Translation of the original operating instructions

Argon Calibration Leak TL4, Hydrogen Calibration Leak TL5

Calibration leak

Catalog No.
561-501, 561-502

jinb56en1-01-(2604)

From software version
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Table of Contents

1 About this Manual

In the document, product names may be mentioned that are provided solely for identification purposes and are the property of their respective rights holders.

1.1 Explanation of the Warning Notices

⚠ DANGER

Immediate danger with death or serious injuries as a consequence

⚠ WARNING

Dangerous situation with possible death or serious injuries as a result

⚠ CAUTION

Dangerous situation resulting in minor injuries

NOTICE

Dangerous situation resulting in property or environmental damage

1.2 Target Groups

This instruction manual is aimed at the operator of the device, at technically qualified specialists, and trained personnel.

2 Safety

2.1 Intended use

This device is a calibration leak for calibrating INFICON leak detectors. The gas cartridge contains tracer gas that escapes at a defined leak rate during calibration.

Incorrect usage

Avoid the following unintended uses:

- Use outside the technical specifications, see "Technical data"
- Use of accessories or spare parts, which are not listed in this manual
- Use with non-INFICON leak detectors
- Using the device outdoors
- Connecting the calibration leak to an overpressure source
- Refilling of gas cartridges
- Use of damaged gas cartridges
- Opening or manipulating the calibration leak
- Use the calibration leak when wet or in water
- Using or storing the calibration leak in unventilated rooms and in the vicinity of ignition sources
- Using the gas cartridge to lift, carry, or pull the connected leak detector
- Storing and using the device in hot environments (e.g. surfaces, sunlight)

2.2 Duties of the Operator

- Read, observe, and follow the information in this instruction manual and in the work instructions provided by the owner. This concerns in particular the safety and warning instructions.
- Always observe the complete operating instructions for all work.
- If you have any questions about operation or maintenance that are not answered in this instructions for use, contact INFICON service.

2.3 Owner Requirements

The following notes are for companies or any person who is responsible for the safety and effective use of the product by the user, employees or third parties.

Safety-conscious operation

- Operate the device only if it is in perfect technical condition and has no damage.
- Only operate the device properly in accordance with this instruction manual, in a safety and risk conscious manner.
- Adhere to the following regulations and observe their compliance:
  - Intended use
  - Universally valid safety and accident prevention regulations
  - International, national and local standards and guidelines
  - Additional device-related provisions and regulations

- Only use original parts or parts approved by the manufacturer.
- Keep this instruction manual available on site.

Personnel qualifications

- Only instructed personnel should be permitted to work with and on the device. The instructed personnel must have received training on the device.
- Make sure that authorized personnel have read and understood the instruction manual and all other applicable documents.

3 Scope of Delivery, Transport, Storage

Scope of delivery

Item	Quantity
Calibration leak	1
Inspection certificate	1
Digital operating instructions, to download as PDF from www.inficon.com	1

- ▶ Upon receipt of the device, check the scope of delivery for completeness.

Transport

NOTICE

Damage due to transport in unsuitable packaging

Transport in unsuitable packaging material can damage the device.

- ▶ Keep the original packaging.
- ▶ Transport the device only in the original packaging.

Storage

Always store the device in compliance with the technical data, see "Technical data [▷ 9]".

