

- **FUTURE-PROOF INVESTMENT**

Supports any size of foreline pump.

- **SIMPLE TO USE AND TO INTEGRATE**

Compact design for easy integration in benchtop or rack systems. Compact design for easy integration in benchtop or rack systems.

Plug & play installation; flexible interfaces.

Flexible control via optional display unit, remote control, PLC or PC.

Storage of parameter settings for easy data transfer on an integrated, removable I.STICK.

- **LOW MAINTENANCE**

Low maintenance due to ion source filament and self-diagnostics capability.

APPLICATIONS

The Modul1000 was especially designed for integration into medium automated test benches:

- Evaporators, condensers, compressors
- Valves
- Brake lines, fuel lines
- Hydraulic components
- Motors

Modul1000

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| Modul1000, vacuum version | 550-300A |
| Modul1000, vacuum and sniffer version | 550-310A |
| Modul1000b, vacuum and sniffer version | 550-330A |
| Display unit, table top use | 551-100 |
| Display unit for rack installation | 551-101 |
| Connecting cable for display unit | |
| 0.7 m (2.3 ft) | 551-103 |
| 5 m (16.4 ft) | 551-102 |
| Set of connecting plugs | 551-110 |
| Sniffer line SL200 | 140 05 |
| Remote control RC1000C, wired including 4 m coiled cable | 551-010 |
| Remote control RC1000WL, wireless, incl. wireless transmitter | 551-015 |
| Wireless transmitter for connection >2 leak detectors | 551-020 |
| Extension cable, 8 m for RC1000C | 140 22 |
| TC1000 Test Chamber | 551-005 |

SPECIFICATIONS

| | |
|--------------------------------------|--|
| Minimum detectable leak rate | |
| VACUUM mode | $<5 \times 10^{-12}$ mbar l/s |
| SNIFFER mode | $<5 \times 10^{-8}$ mbar l/s |
| Maximum inlet pressure | 0.4 mbar 3 mbar (Modul1000b) |
| Operational mode | Wide range without crossover (12 decades) |
| Helium pumping speed at inlet | 2.5 l/s 0.1 l/s (Modul1000b) |
| Ion source | Two longlife iridium filaments, yttrium-oxide coated |
| Start-up time | <3 min |
| Inlet port/fore-vacuum port | DN 25 KF |
| Power supply | 100 – 240 V, 50/60 Hz |
| Control inputs | 8 × PLC compatible, max. 35 V |
| Status/Valve control/trigger outputs | 9/11/3 × relay contacts, max. 60 V(ac)/ 25 V(dc) / 1 A |
| Chart recorder output lin/log | 2 × 0-10 V, programmable |
| Recommended fore-vacuum pump | 2.5 - 16 m ³ /h, wet or dry |
| Dimensions (W × D × H) | 535 × 350 × 339 mm (21.1 × 13.8 × 13.4 in.) |
| Weight | 30 kg (66 lb.) |

Accumulation Leak Detector

LDS3000 AQ

LDS3000 AQ is the first leak detector to use forming gas or helium in a simple accumulation chamber.

The LDS3000 AQ is very sensitive and can detect leaks down to the 10^{-5} mbar l/s range. It will detect fluid leaks as reliably as helium vacuum leak—testing, but with costs practically as low as for air testing. The real differentiator: The new leak detector uses the cost-efficient forming gas or helium for accumulation leak — testing.



ADVANTAGES

- **HIGHLY EFFICIENT**

With the accumulation method, INFICON is closing the gap between air and vacuum testing, while still achieving measurement results quickly and without any effect from temperature or moisture.

The minimum detectable leak rate is down to a range of 10^{-5} mbar-l/s

- **FUTURE-PROOF INVESTMENT**

The ability to reliably perform leak testing not just with helium, but also with forming gas, means that you can be confident in the decision you take today.

Another special feature of the LDS3000 AQ is that with a simple change of operating mode, the leak detector can also be used for a vacuum system. One device that offers several solutions. With its variety of modern interfaces, the LDS3000 AQ already provides you with a future-proof solution today.

- **COST EFFICIENCY**

The LDS3000 AQ and the accumulation method allow customers to meet high quality requirements, save costs and minimize investment all at the same time.

- **SIMPLE TO USE AND TO INTEGRATE**

The special accumulation software of the LDS3000AQ allows customers to easily define the measuring period. Just a few parameters have to be entered, such as the chamber size, type of gas, leak rate etc., and the device then calculates a suggested measuring period, which simply has to be accepted.

APPLICATIONS

- Leak detection for room air conditioner components, refrigeration components or heating components
- Manufacturers of automotive gas lines, small heater coils, etc. that are now demanding greater leak tightness
- Leak detection involving warm, humid or large parts, where the pressure decay method is ineffective
- Other markets where helium vacuum leak detection has been considered too costly or complex

LDS3000 AQ

ORDERING INFORMATION (BASIC COMPONENTS)

| ITEM | PART NUMBER |
|---|-------------|
| LDS3000 AQ (incl. inlet system and special accumulation Software) | 560-600 |
| I/O1000 module (input/output) | 560-310 |
| BM1000 bus module | |
| Profibus | 560-315 |
| Profinet | 560-316 |
| DeviceNet | 560-317 |
| EtherNet/IP | 560-318 |
| Data cable (MSB-I/O1000) | |
| 2 m cable length | 560-332 |
| 5 m cable length | 560-335 |
| 10 m cable length | 560-340 |

NOTE: An I/O1000 module or BM1000 module as well as a data cable are necessary for the operation of an LDS3000. The data cables can be used for connecting to an I/O1000 module or a BM1000 module and the CU1000 control unit.

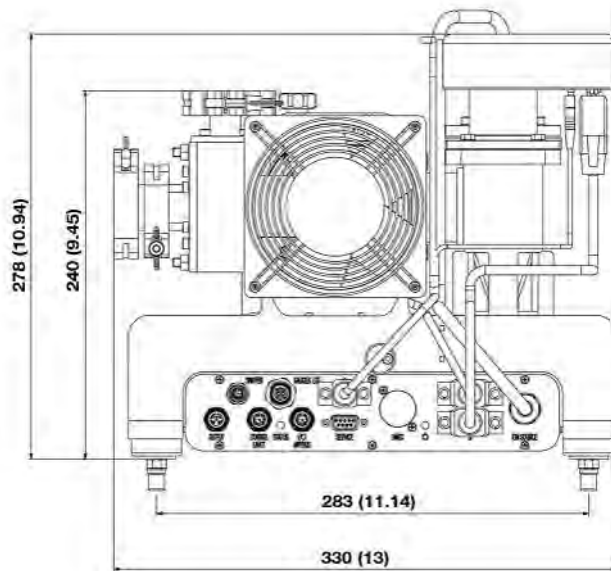
ORDERING INFORMATION (OPTIONS)

| ITEM | PART NUMBER |
|----------------------------------|-------------|
| CU1000 Control Unit | 560-320 |
| DIN rail power supply 24 V, 10 A | 560-324 |
| Diaphragm pump LDS3000 AQ | 560-630 |

