O P E R A T I N G I N S T R U C T I O N

lina80e1-06 (1603)

CE

Catalog No.
122 20 bis 122 23S
122 25, 122 25S
122 27 bis 122 43
122 75
123 22

Test Leck for Sniffer Leak Testing

INFICON

Content

1 Description

1.1 General

INFICON covers no responsibility nor warranty if the user or third parties

- disregard the information in this document
- utilize the product not according to the defined use
- make any kind of changes (modifications, alterations, etc.) to the product.

Important remarks concerning operational safety and protection are emphasised as follows:

Warning

Indicates procedures that must be strictly observed to prevent hazards to persons

Caution

Indicates procedures that must strictly be observed to prevent damage, or destruction.

Notice: Information on correct handling or use. Disregard may lead to malfunctions or minor equipment damage.

The references to diagrams consist of the Fig. No. and the item No. in that order. For example: (2/1) refers to item 1 in the second figure, i.e. the Manometer

1.1.1 Purpose

The test leak is designed as bench-top unit and used for calibrating and testing sniffing leak detectors. The safety regulations have to be taken into account.

1.1.2 Validity

This manual applies to products with Cat. No.

Catalog number	Gas of test leak
122 20	TL R134a
122 20S	TL R134a
122 20SN	TL for special gases (non flammable)
122 20SF	TL for special gases (flammable)
122 21	TL R600a
122 21S	TL R600a
122 22	TL R404a
122 22S	TL R404a
122 23	TL R502
122 23S	TL R502a
122 25	TL R22
122 25S	TL R22a
122 27	TL R152a
122 27S	TL R152a
122 28	TL R407c
122 28S	TL R407c
122 29	TL R410a
122 29S	TL R410a
122 30	TL R401a
122 30S	TL R401a
122 31	TL R290
122 32	TL R744 (CO_2)
122 33	Foming gas (10% hydrogen in Helium)

Catalog number	Gas of test leak
122 34	Halon 1301
122 35	TL HFO-1234yf
122 36	TL R32
122 37	S-TL 4 Helium
122 37S	S-TL 4 Helium
122 38	S-TL 5 Helium
122 39	S-TL 6 Helium
122 40	TL R134a
122 40SN	TL for special gases (non flammable)
122 40SF	TL for special gases (flammable)
122 41	TL R600a
122 42	TL R404a
122 43	TL R502
122 75	TL R744 (CO_2)

Cat. No.122 20SN and 122 40SN for special gases can be ordered on special request only.
The Cat. No. is shown on the name plate on the back side of the calibrated test leak.

1.2 Safety information

Take into account the relevant regulations and safety measures for the calibration gases used
(→ safety data sheets for the calibration gases).

The test leak is pressurized. Protect it from solar heat, temperatures above 50 8C, and damage.

Calibration gas: Avoid eye-contact and inhalation in high concentrations.

Pass on the safety information to other users.

1.3 Technical data

Caution

Flammable: Keep away from ignition sources.

Smallest deviation from calibration	± 10 %
pressure range	0.5 bar to 8 bar
temperature range	+15°C to +35°C
Storage temperature	0°C to +50°C
Service life (depending on the type of gas and the leak rate)	1 - 5 years
Weight	approx. 3.5 kg

