

PRODUCT TECHNICAL BRIEF

LeakLab KTK.IZ.003 Refillable Internal Calibrated Leak

LeakLab KTK.IZ.003 Refillable Internal Calibrated Leak - LeakLab solutions for leak testing, vacuum systems and test equipment.

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Technical Data

PARAMETER	PUBLISHED VALUE / INFORMATION
Instrument family / Intended use	Compatibility requirement
Pfeiffer ASM 142 / Replacement of the built-in reference leak	Confirm instrument version, mounting and connection
Pfeiffer ASM 310 / Restoration of the internal calibration source	Confirm instrument version, mounting and connection
Pfeiffer ASM 340 / Internal service replacement	Confirm instrument version, mounting and connection
Other ASM configurations / Possible application after technical review	Dimensions, connection and temperature-sensor arrangement must be checked
Parameter	Documented value
Model	KTK.IZ.003
Tracer gas	Helium
Calibrated flow recorded for the referenced unit	$1.08 \times 10^{-8} \text{ Pa} \cdot \text{m}^3 / \text{s}$
Calibration temperature for the referenced unit	21.0 °C
Fill pressure recorded for the referenced unit	0.25 MPa
Maximum stated fill pressure	1.25 MPa
Flow temperature correction	1% per 1 °C
Relative deviation	No more than $\pm 30\%$
Flow measurement method	Mass-spectrometric comparison with a reference gas flow

PARAMETER	PUBLISHED VALUE / INFORMATION
Operating-temperature range	+10 to +40 °C
Calibration interval	1 year
Construction	Refillable helium reservoir with a calibrated flow element
Product Label	New

Technical and Project Information

The LeakLab KTK.IZ.003 is a refillable internal helium reference leak intended as a service replacement for compatible Pfeiffer ASM 142, ASM 310 and ASM 340 instruments. The documented unit has a calibrated flow of 1.08×10^{-8} Pa·m³/s at 21.0 °C and a fill pressure of 0.25 MPa. It is supplied with a product passport and calibration record. Confirm instrument configuration and fit before ordering.

LeakLab KTK.IZ.003 Internal Helium Reference Leak

The LeakLab KTK.IZ.003 is a refillable internal calibrated leak developed for service replacement of the built-in helium reference source in compatible Pfeiffer ASM leak detectors. Its intended applications include ASM 142, ASM 310 and ASM 340 instruments, subject to confirmation of the exact instrument configuration and connection.

The calibrated leak produces a helium flow in the 10^{-8} Pa·m³/s region. The unit described in the source product record was calibrated at 1.08×10^{-8} Pa·m³/s at 21.0 °C with a fill pressure of 0.25 MPa. Use the passport and calibration record supplied with the individual unit for all quantitative work.

Why the Internal Reference Leak Matters

A helium mass-spectrometer leak detector uses its internal reference leak to check sensitivity, response and calibration. If the internal reservoir loses helium, the metering element becomes contaminated or the flow moves outside its permitted range, the instrument may fail its calibration routine or produce unreliable quantitative results.

The internal calibrated leak is therefore a measurement component, not simply an accessory. Its condition should be included in planned instrument diagnostics and maintenance.

Intended Compatibility

The existing temperature sensor from the previous assembly is transferred to the KTK.IZ.003 where the instrument configuration permits. Installation instructions and service documentation for the specific detector take precedence.

Documented Technical Data

Values above are taken from the passport information described on the source page. Confirm them against the documents supplied with the individual product because calibrated flow and associated conditions are unit-specific.

Unlike a sealed disposable reference source, the KTK.IZ.003 can be refilled, recalibrated and returned to service when technically suitable. This can extend the useful life of the assembly and reduce dependence on repeated replacement of the complete internal leak. Refill and calibration must be performed by a competent service or calibration provider using the applicable procedure.

Installation and Commissioning

The replacement procedure should preserve the instrument's original measurement arrangement. Where applicable, the temperature sensor from the previous internal leak is transferred to the replacement assembly. After installation, the connections must be leak-tested and the detector must complete its prescribed calibration and functional checks.

- Verify the complete detector model, serial number and service configuration.
- Compare mounting dimensions and connections before installation.

- Transfer the temperature sensor only as specified for the instrument.
- Check the installed assembly for leak tightness.
- Enter or confirm the unit-specific calibrated flow and temperature data as required by the detector.
- Run the manufacturer's calibration and sensitivity-check procedure.

The stated supply documentation includes a product passport and calibration record. Depending on the individual unit, these documents identify the model, tracer gas, calibrated flow, calibration temperature, fill pressure, calibration date and the applicable operating or recalibration information.

The documentation for the delivered unit is the controlling source for traceability and quantitative use. Additional verification or accreditation requirements should be agreed before ordering.

- Service of compatible Pfeiffer ASM 142, ASM 310 and ASM 340 leak detectors.
- Restoration of the detector's internal calibration function.
- Planned maintenance of helium leak detectors in industrial and laboratory systems.
- Vacuum-equipment, electronics, mechanical-engineering and other quantitative leak-testing applications.

Contact LeakLab with the leak-detector model, serial number, photographs of the existing internal leak and connection, and the required calibration documentation. Availability, compatibility, delivery destination and service scope will be confirmed for the specific request.

- Helium Reference Leaks Capillary Helium Reference Leaks Gelit Reference Leaks Reference Leaks for Pfeiffer and Adixen ASM Detectors
- Capillary Helium Reference Leaks
- Gelit Reference Leaks
- Reference Leaks for Pfeiffer and Adixen ASM Detectors
- Scanning Electron Microscopes
- Leak-Detector Accessories

WORLDWIDE PROJECT CONTACT

Send the test object or system, operating conditions, target sensitivity or pressure range, applicable standard, destination country, quantity and schedule. LeakLab will review the project scope.

mail@leaklab.org

Regarding: LeakLab KTK.IZ.003 Refillable Internal Calibrated Leak

Specifications, standards, verification scope, availability and commercial terms must be confirmed for the exact configuration and destination jurisdiction before order or project acceptance.