LDS3000 AQ

SPECIFICATIONS

| | |
|--|---|
| Minimum detectable forming gas or helium leak rate | 1×10^{-5} mbar l/s |
| Measurement range | 5 decades |
| Test chamber pressure | 1 atm |
| Time constant of the leak rate signal | <1 s |
| Gas sensor | 180° sector field mass spectrometer |
| Run-up time | <3 min |
| Field buses available | PROFIBUS, PROFINET, DeviceNet, EtherNet/IP |
| Connections | ISO-KF DN16 |
| Control input | PLC compatible, max. 35 V |
| Status / trigger outputs | 8 × relay contacts, max. 25 V(ac)/60 V(dc)/ 1 A |
| Chart recorder output lin/log | 0 - 10 V |
| Dimensions (L × W × H) | 330 × 240 × 280 mm |



Dimensional drawing of the mass spectrometer module in mm (in)

T-Guard2

COST EFFECTIVE, RELIABLE AND ALMOST MAINTENANCE-FREE

T-Guard2 Leak Detection Sensor closes the gap between costly hard vacuum helium leak detection and low sensitivity leak testing methods like water bath and pressure decay. There is no faster and more cost-effective way of repeatable leak testing in the measurement range of T-Guard2.



ADVANTAGES

- **LOW OPERATING COST**

The INFICON Wise Technology helium sensor does not need a vacuum, turbo- pump, or maintenance. This lowers your operating costs and assures high uptimes

- **NO LIMITATION OF PRODUCT PROPERTIES**

Even warm or humid objects, and those can not be well operated under vacuum can be leak tested

- **SIMPLE AND LOW COST CHAMBER**

T-Guard2 works at atmospheric pressure, therefore there is no need for vacuum chambers and pumps

- **FIND ALL LEAKS RELIABLY**

With INFICON Wise Technology leaks down to E-6 mbarl/s can be detected reliably

- **EASY TO USE**

The intelligent software and optional display units supply easy operation through an intuitive menu structure

- **FLEXIBLE CONTROL**

INFICON T-Guard2 allows a wide range of control options. You can choose between PLC, PC or optional display and Profibus.

APPLICATIONS

- Wherever pressure decay and water bath systems are used or are not sensitive enough
- Leak detection for water coolers and radiators. Big valves, e.g., for chemical applications
- Manufacturers of automotive gas lines and tanks, small heater coils, etc. that are now demanding greater leak tightness
- Leak detection involving warm, humid or large parts, where the pressure decay method is ineffective
- Other markets where helium vacuum leak detection has been considered too costly or too complex

T-Guard2

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| T-Guard2 Leak Detection Sensor | 540-200 |
| T-Guard2 Leak Detection Sensor with Profibus | 540-201 |
| OPTIONS, ACCESSORIES | |
| Control Unit, table top version | 551-100 |
| Control Unit, rack version | 551-101 |
| Cable 5 m for 551-100 | 551-102 |
| Connecting cable ext. Control Unit, 0.7 m | 551-103 |
| PLUG SET Modul1000 | 551-110 |
| I-Stick Modul1000 | 200001997 |

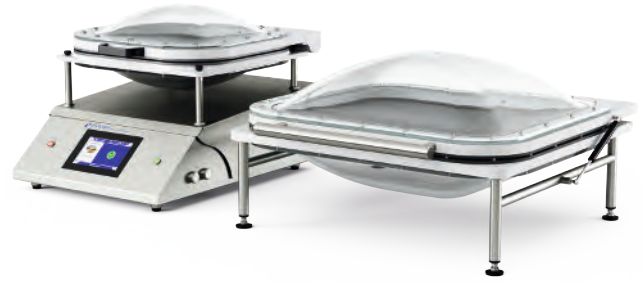
SPECIFICATIONS

| | |
|---|--|
| Minimum detectable leak rate | 1×10^{-6} mbar l/s |
| Measurement range | Five decades |
| Test chamber pressure | 1 atm |
| Maximum carrier gas flow | 1,000,000 sccm |
| Probe gas flow Fine / Gross | 180 sccm / 90 sccm |
| Time constant of the leak rate signal | <1 s |
| Helium sensor | WISE Technology™ |
| Run-up time | <3 min |
| Hose connectors | 6 mm |
| Control inputs | 6 × PLC compatible, max. 35 V(ac) |
| Status / trigger outputs | 8 × relay contacts, max. 60 V(ac)/ 25 V(dc)/ 1 A |
| Chart recorder output lin/log | 2 × 0...10 V, programmable |
| Power supply demand / power consumption | 24 V(dc) / 100 W |
| Type of protection | IP20 |
| Dimensions (L × W × H) | 272 × 130 × 272 mm (10.7 × 5.1 × 10.7 in.) |
| Weight | 6.8 kg / 15 lbs |
| Noise level dB (A) | <56 |
| Typical power consumption | <100 W |
| Recommended fore pump | Two-stage diaphragm |

Contura[®] Leak Tester Series S400, S600

The innovative Contura Series Leak Tester offers manufacturers of food packaging machines and the food industry in general a unique solution for detecting leaks in MAP (modified atmosphere packaging) and other flexible packages.

No matter whether it is a gross leak or a leak so fine that it is undetectable by the naked eye or by the water bath method: the unique technology of the Contura Leak Series can detect any leak—without tracer gas and without damage to the package.



ADVANTAGES

- No tracer gas required
- Non-destructive testing
- Test sensitivity: detection of even the finest of leaks (hole sizes <math><10\ \mu\text{m}</math>)
- Wide dynamic range: Include cross-leak detection
- Rapid and reliable leak-testing: measuring time: <math><12\ \text{sec}</math>
- Immediate and quantitative indication of leak rate
- Multiple possibilities for integrating into production lines
- Reduction in rates of complaint and processing costs
- Reinforcement of the image through always durable goods and defect-free packaging

APPLICATIONS

- For checking whether MAP packaging and hermetically sealed packages are airtight
- Usage in laboratories and production lines
- Allows manufacturers to check whether newly built packaging machines produce 100% airtight packaging

Contura[®] Leak Tester Series S400, S600

ORDERING INFORMATION

| ITEM | | PART NUMBER |
|-----------------------|--------------------------------|-------------|
| Contura S400 | | 570-000 |
| Contura S600 | | 574-000 |
| Additional test leaks | | |
| Con-Check | $(1.4 \pm 0.2) \times 10^{-2}$ | 571-000 |
| Pac-Check | $2.25 \pm \times 10^{-1}$ | 572-000 |
| Calibration kit | | 573-000 |

SPECIFICATIONS

| | S400 | S600 |
|-------------------------------------|--|--|
| Chamber size (L x W x H) | 400 x 350 x 200 mm (15.7 x 13.7 x 7.9 in.) | 550 x 450 x 250 mm (21.7 x 17.7 x 9.8 in.) |
| Device dimensions (L x W x H) | 725 x 535 x 475 mm (28.5 x 21.0 x 18.7 in.) | 800 x 780 x 420 mm (31.5 x 30.7 x 16.5 in.) |
| Weight | 46 kg | 61 kg |
| Test duration | | <12 s |
| Smallest detectable (hole diameter) | <10 µm | 10 µm |
| Calibration | Not necessary | |
| Warm-up time | <1 min | |
| Casing | Stainless steel, splash-proof to IP20D | |
| Power supply | 115 /230 V ± 10% / 50 Hz – 60 Hz | |
| Interfaces | USB/network/RS232 serial | |
| Display | 7 in. touchscreen | |
| Barcode reader | User and product selection | |

Pernicka 700H

The Cumulative Helium Leak Detector (CHLD) combines mass spectrometer expertise with cryogenic ultra-high vacuum. The Pernicka 700H offers hermetic testing superior to conventional GROSS and FINE leak methods.

