Translation of the original operating instructions

Test leak for sniffer leak detection

Catalog No.
(Enumeration inside)

From software version
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lina80en1-07-(2004)

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1 About this manual

1.1 General information

The calibration leak must only be operated in the proper condition and in the condition described in the instruction manual, and used by trained personnel.

Follow the local regulations for the use of the calibration leak.

Follow the instructions in this document as well as the operating instructions of the leak detector.

1.2 Intended use

The test leak, designed as a tabletop device, is used to calibrate and check sniffer leak detectors, taking into account the safety regulations. The test leak must be adjusted to a room temperature of 20 °C at the place of use 24 hours before use.

1.3 Basic safety instructions

- Observe the relevant protective measures when handling the calibration gas used, see also safety data sheets.

- The test leak is pressurized. Protect it from solar heat, temperatures above 40 °C, and damage.
- Calibration gas: Avoid eye-contact and inhalation in high concentrations.
- Share the security information with other users.

INFICON does not assume any responsibility and warranty if the operator or third parties

- disregard this document
- use the product for purposes other than those for which it was intended
- carry out interventions of any kind on the product (conversions, modifications, etc.).
- Important instructions concerning technical safety and industrial safety are highlighted by the following markings.

1.4 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 Description

2.1 Calibrated test leak

The calibrated test leak is installed in a rectangular housing.

Fig. 1: Test leak without proof

1	Manometer	2	Date of calibration
3	Leak rate of the calibrated test leak.	4	Calibration gas outlet

2.2 Technical specifications

Note that the pressure in the test leaks changes depending on the temperature.

Smallest deviation from calibration	± 10 %
Cat. No. / Pressure range	
122 20, 122 20S, 122 21, 122 21S, 122 22, 122 22S, 122 27, 122 28, 122 28S, 122 29, 122 29S, 122 31, 122 32, 122 33, 122 35, 122 36S, 122 37, 122 37S, 122 38, 122 39	0.5 bar to 7.5 bar
123 00, 123 01, 123 04, 123 05, 123 11, 123 20, 123 21, 123 22, 123 23, 123 24, 123 27, 123 28, 123 39	
12275	0.5 bar to 60 bar
Temperature range	+15°C to +35°C (40-122 °F)
Storage temperature	0°C to +40°C (40-122 °F)
Weight	approx. 3.5 kg

⚠ WARNING

Highly flammable gases

- Keep gases that are marked with a flame symbol in the following table away from ignition sources.

Refrigerant

	Gas type	Cat. no.	Leak rate g/a	Leak rate oz/y
	R 134 a	122 20	2.0 - 5.0	0.07 – 0.18
	R 134 a	122 20S [1.)]	2.0 - 11.0	0.07 – 0.39
	R 600 a	122 21	2.0 - 5.0	0.07 – 0.18
	R 600 a	122 21S [1.)]	2.0 - 20.0	0.07 – 0.71
	R 404 a	122 22	2.0 - 5.0	0.07 – 0.18
	R 404 a	122 22S [1.)]	2.0 - 10.0 10.0 - 15.0	0.07 – 0.353 0.353 – 0.529
	R152a	122 27	2.0 - 5.0	0.07 - 0.18
	R 407 c	122 28	2.0 - 5.0	0.07 – 0.18
	R 407 c	122 28S [1.)]	2.0 - 10 10.0 - 15.0	0.07 – 0.353 0.353 – 0.529
	R 410 a	122 29	2.0 - 5.0	0.07 – 0.18

