

Operating Instructions

Test leaks for system integration

Catalog No.

143 00, 143 16, 143 08, 155 65, 155 66, 143 04, 143 12, 143 20

From software version

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minq69en1-01-(2401)



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1 About this manual

This document applies to the calibration leaks stated on the title page.

Product names may occur in the document, which are added for identification purposes only and belong to the respective owner of the rights.

1.1 Warnings



DANGER

Imminent hazard resulting in death or serious injuries



WARNING

Hazardous situation resulting in potential death or serious injuries



CAUTION

Hazardous situation resulting in minor injuries



NOTICE

Hazardous situation resulting in damage to property or the environment

2 Safety

2.1 Intended use

- Only operate the calibration leak as intended, as described in the instruction manual, in order to avoid hazards due to incorrect usage.
- Comply with application limits, see "Technical Data".

Incorrect usage

Avoid the following unintended uses:

- Use of the calibration leak by untrained personnel
- Use outside the technical specifications, see "Technical Specifications"
- Use of the calibration leak in case of recognizable defects
- Operation at too high ambient temperature
- Using the calibration leak outside of the specific area
- Exceeding permissible environmental conditions for calibration leaks

2.2 Duties of the user

- 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 manual, contact customer 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

- Only operate the calibration leak if it is in a technically perfect condition and shows no signs of damage such as escaping solvents.
- Only operate the calibration leak as intended, in a safety and risk conscious manner, and in accordance with this instruction manual.
- Adhere to the following regulations and observe their compliance:
 - Intended use
 - General applicable safety and accident prevention regulations

- International, national and local standards and guidelines
- Additional device-related provisions and regulations
- Keep this instruction manual available on site.

Personnel qualifications

- Only instructed personnel are to be permitted to work with the calibration leak on the battery leak detector. The instructed personnel must have received training on calibration leaks.
- Make sure that authorized personnel have read and understood the instruction manual and all other applicable documents.

3 Scope of delivery, Transport, Storage

The following descriptions apply to test leaks with the following part number:

Calibration leak	Part number
Test leak in screw-in sleeve 1 to E-7	143 00
Test leak TL in screw-in sleeve 6 mm	143 16
Test leak TL hose shaft 1 to 1E-7	143 08
TL4 test leak	155 65
TL6 test leak	155 66
Test leak TL Pin type/VCO 1 to 1E-7	143 04
Test leak TL Cyl. casing/VCO 1 to 1E-7	143 12
Screw-in test leak Pressure on long side	143 20
Screw-in test leak Pressure on short side	143 21

Transport

NOTICE

Damage caused by transport

Transport in unsuitable packaging material can damage the calibration leak.

- ▶ Keep the original packaging.
- ▶ Only transport the test leak in its original packaging.

Storage

NOTICE

Calibration leak defect due to improper storage

Excessive humidity in conjunction with condensate formation can significantly reduce the service life of the calibration leak.

- ▶ In the sealed and damage-free PE bag together with the original silica gel, a storage time of at least 2 years is guaranteed. We recommend replacing the desiccant bag after 2 years.
- ▶ Store the calibration leaks in a cool place.

4 Description

Test leak with pin housing



NOTICE

Calibration leaks are sensitive test equipment and have glass components in their interior that can be destroyed if handled improperly.

- ▶ Do not drop the calibration leak.
- ▶ If the test leak has fallen off, return the test leak to the manufacturer for inspection, see "Disposal".

Helium test leak without gas container (capillary-type leaks) for determining the sensitivity and signal response time during the vacuum leak test. A purge valve with hose nozzle enables the gas in the dead volume to be replaced quickly.

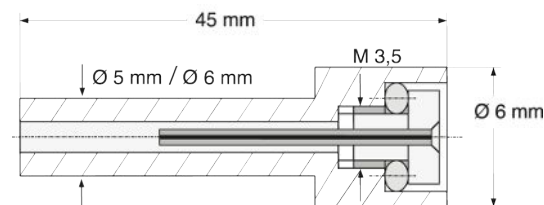


Fig. 1: Test leak with screw-in sleeve

Test leak with cylindrical housing

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

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

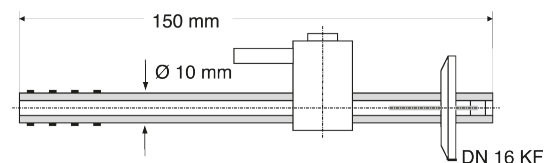


Fig. 2: Test leak with pin housing and hose nozzle

Test leak with screw-in sleeve

Used as a standard test spot for testing the entire helium leak test system.

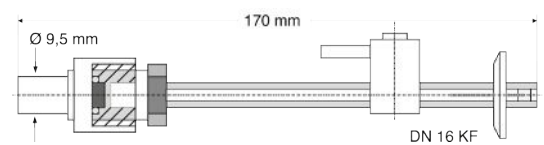


Fig. 3: Test leak with pin housing and VCO connection

Screw-in test leak

The screw-in test leak is used for leak testing on a test object if a specific helium leak rate is required.

Use for:

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

It is equipped with a fixed threaded connection to enable quick installation in a system. Depending on the specific order, the thread can be located on the long pressure side or on the short pressure side.

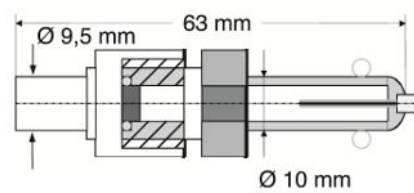


Fig. 4: Test leak with cylindrical housing and VCO connection

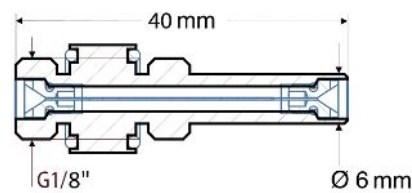


Fig. 5: Screw-in test leak

5 Technical Data

Calibration leak	Leak rate range	Max. operating pressure	Part number
Screw-in sleeve, 5 mm Ø	Customized	20 bar - to close 40 bar*	143 00
Screw-in sleeve, 6 mm Ø	Customized	20 bar - to close 40 bar*	143 16
PIN-type housing and hose connectors	Customized	6 bar	143 08
PIN-type housing and hose connectors of TL 4	10 ⁻⁴ mbar l/s	6 bar	155 65
PIN-type housing and hose connectors of TL 6	10 ⁻⁶ mbar l/s	6 bar	155 66
PIN-type housing and VCO connection	Customized	6 bar	143 04
Cylindrical housing and VCO connection	Customized	6 bar	143 12
Screw-in calibration leak **	Customized	40 bar	143 20
Screw-in calibration leak **	Customized	40 bar	143 21

* Up to 40 bar if the capillary is glued in by the customer.

** For details see INFICON homepage

6 Decommissioning

6.1 Disposing of the device

The device can either be disposed of by the operator or be sent to the manufacturer. 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.

6.2 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.

For contamination declaration see below.

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 <input type="checkbox"/> 1)	yes <input type="checkbox"/>	
caustic	no <input type="checkbox"/> 1)	yes <input type="checkbox"/>	
biological hazard	no <input type="checkbox"/>	yes <input type="checkbox"/> 2)	
explosive	no <input type="checkbox"/>	yes <input type="checkbox"/> 2)	
radioactive	no <input type="checkbox"/>	yes <input type="checkbox"/> 2)	
other harmful substances	no <input type="checkbox"/> 1)	yes <input type="checkbox"/>	

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

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

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



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