This technique can be applied to any hermetically sealed device which either contains a gas such as nitrogen, helium, argon, krypton, xenon, etc. or can be "bombed" with helium.



ADVANTAGES

- **HIGHLY EFFICIENT**

- Fast and effective test procedures for various test objects by tailored method.
- Shorter bombing time due highest sensitivity for smallest detectable leak rates.
- Fast calibration cycle.
- Simultaneous detection of fluorocarbons, nitrogen, argon, xenon, etc..
- Combining GROSS and FINE leak tests in one operation.

- **COST EFFICIENCY**

- Low cost of ownership.

- **SIMPLE TO USE AND TO INTEGRATE**

- Customer designed inlays for easier handling.

- **LOW MAINTENANCE**

- Low maintenance due to worldwide Support & Service.

APPLICATIONS

- High-reliability electronics, such as space/satellite parts
- Gas-filled components
- Large Hybrid packages
- Ultra-small volume devices, such as SMD packages
- Implantable medical devices, such as pacemakers, cochlear implants

Pernicka 700H

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| Pernicka 700H | |
| Cumulative helium leak detector system, | |
| 110 V version | 550-700 |
| 230 V version | 550-701 |
| OPTIONS: | |
| Double O-ring test chamber | |
| Large | 551-710 |
| Medium | 551-711 |
| Small | 551-712 |
| Small metal seal test chamber | 551-715 |
| High purity purge gas regulator for Nitrogen/Argon | |
| Pressure setting max. 30 PSI | |
| Connection to gas bottle US CGA 580 | 551-701 |
| Connection to gas bottle DIN 477 No. 6 | 551-702 |
| Connection to gas bottle DIN 477 No. 10 | 551-703 |
| Connection to gas bottle Chinese G5/8-14 RH-EXT | 551-706 |
| Gas regulator for valve operation | |
| Pressure setting max. 250 PSI | |
| Connection to gas bottle US CGA 580 | 551-705 |
| Connection to gas bottle DIN 477 No. 10 | 551-704 |
| Test leak | |
| Air leak rate 10^{-5} mbar l/s | 551-720 |
| Air leak rate 10^{-6} mbar l/s | 551-721 |

Pernicka 700H

SPECIFICATIONS

| | |
|--|---|
| Minimum detectable leak rate for helium | |
| FINE mode | $>4 \times 10^{-14}$ mbar l/s |
| GROSS mode | $>10^{-4}$ mbar l/s |
| Detectable masses | 2–100 |
| Mass spectrometer | Quadrupole type |
| Calibrated built-in test leak in the range | 10^{-10} mbar l/s |
| Test port | DN 16 CF |
| Vacuum pump system | - turbomolecular pump - roughing pump - cryo pump |
| Supply voltage | 110/120 V, 50/60 Hz 15 A 220/240 V, 50/60 Hz 10 A |
| Cryo compressor (air cooled) | 208-240 V, 50/60 Hz 10 A |
| Gas supply | |
| Valve operation | Compressed air, 100 – 110 PSI |
| Purge gas | Argon, 0.5 – 1 PSI |
| Ambient conditions | Intended for indoor use only |
| Max. permissible height above sea level (during operation) | 2000 m |
| Operating temperature | +15 to 28°C (60 to 80°F) |
| Max. relative humidity | 80% |
| Overvoltage category | II |
| Degree of contamination | 2 (EN 61010) |
| Weight | 245 kg (540.13 lb.) |
| Dimensions (W × H × D) | 660 × 1390 × 870 mm (26 × 54.5 × 34.25 in.) |

Natural Gas Leak Detectors

IRwin®

IRwin® Methane Leak Detector is an innovative natural gas detector for easy gas pipes survey and gas leak detection. Developed in accordance with many national directives, as the DVGW (Deutscher Verband des Gas- und Wasserfaches) directive, this natural gas leak detector is portable and has explosion-proof models certified for use in Zone 0, classification Ex II 1G, Ex ia IIC T3 Ga, Intrinsically Safe Class I, Division 1, Groups A, B, C and D, T3.

The integrated proprietary IR sensor has a very short reaction and recovery time and also a high sensitivity. This prevents false alarms when searching for gas leaks. In addition, a correct and fast leak evaluation is ensured. The range is from 1 ppm to 100 Vol.%.



IRwin®

ADVANTAGES

- **HIGHLY EFFICIENT**

The specially developed gas chromatograph (GC) and sensor combination allows near realtime distinction between swamp gas and natural gas.

Improved efficiency with high sensitivity, fast reaction and short recovery time.

Accurate gas analysis enabled through improved IR-technology.

Automatic documentation of survey results.

- **COST EFFICIENCY**

This multi-function instrument efficiently operates on different surfaces and situations during survey, is highly sensitive, responds quickly and has a short recovery time.

- **SIMPLE TO USE AND TO INTEGRATE**

Thanks to quick install fittings, the user can easily apply the correct probe for the specific working situation.

Modular system for quick probe change.

- **LOW MAINTENANCE**

All needed items are easily carried – no need for extra trips to your vehicle.

Filter change done in the field with a minimum of tools.

APPLICATIONS

- Natural gas pipelines (Distribution and Transmission)
- Biogas
- In-house gas lines
- Natural gas production companies
- Landfill Surface Emission Monitoring


ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| INSTRUMENTS | |
| IRwin S | 580-000 |
| IRwin SX | 580-010 |
| IRwin SXT | 580-015 |
| IRwin SXG | 580-020 |
| IRwin SXGT | 580-030 |
| ACCESSORIES | |
| IRwin Accessories Kit | 580-712 |
| Carpet Probe 'Mono Wheeler' | 580-210 |
| Bell Probe | 580-300 |
| Carpet (without locking mechanism) | 580-211 |
| Bell | 580-301 |
| Flexi Bell | 580-305 |
| Hand Probe | 580-100 |
| Hand Probe Flexible Extension | 580-110 |
| Rod, 850 mm (33.4 in.) | 580-150 |
| Short Rod, 600 mm (23.6 in.) | 580-140 |
| Extension Rod, 150 mm (5.9 in.) | 580-160 |
| Bar Hole Probe, for 13–18 mm (0.5–0.7 in.) holes diameters | 580-115 |
| Swan Neck Probe | 580-120 |
| Extension Connector | 580-220 |
| Transport case | 580-450 |
| Mat | 580-127 |
| Harness | 580-405 |
| Compact Kit | 580-240 |
| Compact Rod | 580-170 |
| ODFR, On Demand Flow Regulator US For C10 bottles 5/8"x18 UNF | 580-230 |
| ODFR, On Demand Flow Regulator DE for aerosol/minican 7/16"x28 UNEF | 580-235 |