	Gas type	Cat. no.	Leak rate g/a	Leak rate oz/y
	R 410 a	122 29S [1.)]	2.0 - 10.0 10.0 - 15.0	0.07 – 0.353 0.353 – 0.529
	R 290	122 31	7.0 - 8.0	0.25 – 0.28
	CO2	122 32	2.0 - 3.5	0.07 – 0.123
	R1234 YF	122 35	2.0 - 5.0	0.07 – 0.18
	R 32	122 36S [2.)]	2.0 - 8.0	0.07 – 0.282
	R 134 a	122 40	10.0 - 11.0	0.353 – 0.383
	R 600 a	122 41	14.0 - 18.0	0.49 – 0.63
	R 404 a	122 42	13.0 - 17.0	0.459 – 0.60
	CO2	122 75	10 - 14	0.353 – 0.494
	SF6	123 00	2.0 - 5.0	0.07 – 0.18
	R 1234ze	123 01	2.0 - 5.0	0.07 – 0.18
	R 245fa	123 04	2.0 - 5.0	0.07 – 0.18
	R 452A	123 05	2.0 - 5.0	0.07 – 0.18
	R 448A	123 11	2.0 - 5.0 10.0 - 15.0	0.07 – 0.18 0.353 – 0.529
	R 452B	123 20	2.0 – 5.0	0.07 – 0.18

	Gas type	Cat. no.	Leak rate g/a	Leak rate oz/y
	R 454C	123 21	2.0 - 5.0	0.07 – 0.18
	R 454B	123 23	2.0 - 3.0	0.07 – 0.106
	R 513A	123 24	2.0 - 5.0	0.07 – 0.18
	R 450A	123 27	2.0 - 5.0	0.07 – 0.18
	R 438A	123 28	2.0 - 5.0	0.07 – 0.18

To 1.) Test leaks with customer-specific leak rate in the specified range

To 2.) No customer-specific leak rate possible

Test gases helium and hydrogen

	Gas type	Cat. no.	Leak rate mbar l/s
	He/H2	122 33	1.00 - 1.20x10^{-4} mbar l/s
	He	122 37	1.00 - 1.20x10^{-4} mbar l/s
	He	122 37S [1.)]	0.06 - 1.20x10^{-4} mbar l/s
	He	122 38	2.00 - 6.00x10^{-5} mbar l/s
	He	122 39	6.00 - 8.00x10^{-6} mbar l/s
	H2	123 22	1.00 - 1.10·10^{-4} mbar l/s

	Gas type	Cat. no.	Leak rate mbar l/s
	H2/He	123 39	1.00 - 1.20·10^{-4} mbar l/s

To 1.) Test leaks with customer-specific leak rate in the specified range

Available gases for test leaks

Test leaks are only suitable for specific gases.

- If you want to have a test leak with a gas that is not on the list please contact us. We will tell you if the test leak with the gas you request can be build.
- For additional information please see the safety data sheet of the calibration gas and the quality test certificate that was added to the test leak.

3 Calibrating

The calibrated test leak constantly emits gas during its operational readiness.

⚠ WARNING

Explosive gas mixtures

Flammable gases can form explosive gas mixtures, see the gases marked with the flame symbol under “Technical specifications [▷ 8]“.

- Care for sufficient ventilation and keep away from ignition source.
- Please also observe the instructions in the safety data sheet.

✓ Ambient temperature + 15°C to + 40°C

✓ Indicated pressure range 0.5 bar to 7.5 bar.
At a pressure of: p < 0.5 bar, the test leak is no longer operational.

1. Follow the instructions for calibration with an external test leak as described in the operating manual of the respective leak detector.
2. Hold the sniffer tip against the exit opening of the test leak until the measurement result is stable.

4 Cleaning and maintenance

4.1 Cleaning the housing

For cleaning the outside of the test leak, a slightly humid cloth should normally do. Do not use under any circumstances any aggressive or scouring cleaning agents.

4.2 Maintenance

Pressure in test leak too low

Test leaks with a pressure < 0.5 bar can no longer be measured correctly. Proper calibration of the leak detector is therefore no longer possible.

The calibrated test leak requires no maintenance. When the calibration gas is used up (pressure < 0.5 bar) the test leak has to be refilled and calibrated.

Please contact your nearest INFICON Service Center.

4.3 Sending for repair or maintenance

Do not open defective products.

Contact your nearest INFICON service point.

⚠ CAUTION

Calibration gas

Test leaks sent for repair may still contain calibration gas.

- ► Take account of the national regulations for shipping the respective calibration gas.

5 Disposal

⚠ WARNING

Environmentally hazardous substances

Products, equipment, etc. may have to be disposed of specially.

- Contact your nearest INFICON service center for correct disposal.

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