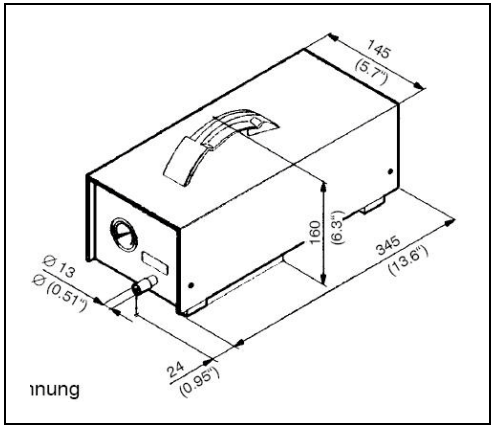

Fig. 1 Dimensional drawing

	Gas type	Leak rate, typical		Cat. No.
		g/a	oz/y	
	R 22	2 … 5	0,07 … 0,18	122 25
	R 22	2 … 5	0,07 … 0,18	122 25S
	R 23	2 … 5	0,07 … 0,18	122 26
	R 32	2… 8	0,07 …0,28	122 36S
	R 134a	2 … 5	0,07 …0,18	122 20
	R 134a	2 … 11	0,07 ... 0,39	122 20S
	R 134a	10 … 14	0,36 … 0,49	122 40
⚠	R 152a	2 … 5	0,07 … 0,18	122 27
⚠	R 152a	2 … 8	0,07 … 0,28	122 27S
⚠	R 290	7 … 8	0,25 … 0,28	122 31
	R 401a	2 … 5	0,07 … 0,18	122 30
	R 401a	2 … 15	0,07 … 0,53	122 30S
	R 404a	2 … 5	0,07 … 0,18	122 22
	R 404a	10 … 15	0,35 … 0,53	122 22S
	R 404a	13 … 17	0,46 … 0,60	122 42
	R 407c	2 … 5	0,07…0,18	122 28
	R 407c	2 … 15	0,07…0,53	122 28S
	R 410a	2 … 5	0,07…0,18	122 29
	R 410a	2 … 5	0,07…0,18	122 30S
⚠	R 502a	11 … 15	0,39…0,53	122 43
⚠	R 502a	2 … 5	0,07…0,18	122 23
⚠	R 502a	2 … 15	0,07…0,53	122 23S
⚠	R 600a	2 … 5	0,07…0,18	122 21
⚠	R 600a	2 … 20	0,07…0,71	122 21S
⚠	R 600a	14 … 18	0,49…0,63	122 41

	Gas type	Leak rate, typical		Cat. No.
		g/a	oz/y	
⚠	HFO-1234yf	2 … 5	0,07…0,18	122 35
	R 1301	2 … 17	0,07 … 0,60	122 34S
	R744	2 … 3,5	0,07…0,12	122 32
	R744	10 … 14	0,36…0,50	122 75
	He	1,00 - 1,20 x 10^{-4} mbar l/s		122 37
	He	1,00 - 1,20 x 10^{-4} mbar l/s		122 37S
	He	2,00 - 6,00 x 10^{-5} mbar l/s		122 38
	He	6,00 - 8,00 x 10^{-6} mbar l/s		122 39
	10% H2, 90% He	1 - 1,2 x 10^{-4} mbar l/s		122 33
	100% H2	1 - 1,1 x 10^{-4} mbar l/s		123 22
	customer specific*	2 … 5		122 20SF
	customer specific*	2 … 5		122 20SN
	customer specific*	10 … 14		122 40SF
	customer specific*	10 … 14		122 40SN

* 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 reqest 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.

2 Operation

2.1 Description

The calibrated test leak is installed in a rectangular housing. The front view is shown in Fig. 2.

Fig. 2 Front view

Pos.	Description
1	Manometer
2	Leak rate of the calibrated test leak. (Example: Gas R152a, leak rate 2,64 g/a)
3	Calibration gas outlet
4	Date of calibration

2.2 Handling

The calibration test leak is continually in operation.

Caution

Flammable gases! The gases R152a, R290, R502, R600a and HFO-1234yf may form explosive gas mixtures.
Care for sufficient ventilation and keep away from ignition source.

Preconditions

Ambient temperature +15°C to +35°C
Displayed pressure range 0.5 bar to 8 bar

Notice: p < 0.5 bar: Test leak no longer ready for operation.
p > 8 bar: Test leak too hot.

Sniffing

Keep probe in contact with the gas outlet until the measured value is stable.

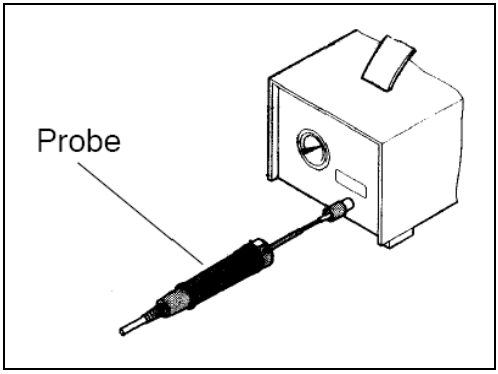

Fig. 3 Sniffing Probe

3 Maintenance

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.

Notice: If the pressure is < 0.5 bar a proper calibration of the leak detector is not assured. Therefore an accurate measurement of the test sample is not guaranteed.

3.1 Cleaning the outside

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.

3.2 Repair

Defective products must not be opened.
Please contact your nearest INFICON-Service Center.

3.3 Returning the Product

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.

3.4 Decommissioning

Warning

Substances detrimental to the environment
Products, operating material, fluids, consumables etc. may have to be specially decommissioned.
For professional decommissioning of the product, please contact your nearest INFICON-Service Center.

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