SPECIFICATIONS

| TYPE | IRwin S | IRwin SX | IRwin SXT | IRwin SXG | IRwin SXGT |
|-----------------------------|--|--|--|--|--|
| DETECTABLE GASES | | | | | |
| Methane | CH ₄ | CH ₄ | CH ₄ | CH ₄ | CH ₄ |
| Carbon dioxide | CO ₂ | CO ₂ | CO ₂ | CO ₂ | CO ₂ |
| Ethane | C ₂ H ₆ | C ₂ H ₆ | C ₂ H ₆ | C ₂ H ₆ | C ₂ H ₆ |
| Propane | | C ₃ H ₈ | C ₃ H ₈ | C ₃ H ₈ | C ₃ H ₈ |
| Butane | | C ₄ H ₁₀ | C ₄ H ₁₀ | C ₄ H ₁₀ | C ₄ H ₁₀ |
| Carbon monoxide | | | CO | | CO |
| Oxygen | | | O ₂ | | O ₂ |
| Hydrogen sulfide | | | H ₂ S | | H ₂ S |
| Sensitivity | 1 ppm to 100% CH ₄ | 1 ppm to 100% CH ₄ | 1 ppm to 100% CH ₄ | 1 ppm to 100% CH ₄ | 1 ppm to 100% CH ₄ |
| Operating time | min. 8 h | min. 8 h | min. 8 h | min. 8 h | min. 8 h |
| Power supply | Lithium Ion battery, 100% in 4 h; fast charge in 3 h | Lithium Ion battery, 100% in 4 h; fast charge in 3 h | Lithium Ion battery, 100% in 4 h; fast charge in 3 h | Lithium Ion battery, 100% in 4 h; fast charge in 3 h | Lithium Ion battery, 100% in 4 h; fast charge in 3 h |
| IP protection type | IP54 | IP54 | IP54 | IP54 | IP54 |
| Operating temperature | -20°C to 50°C | -20°C to 50°C | -20°C to 50°C | -20°C to 50°C | -15°C to 40°C |
| Storage temperature | -25°C to 70°C | -25°C to 70°C | -25°C to 70°C | -25°C to 70°C | -25°C to 70°C |
| Humidity | max. 95% RH, not condensing | max. 95% RH, not condensing | max. 95% RH, not condensing | max. 95% RH, not condensing | max. 95% RH, not condensing |
| Dimensions (W × H × D) | 197 × 256 × 62 mm | 197 × 256 × 62 mm | 197 × 256 × 62 mm | 197 × 256 × 62 mm | 197 × 256 × 62 mm |
| WEIGHT | | | | | |
| Instrument | approx. 1.4 kg (3 lb.) | approx. 1.6 kg (3.5 lb.) | approx. 1.6 kg (3.5 lb.) | approx. 1.6 kg (3.5 lb.) | approx. 1.6 kg (3.5 lb.) |
| Instrument and probe system | approx. 3 kg (6 lb.) | approx. 3 kg (6 lb.) | approx. 3 kg (6 lb.) | approx. 3 kg (6 lb.) | approx. 3 kg (6 lb.) |

Service Tools for HVAC and Automotive

D-TEK® Stratus

Find leaks in no time!

The D-TEK Stratus combines the outstanding leak detection capabilities of D-TEK Select and the gas cloud search of a portable monitor in a handheld device.

Quickly determine the area where the leak is located using the large, easy-to-read LCD screen and then localize the leak with the same device!

The D-TEK Stratus is the next big step in the world of refrigerant leak detection.



ADVANTAGES

- **HIGHLY EFFICIENT**

Sensitivity of 0.03 oz/year (1 g/year).

Innovative cloud hunter mode with ppm display - locates leaks faster than ever

Detects all CFCs, HCFCs, HFCs, and HFOs.

Sensitivity does not decrease over time.

- Fully redesigned infrared sensor:

- Longest sensor life in the industry

- Easy field replacement

- **COST EFFICIENCY**

With the cloud hunter and pinpoint modes, you have two leak detectors in one.

- **SIMPLE TO USE AND TO INTEGRATE**

Automatic and manual zero modes.

Rugged carrying case included.

- New lithium ion battery:

- Quick charge capability

- Easy field replacement

D-TEK[®] Stratus

APPLICATIONS

- Industrial AC and Refrigeration

More information about our service tools is available at
www.inficonservicetools-europe.com

We will be happy to receive your request by e-mail at
servicetools.europe@inficon.com

D-TEK® Stratus

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|----------------|
| D-TEK Stratus | 724-202-G11 |
| Accessories and replacement parts | |
| Earphones | 721-607-G1 |
| TEK-Check R134a test leak | 703-080-G10 |
| Charger US and International) | 721-606-G1 |
| 12 VDC car charger | 721-605-G1 |
| Lithium ion battery | 721-702-G1 |
| Battery charging station | 721-610-G1 |
| Battery charging station combination | 721-604-G1 |
| Needle probe extension | 721-612-G1 |
| Refrigerant sensor (detects CFCs, HFCFs, HFCs and HFOs) | 721-701-G1 |
| CO ₂ sensor | Available soon |
| Filter cap | 712-705-G1 |
| Filter cartridges | 712-707-G1 |
| Transport case | 724-700-G1 |

SPECIFICATIONS

| | |
|-------------------------------|--|
| Contains | D-TEK Stratus Infrared sensor Lithium ion battery Replacement filter AC charger DC car charger Extra long probe Transport case Earphones |
| Compatible refrigerants | R22, R32, R134a, R404a, R407c, R410a, R422b, R448a, R449a, R452a, R452b, R507 (AZ50), R1234yf, CO ₂ (requires CO ₂ sensor) ammonia, SF6 and others |
| Energy source | Lithium ion battery (rechargeable) USB (useable when charging) |
| Battery life | ~ 8 hours (cloud hunter mode) ~ 10 hours (leak detection mode) |
| Weight | 490 g |
| Certificates | CE SAEJ2791 SAEJ2913 EN14624:2012 A2L certified |
| Probe length (standard probe) | 38 cm |
| Warranty | 2 years |

D-TEK[®] Stratus

Accessories

Accessories

Test Leaks

| | |
|---|----|
| Calibrated Test Leaks | C1 |
| Sniffer Application Test Leaks | C4 |
| Calibration Leaks for Sensistor Industrial Hydrogen Leak Detectors Test Leaks | C6 |
| Calibration Leaks for Sensistor Industrial Hydrogen Leak Detectors Test leaks | C7 |
| Con-Check and Pac-Check Test Leaks | C8 |

Miscellaneous

| | |
|--|----|
| Accessories Leak Detection Systems | C9 |
|--|----|

Calibrated Test Leaks

Test Leaks

Manufacturers of helium leak-testing systems require calibrated leaks of various sizes with individually adjusted leak rates for the purpose of setting up and calibrating their systems.

