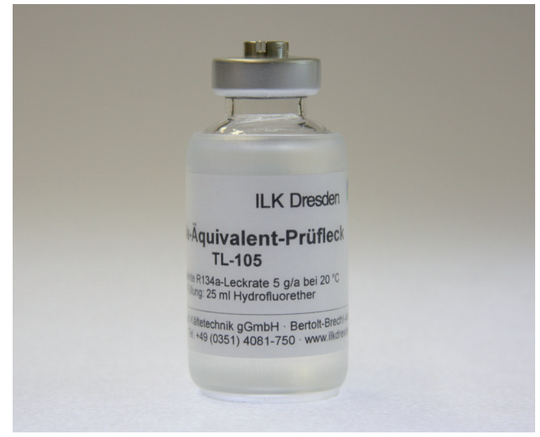
ILK Dresden

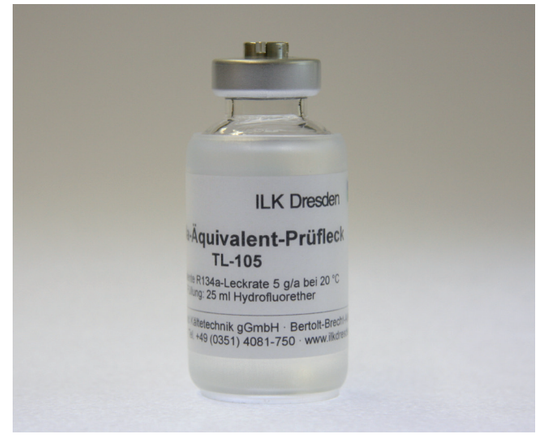
Manual



R134a-equivalent reference leak
for mobile leak detectors
TL-105

ILK Dresden

Manual



R134a-equivalent reference leak
for mobile leak detectors
TL-105

1. Purpose

The reference leak is intended for checking the functionality (function test) of mobile leak detectors that are sensitive to fluorinated hydrocarbons. The R134-equivalent leakage rate of this reference leak is 5 g/yr* allowing to check mobile leak detectors for practical application.

* The reference leak is designed to result in a signal of the leak detector that is equal to the signal caused by a R134a leak with a leakage rate of 5 g/yr.

2. Function Test

In case of usage with the wooden box the reference leak can be used without removal from the box after turning away the lid of the box. Just a short blow is recommended to remove potentially accumulated test fluid around the orifice.

For the function test the probe head of the mobile leak detector is to be positioned vertically on top of the reference leak until maximum signal of the leak detector. By comparison of the signals of the leak detector positioned at the reference leak and at the refrigeration plant an estimation of the leakage rate of this refrigeration plant is possible. With a regular check of the mobile leak detectors in use changes in their relevant properties can be found easily. The reference leak can be used for all common detection methods that are utilized in modern leak detectors for fluorinated refrigerants, e.g. semiconductor, infrared, corona, Rice detector. The reference leak is usable as long as it apparently contains fluid. For checking the level of the fluid the reference leak can be easily removed from the wooden box.

The orifice of the reference leak should always be open. Sealing the orifice or the slits on top of the reference leak will result in a (temporary) malfunction because of a local increase of the test fluid and thus a temporary increase of the signal at the detector.

3. Technical Parameter

Leakage rate:
R134a-equivalent leakage rate 5 g/yr at 20 °C

Temperature coefficient: 4.2 % / K

Operational temperature: 10 °C to 30 °C

Avoid temperatures >40 °C

Storage temperature: 5 °C to 30 °C

Lifetime: min. 5 years for storing at RT

4. Safety Instruction

No exposure limits have been defined by legislation for the ingredients of the reference leak. The fluid is not flammable. It does not contribute to the depletion of the ozone layer. The fluid is volatile in air (boiling point 61 °C). Under conditions of normal use the reference leak is shatterproof due to the usage of special glass bottles and the plastic protection cover.

It is prohibited to alter the orifice of the reference leak (e.g. to open the aluminum cap forcibly or to penetrate the orifice). For usage under the conditions of a construction site the reference leak can be additionally protected by the wooden box (optional).

5. Packaging, Transportation and Shipping

Packaging of the reference leak is done in small wooden boxes (optional) utilizing foam as shock protection. Transportation and shipping do not require special provisions or designations, see safety instruction section 4. The reference leak is not regarded as a dangerous good.

6. Maintenance

The reference leak is maintenance free.

7. Disposal

After approximately 5 years the test fluid is exhausted. This test fluid is not regarded as a hazardous substance according to Regulation (EC) No 1272/2008. Follow your national, regional, and local regulations for disposal.

8. Warranty

Leakage rate and tightness of the reference leak has been tested before shipping utilizing a computer-based evaluation program. Warranty is invalidated by breakage of glass and manipulation at the orifice.

9. Manufacturer

Institut für Luft- und Kältetechnik
Gemeinnützige Gesellschaft mbH
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ILK Dresden

R134a-Äquivalent-Prüfleck
TL-105

äquivalente R134a-Leckrate 5 g/a bei 20 °C
Füllung: 25 ml Hydrofluorether

Institut für Luft- und Kältetechnik gGmbH · Bertolt-Brecht-Allee 20
01309 Dresden · Tel. +49 (0351) 4081-750 · www.ilkdresden.de

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ILK Dresden
R134a-Äquivalent-Prüfleck
TL-105
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Füllung: 25 ml Hydrofluorether
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