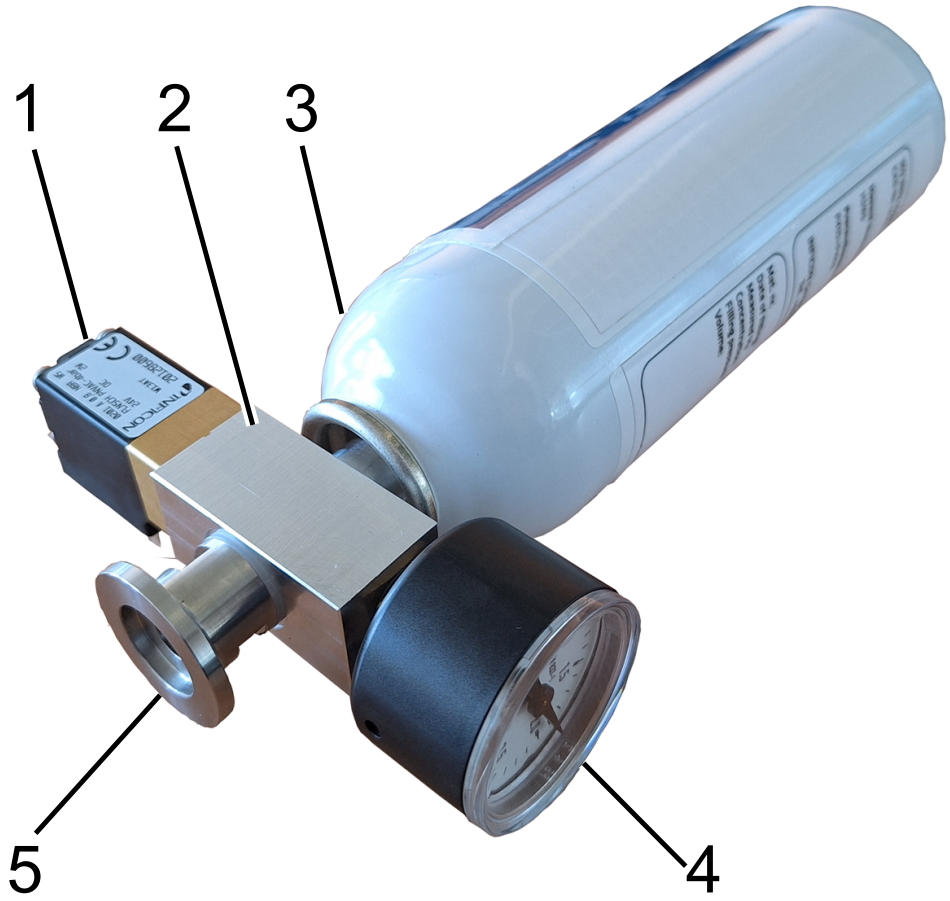
4 Description

4.1 Function

The calibration leak is connected to an INFICON leak detector and used for internal calibration of the leak detector.

The calibration leak contains a gas cartridge and releases the calibration gas at a specified rate during calibration.

4.2 Structure of the calibration leak



1	Valve	4	Manometer
2	Valve block	5	Connection flange
3	Gas cartridge		

4.3 Markings on the device

The device contains a pressurized gas cartridge.

The hazard warning is located on the gas cartridge. Whether and in what form additional marking of the device or the installation location is required must be determined by the operator as part of the operational risk assessment.

4.4 Technical data

Mechanical data

Argon calibration leak TL4, hydrogen calibration leak TL5	
Dimensions (W x H x D)	118 x 59 x 217 mm
Weight	300 g
Gas cartridge capacity	405 ml
Fill pressure	< 2.9 bar(g)

Physical data

Argon Calibration Leak TL4	
Calibration gas	98% argon, 2% hydrogen
Leak rate	1.5 x 10^{-4} to 3.5 x 10^{-4} mbar l/s
Decrease in the leak rate per 100 calibrations	< 1%

Hydrogen calibration leak TL5	
Calibration gas	98% argon, 2% hydrogen
Leak rate	0.8 x 10^{-5} to 1.6 x 10^{-5} mbar l/s
Decrease in the leak rate per 100 calibrations	< 1%

Ambient conditions

Argon calibration leak TL4, hydrogen calibration leak TL5	
Max. altitude above sea level	2000 m
Max. relative humidity	Non-condensing
Max. storage temperature	-10 °C to +50 °C
Permissible ambient temperature (during operation)	10 °C to 50 °C

5 Installation

5.1 Connecting the calibration leak to the leak detector

Contamination on the connection flange of the calibration leak or on the flange of the leak detector can affect the operation of the calibration leak. Connect the calibration leak to the leak detector in a clean environment, and remove the protective cap from the calibration leak only immediately before connecting it to the leak detector.

1. Connect the calibration leak via the connection flange to an available DN ISO-KF 16 flange on the leak detector's connection block.
2. Connect the leak detector's calibration leak connection cable to the valve of the calibration leak.

3. To remove the calibration leak, disconnect the calibration leak connection cable from the leak detector and remove the calibration leak from the flange of the connection block.