Depending on the type of application, these calibrated leaks are either installed in the test sample as a master leak or are installed in the test chamber itself.

INFICON offers calibrated leaks which are capable of meeting the requirements concerning type and required leak rate.

These types of calibrated leaks are only available on request. Please use the order form on our website at www.inficon.com to provide feedback on feasibility as well as for all important ordering information.

ADVANTAGES

- Various types adapted to different customer requirements
- Simple to operate
- Easy to install
- Ideal installation dimensions
- All calibrated leaks are supplied with a factory certificate indicating their leak rate



Calibrated leak with screw-in sleeve



Calibrated screw-in leak



Calibrated leak with cylindrical casing and VCO fitting



Calibrated leak with pin type casing



CONTURA Z integrated test leak

Test Leaks

APPLICATIONS

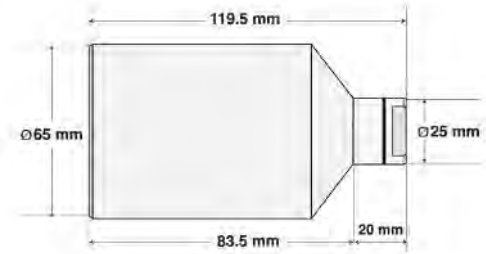
- As a master calibrated leak built directly into the test sample
- Directly installed on the test chamber
- Use as a calibrated leak for sniffer applications

CALIBRATED INTEGRAL LEAK WITH HELIUM RESERVOIR

The integral helium test leak is for use in a vacuum test chamber and is designed for easy filling and refilling by the customer.

It is used for:

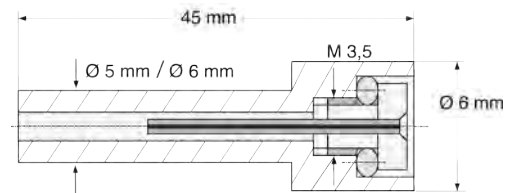
- Calibration of the vacuum system
- Evaluation of the machine factor for the system
- Verification of the test procedure
- Max. operating pressure: 1 bar against vacuum



CONTURA Z integral test leak

CALIBRATED LEAK WITH PIN TYPE CASING

Helium calibrated leaks without gas reservoir (capillary type of leak) for sensitivity and signal response time determinations during vacuum leak detection. A purging valve with hose nozzle permits a rapid exchange of the gas in the dead volume.

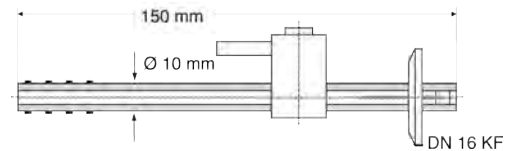


Calibrated leak with screw-in sleeve

CALIBRATED LEAK WITH CYLINDRICAL CASING

The test gas connection is either by a VCO fitting or a 10 mm hose nozzle for flexible connections.

All calibrated test leaks for systems are designed for a max. working temperature of 80°C.



Calibrated leak with pin type casing and hose nozzle

CALIBRATED LEAK WITH SCREW-IN SLEEVE

Used as a master leak to check the entire helium leak-testing system.



Calibrated leak with pin type casing and VCO fitting

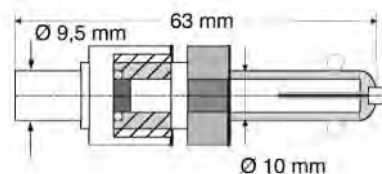
Test Leaks

CALIBRATED SCREW-IN LEAK

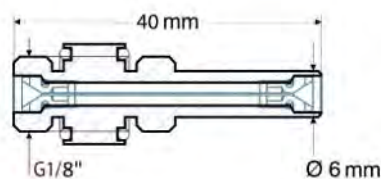
The calibrated screw-in leak is designed to prepare a test sample with a specific helium leak rate. In a leak detection system this master test sample can be used for

- Calibration of the vacuum system
- Evaluation of the machine factor for the system
- Verification of the test procedure

It is prepared with a fixed thread to allow a quick installation into a system. The thread can be on the pressure long side or the pressure short side, depending on the order.



Calibrated leak with cylindrical casing and VCO fitting



Calibrated screw-in leak

ORDERING INFORMATION

| CALIBRATED LEAK | LEAK RATE RANGE | MAX. OPERATING PRESSURE | PART NUMBER |
|---------------------------------------|--|-------------------------------------|-------------|
| CONTURA Z integral test leak | 10 ⁻² - 10 ⁻⁶ mbar l/s | 1 bar against vacuum | 143-15S |
| Screw-in sleeve, 5 mm Ø | on request | 20 bar – up to 40 bar ¹⁾ | 143 00 |
| Screw-in sleeve, 6 mm Ø | on request | 20 bar – up to 40 bar ¹⁾ | 143 16 |
| Pin-type casing and hose nozzle | on request | 6 bar | 143 08 |
| Pin-type casing and hose nozzle, TL 4 | 10 ⁻⁴ mbar l/s | 6 bar | 155 65 |
| Pin-type casing and hose nozzle, TL 6 | 10 ⁻⁶ mbar l/s | 6 bar | 155 66 |
| Pin-type casing and VCO fitting | on request | 6 bar | 143 04 |
| Cylindrical casing and VCO fitting | on request | 6 bar | 143 12 |
| Calibrated screw-in leak | on request | 40 bar | 143 20 |

¹⁾ Up to 40 bar if the capillary is glued in by the customer

On request:

Please visit the web form at "<http://www.inficon.com/lof>". With the Order Form you will get direct feedback about feasibility of the required calibrated leak. If the calibrated leak can be made a code is generated. Place the order to your INFICON dealer with the supplied code of the Order Form.

Sniffer Application

The function of these leaks is based on a special quartz capillary which is customized to deliver a specific reduced flow from a test gas reservoir. This type of calibrated test leak is available with different leak rates and test gases (Ordering Information [▶ 4]).

ADVANTAGES

- Highly accurate and reliable due to the profile of the quartz capillary
- Metal-free capillary for low temperature dependence
- Inspection certificate (included) in accordance to DIN EN 10204:2004-3.1

APPLICATIONS

- Determination of the nominal leak rate by comparison with a calibrated leak having a PTB certificate



ORDERING INFORMATION

| CALIBRATED LEAK | LEAK RATE RANGE | PART NUMBER |
|---|-----------------------------------|-------------|
| S-TL 4, with helium gas reservoir | $1.0-1.2 \times 10^{-4}$ mbar l/s | 122 37 |
| S-TL 5, with helium gas reservoir | $2.0-6.0 \times 10^{-5}$ mbar l/s | 122 38 |
| S-TL 6, with helium gas reservoir | $6.0-8.0 \times 10^{-6}$ mbar l/s | 122 39 |
| H ₂ /forming gas | $1.0-1.1 \times 10^{-4}$ mbar l/s | 123 22 |
| CALIBRATED SNIFFER TEST LEAKS FOR REFRIGERANTS | | |
| 2-5 g/a, 0.07-0.18 oz/yr | R 134a | 122 20 |
| 2-11 g/a, 0.07 – 0.39 oz/yr | R 134a | 122 20S *) |
| 10-11 g/a, 0.353 – 0.383 oz/yr | R 134a | 122 40 |
| 2-5 g/a, 0.07-0.18 oz/yr | R 600a | 122 21 |
| 2-20 g/a, 0.07 – 0.71 oz/yr | R 600a | 122 21S *) |
| 14-18 g/a, 0.49 – 0.63 oz/yr | R 600a | 122 41 |
| 2-5 g/a, 0.07-0.18 oz/yr | R 404a | 122 22 |
| 2-10 g/a, 0.07 – 0.18 oz/yr | R 404a | 122 22S *) |
| 10-15 g/a, 0.353 – 0.529 oz/yr | | |
| 13-17 g/a, 0.459 – 0.60 oz/yr | R 404a | 122 42 |
| 2-5 g/a, 0.07-0.18 oz/yr | R152a | 122 27 |
| 2-5 g/a, 0.07-0.18 oz/yr | R 407c | 122 28 |
| 2-10 g/a, 0.07 – 0.353 oz/yr | R 407c | 122 28S *) |
| 10-15 g/a, 0.353 – 0.529 oz/yr | | |
| 2-5 g/a, 0.07-0.18 oz/yr | R 410a | 122 29 |
| 2-10 g/a, 0.07 – 0.353 oz/yr | R 410a | 122 29S *) |
| 10-15 g/a, 0.353 – 0.529 oz/yr | | |
| 2-5 g/a, 0.07-0.18 oz/yr | R1234 YF | 122 35 |
| 2-8 g/a, 0.07-0.282 oz/yr | R 32 | 122 36S |
| 7-8 g/a, 0.25-0.28 oz/yr | R 290 | 122 31 |
| 10-14 g/a, 0.36-0.49 oz/yr | R 134a | 122 40 |
| 2-3.5 g/a, 0.07 - 0.123 oz/yr | CO ₂ | 122 32 |
| 10-14 g/a, 0.353-0.494 oz/yr | CO ₂ | 122 75 |
| 2-5 g/a, 0.07 – 0.18 oz/yr | SF ₆ | 123 00 |
| 2-5 g/a, 0.07 – 0.18 oz/yr | R 1234ze | 123 01 |
| 2-5 g/a, 0.07 – 0.18 oz/yr | R 245fa | 123 04 |
| 2-5 g/a, 0.07 – 0.18 oz/yr | R 452A | 123 05 |
| 2-5 g/a, 0.07 – 0.18 oz/yr | R 448A | 123 11 |
| 10-15 g/a, 0.353 – 0.529 oz/yr | | |

Sniffer Application

| CALIBRATED LEAK | LEAK RATE RANGE | PART NUMBER |
|-----------------------------|-----------------|-------------|
| 2-5 g/a, 0.07 – 0.18 oz/yr | R 452B | 123 20 |
| 2-5 g/a, 0.07 – 0.18 oz/yr | R 454C | 123 21 |
| 2-3 g/a, 0.07 – 0.106 oz/yr | R 454B | 123 23 |
| 2-5 g/a, 0.07 – 0.18 oz/yr | R 513A | 123 24 |
| 2-5 g/a, 0.07 – 0.18 oz/yr | R 450A | 123 27 |
| 2-5 g/a, 0.07 – 0.18 oz/yr | R 438A | 123 28 |

*) Test leaks with customer-specific leak rate in the specified range

Calibration Leaks for Sensistor Leak Detectors

The Easy Way to Test and to Calibrate—For Maximum Accuracy

To be able to correctly accept/reject test objects you need to measure to a set standard. You also need to calibrate your leak detector against a reliable reference leak. INFICON reference leaks for Sensistor industrial hydrogen leak detectors cover a wide range of leak rates to suit your specific application and include bigger leaks (Types A-C) and smaller leaks (Types E and G). Leak Type A is intended for accumulation testing only. All leaks are traceable to NIST, NMIJ, NPL, PTB, etc., through the Mutual Recognition Arrangement of the BIPM.



TYPES AND CONNECTIONS

A, B and C

Sintered stainless steel leaks Target flow between 5×10^{-2} and 5×10^{-4} (Air)

E and G

Crimped metal capillary leaks Target flow between 7×10^{-5} and 2×10^{-5} (5% H_2 /95% N_2)

ADVANTAGES

- Suitable for industrial applications
- Easy to use
- Available in different leak rates
- Traceable to NIST, NMIJ, NPL, PTB, etc.

APPLICATIONS

- Test and Calibration of Sensistor Industrial Hydrogen Leak Detectors

ORDERING INFORMATION

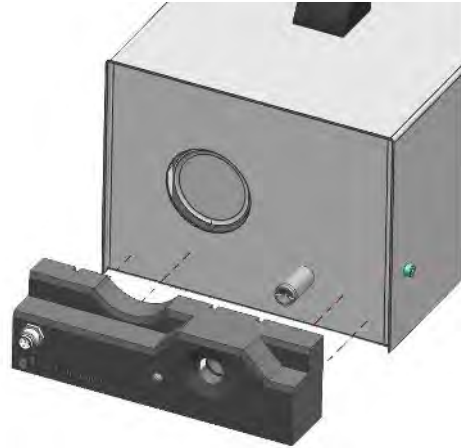
| CALIBRATED LEAK | PART NUMBER |
|---|-------------|
| Calibration Leak Type A, 5×10^{-2} mbarl/s @1bar | 590-420 |
| Calibration Leak Type B, 5×10^{-3} mbarl/s @1bar | 590-421 |
| Calibration Leak Type C, 5×10^{-4} mbarl/s @1bar | 590-422 |
| Calibration Leak Type E, 10g/a | 590-427 |
| Calibration Leak Type G, 3g/a | 590-429 |

Test leaks

CalMate Adapter for Calibrated leaks

CalMate calibration adapter

For inserting a sniffer tip into the opening of the CalMate calibration adapter to start a quick and easy calibration check or calibration in a sniffer leak detector, e.g. the XL3000flex.