6 Maintenance

To ensure that the calibration leak is functioning properly, send it to INFICON for maintenance in the following cases:

- The recalibration date has been reached.
  You can find this date in the "Exp. date" field on the inspection certificate or the gas cartridge of the calibration leak.
- The manometer on the calibration leak indicates a pressure lower than the recalibration pressure.
  You can find this pressure in the "Recal. pressure" field on the inspection certificate or the gas cartridge of the calibration leak.

If at least one of the two conditions is met:

1. Remove the calibration leak from the leak detector; see also "Connecting the calibration leak to the leak detector [▷ 10]".
2. Send the calibration leak to INFICON for maintenance; see also "Returning the device for maintenance, repair or disposal [▷ 12]".

7 Decommissioning

7.1 Disposing of the device

The owner can dispose of the device or it can be sent to INFICON.

The device consists of materials that can be recycled. This option should be exercised to prevent waste and also to protect the environment.

▶ During disposal, observe the environmental and safety regulations of your country.

Device cannot be disposed of as normal domestic waste.

7.2 Returning the device for maintenance, repair or disposal

⚠ WARNING

Danger due to harmful substances

Contaminated devices could endanger health. The contamination declaration serves to protect all persons who come into contact with the device. Devices sent in without a return number and completed contamination declaration will be returned to the sender by the manufacturer.

▶ Fill in the declaration of contamination completely.

1. Contact the manufacturer and send in a completed declaration of contamination before return shipment.

   ⇨ You will then receive a return number and the shipping address.

2. Use the original packaging when returning.
3. Before shipping the instrument, attach a copy of the completed contamination declaration to the outside of the package.

Declaration of Contamination

The service, repair, and/or disposal of vacuum equipment and components will only be carried out if a correctly completed declaration has been submitted. Non-completion will result in delay.
This declaration may only be completed (in block letters) and signed by authorized and qualified staff.

1 Description of product

Type _____
Article Number _____
Serial Number _____

2 Reason for return

_____
_____
_____

3 Operating fluid(s) used (Must be drained before shipping.)

_____
_____

4 Process related contamination of product:

toxic	no ❑ 1)	yes ❑
caustic	no ❑ 1)	yes ❑
biological hazard	no ❑	yes ❑ 2)
explosive	no ❑	yes ❑ 2)
radioactive	no ❑	yes ❑ 2)
other harmful substances	no ❑ 1)	yes ❑

The product is free of any substances which are damaging to health yes ❑

1) or not containing any amount of hazardous residues that exceed the permissible exposure limits

2) Products thus contaminated will not be accepted without written evidence of decontamination!

5 Harmful substances, gases and/or by-products

Please list all substances, gases, and by-products which the product may have come into contact with:

Trade/product name	Chemical name (or symbol)	Precautions associated with substance	Action if human contact

6 Legally binding declaration:

I/we hereby declare that the information on this form is complete and accurate and that I/we will assume any further costs that may arise. The contaminated product will be dispatched in accordance with the applicable regulations.

Organization/company _____
Address _____ Post code, place _____
Phone _____ Fax _____
Email _____
Name _____

Date and legally binding signature _____

Company stamp

Copies:
Original for addressee - 1 copy for accompanying documents - 1 copy for file of sender

8 Appendix

8.1 CE Declaration of Conformity

CE

INFICON

EU Declaration of Conformity

We – INFICON GmbH - herewith declare that the products defined below meet the basic requirements regarding safety and health and relevant provisions of the relevant EU Directives by design, type and the versions which are brought into circulation by us. This declaration of conformity is issued under the sole responsibility of INFICON GmbH.

In case of any products changes made, this declaration will be void.

The products meet the requirements of the following Directives:

- ***Directive 2014/30/EU (EMC)***
- ***Directive 2011/65/EU (RoHS)***

Designation of the product:

Calibration leak

Models:

Argon calibration leak TL*x*

Hydrogen calibration leak TL*x*

Air calibration leak TL*x*

('x' represents a fixed leak-rate value)

Catalogue number:

561-501

561-502

561-503

Applied harmonized standards:

- ***EN ISO 12100 :2010***
- ***EN 61326-1:2013***
  Class A according to EN 55011
- ***EN IEC 63000:2018***

Cologne, April 1st, 2026

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Cologne, April 1st, 2026

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