APPLICATIONS

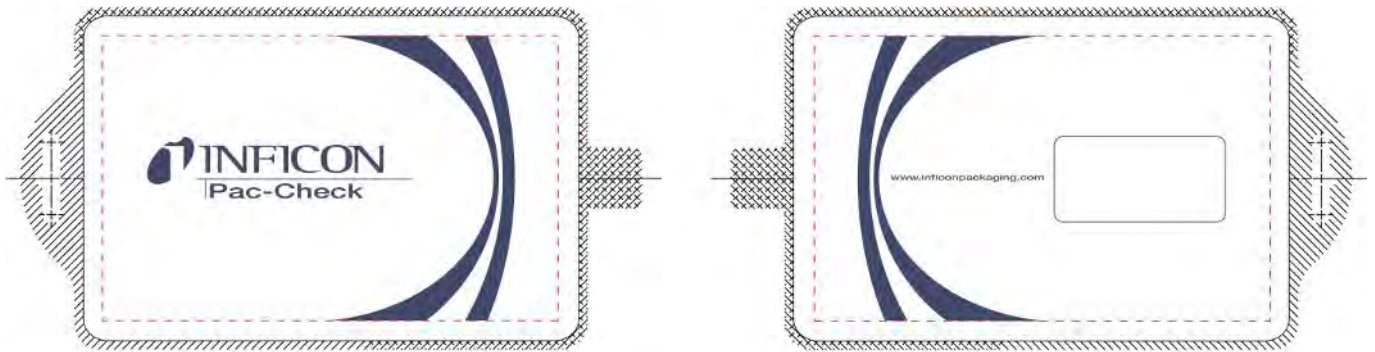
- For adaption to a calibrated leak

ORDERING INFORMATION

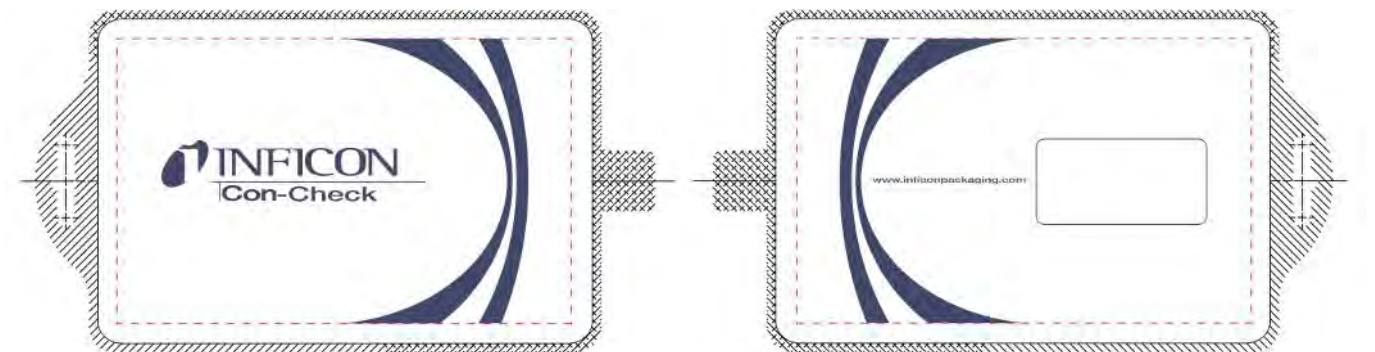
| CALIBRATED LEAK | PART NUMBER |
|------------------------------------|-------------|
| CalMate connection cable 1 m | 520-210 |
| CalMate connection cable 3 m | 520-215 |
| Connecting cable CalMate to IO1000 | 520-220 |
| IO1000 module | 560-310 |

Con-Check and Pac-Check

Con-Check and Pac-Check are used to test the function of Contura S400.



Test leak Pac-Check



Test leak Con-Check

ORDERING INFORMATION

| ITEM | | PART NUMBER |
|-----------------------|--------------------------------|-------------|
| Additional test leaks | | |
| Con-Check | $(1.8 \pm 0.6) \times 10^{-2}$ | 571-000 |
| Pac-Check | $2.25 \pm \times 10^{-1}$ | 572-000 |
| Calibration kit | | 573-000 |

Leak Detection Systems

Accessories

SNIFFER TOOLS

SPECIFIC SNIFFER LINES

SNIFFER LINES FOR DETECTING SPECIFIC GASES

For use with the HLD6000 mobile leak detector.

- SMART sniffer line for R22, R32, R134a, R404A, R407C, R410A, R1234yf, R1234ze and 3 additional gases from the selectable gases that are verifiable by the device
- Sniffer line for R744 (CO₂)
- Sniffer line for R600a and R290



SMART sniffer line

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| SMART sniffer line (gas family of the HFC refrigerant) | 511-047 |
| R744 (CO ₂) sniffer line | 511-045 |
| R600a/R290 sniffer line | 511-048 |

SNIFFER LINE SL200

HELIUM SNIFFER LINE SL200 FOR THE UL1000/5000 AND MODUL1000

Helium sniffers in connection with the UL1000, UL5000 and the Modul1000 leak detectors are used for leak-testing test samples which are pressurized with helium. Besides pinpointing the leaks, it is possible to determine the leak rate of the escaping helium.

- Sniffer line connects directly to the inlet port
- Very fast response time <1 s
- Extremely low detection limit <1 × 10⁻⁷ mbar l/s
- Rigid 120 mm sniffer tip (included)
- Connecting flange DN 25 KF



Helium sniffer line SL200 P

ORDERING INFORMATION

| ITEM | PART NUMBER |
|--|-------------|
| Helium sniffer line, SL200 P, 4 m long, straight handle with red/green LED for go/no-go indication, rigid sniffer tip 120 mm | 140 05 |

Accessories

SL200, QT100 AND GAS SPRAY GUN

HELIUM SNIFFERS QUICK-TEST™ QT100 FOR THE UL1000/5000 AND MODUL1000

- For greater distances up to 20 m between test object and leak detector
- Diaphragm pump for extracting the search gas
- Minimum detectable leak rate 1×10^{-6} mbar l/s
- Short response and decay times: 1 s at 5 m, 8 s at 20 m
- High sniffer velocity
- Built-in transformer for adaptation to any required power supply voltage 110–230 V(ac)



Helium sniffer QUICK-TEST QT100 with sniffer

SEARCH GAS SPRAY GUN

The search gas spray gun with PVC hose (5 m long) is used for well aimed spraying of search gas at places where a leak is suspected.



Search gas spray gun

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| Helium sniffer QUICK-TEST QT100 | 155 94 |
| Sniffer line for the QT100 | |
| 5 m | 140 08 |
| 20 m | 140 09 |
| Search gas spray gun with rubber bladder | 165 55 |
| Rubber bladder (helium reservoir for spray gun) with hose clamp | 200 206 239 |

SPECIFICATIONS

| FEATURE | SL200 | QT100 |
|--|---------------------|-----------------------|
| Minimum detectable leak rate | $<10^{-7}$ mbar l/s | 10^{-6} mbar l/s |
| Supply voltage | - | 110 – 220 V, 50/60 Hz |
| Signal response time, approx. at a length of | | |
| 5 m | <1 s | 1 s |
| 20 m | - | 8 s |
| Connection flange | DN 25 KF | DN 25 KF |
| Weight | 0.6 kg (1.32 lb.) | 3.5 kg (7.72 lb.) |

Accessories

SNIFFER LINE SL3000

HELIUM SNIFFER LINE SL3000 FOR E3000, P3000, XL3000FLEX, UL3000 FAB PLUS AND UL3000 FAB ULTRA

- Detection limit $< 2 \times 10^{-7}$ mbar l/s
- Gas flow, distance sensitivity 160 sccm
- Display with measurement view
- Acknowledge faults via buttons on the sniffer probe



Helium sniffer line SL3000

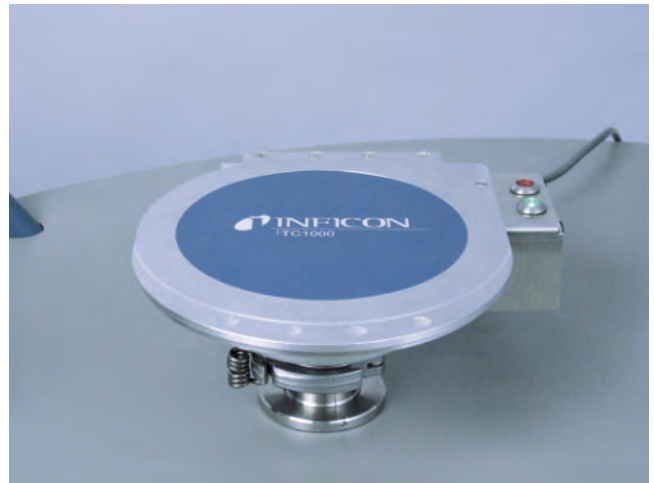
ORDERING INFORMATION

| ITEM | PART NUMBER |
|-------------------------------------|-------------|
| SL3000-3, sniffer line 3 m length | 525-001 |
| SL3000-5, sniffer line 5 m length | 525-002 |
| SL3000-10, sniffer line 10 m length | 525-003 |
| SL3000-15, sniffer line 15 m length | 525-004 |

Accessories

TC1000 TEST CHAMBER

- Turns the UL-Devices and the Modul1000 into a reliable and user-friendly workstation for testing of hermetically sealed parts (also according to MIL-STD 843, Method 1014)
- Easy to install
- Maintenance-free
- Volume (hemispherical shape): approx. 430 ccm
- Upper diameter/depth: 130/40 mm
- Material: Aluminum alloy, low outgassing rate
- Weight: 2.5 kg
- Vacuum connection: DN 25 KF
- Integrated sensor switch to start test in combination with UL1000/UL1000 Fab and the Modul1000
- Clearly visible red/green LED's to display test results
- Calibration by an external test leak is easy by using an optional adapter plate
- Protection of tested parts against static discharge by the standard ESD wrist band and an optional ESD mat (Cat. No. 551-002) for UL1000/UL1000 Fab



TC1000 Test Chamber



TC1000 in operation; exemplary menu function showed on the display

ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| TC1000 test chamber incl. ESD wrist band | 551-005 |
| Test leak adapter for TC1000, DN 16 KF flange | 200 001 797 |

Accessories

REMOTE CONTROL RC1000

- Up to 100 m wireless and up to 28 m wired operation of UL1000, UL1000 Fab, UL3000 Fab, UL5000 and Modul1000 leak detectors
- More than 8 hours battery lifetime
- Full color, 3.5 in touch screen display
- Push-buttons for basic operation features
- Leak rate displayed in digits, chart mode or bargraph mode
- Automatic or manual data recording
- Up to 24 hours storage of measured values
- Data copy via USB stick and download on PC
- Adjustable alarm threshold setting
- Robust design IP42
- Easy substitution of previous remote control version (Ref. No. 200 99 022)



ORDERING INFORMATION

| ITEM | PART NUMBER |
|---|-------------|
| RC1000C remote control, wired, including 4 m coiled cable | 551-010 |
| RC1000WL remote control, wireless, incl. wireless transmitter | 551-015 |
| Wireless transmitter for connection >2 leak detectors | 551-020 |
| Extension cable, 8 m for RC1000C | 140 22 |

Accessories

CONNECTION COMPONENTS

When connecting accessories (helium sniffer probe and calibrated leaks) to a vacuum leak detector, the following reducers and components may be necessary:

ORDERING INFORMATION

| ITEM | PART NUMBER |
|----------------------|-------------|
| PC software LeakWare | |
| DN 25/16 KF | 211-281 |
| DN 40/25 KF | 211-283 |
| DN 40/16 KF | 211-282 |
| Centering rings | |
| DN 16 KF | 211-059 |
| DN 25 KF | 211-068 |
| DN 40 KF | 211-070 |
| Clamping rings | |
| DN 16 KF | 211-001 |
| DN 25 KF | 211-002 |
| DN 40 KF | 211-003 |

The following metal hoses are recommended to connect the leak detectors to systems:

| NOMINAL WIDTH | LENGTH | PART NUMBER |
|---------------|--------|-------------|
| DN 16 KF | 1.0 m | 211-338 |
| DN 16 KF | 0.5 m | 211-336 |
| DN 25 KF | 0.5 m | 211-340 |
| DN 25 KF | 1.0 m | 211-342 |
| DN 40 KF | 1.0 m | 211-346 |
| DN 40 KF | 0.5 m | 211-344 |

Accessories

CALIBRATED TEST LEAKS WITH GAS RESERVOIR FOR VACUUM APPLICATIONS

TL7

Capillary leak with helium reservoir and manual valve.
Leak rate range 10^{-7} mbar l/s. Connecting flange DN 10 KF.

TL8/TL9

Helium test leak with helium reservoir and manual valve.
A special quartz bulb with a high helium permeation rate adjusts the constant gas flow. Connecting flange DN 10 KF.



ADVANTAGES

- Inured to pollution
- Metal-free flow reduction for low temperature dependence
- Inspection certificate (included) in accordance to DIN EN 10204:2004-3.1
- Highly accurate and reliable
- Determination of the nominal leak rate by comparison with a calibrated leak having a PTB certificate
- DAKKS certificate (optional) traceable to PTB

ORDERING INFORMATION

| CALIBRATED LEAK WITH HELIUM RESERVOIR | LEAK RATE RANGE | PART NUMBER |
|---|--------------------|-------------|
| TL 7 with hand valve, DAKKS calibrated | 10^{-7} mbar l/s | 115 14 |
| TL 7 for UL200/UL1000/UL5000, Modul1000 | 10^{-7} mbar l/s | 140 30 |
| TL 8 | 10^{-8} mbar l/s | 165 57 |
| TL 8, DAKKS calibrated | 10^{-8} mbar l/s | 165 57DKD |
| TL 9 | 10^{-9} mbar l/s | 144 08 |

Accessories

TEST LEAKS WITH GAS RESERVOIR FOR VACUUM AND SNIFFER APPLICATIONS

TL3-5 AND TL4-6

Universal gas source for the fast insert in a variety of applications

Helium capillary leak for vacuum and sniffing applications. Adjustable leak rate in the range between 10^{-3} to 10^{-5} mbar l/s. Besides helium, which is included in delivery, the TL4-6 is also usable with different kind of gases.



ORDERING INFORMATION

| TEST LEAK | LEAK RATE RANGE | PART NUMBER |
|----------------------------------|---------------------------------|-------------|
| TL4-6, with helium gas reservoir | 10^{-4} to 10^{-6} mbar l/s | 155 80 |
| TL3-5, with helium gas reservoir | 10^{-3} to 10^{-5} mbar l/s | 155 81 |

About INFICON

INFICON provides technology leadership and application expertise in areas such as gas analysis, leak detection, vacuum measurement and control, as well as the chemical analysis of air, soil, and water. Our products are used in a variety of applications and markets.

Production leak detectors from INFICON ensure quality in air conditioning, refrigeration and automotive manufacturing worldwide, and technicians rely on INFICON Service Tools to ensure that these products will remain free of leaks for years to come.

For more information about INFICON, its products and its global sales and service network, go to www.inficon.com.

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