



Technical features

Feature	30 g/a reference leak	5 g/a reference leak
leak rate	equivalent R134a leak rate 30 g/a at 20 °C, measured with LSG H-25 C	equivalent R134a leak rate 5 g/a at 20 °C, measured with LSG H-25 C
temperature coefficient	3,5 % /K	5,5 % /K
temperature application range	from 10 °C up to 30 °C	from 10 °C up to 30 °C
storage temperature	from -20 °C up to 50 °C	from -20 °C up to 50 °C
lifetime	min. 2 years	min. 5 years
recommended accessory	transport box	



Important impulses

The foundation and development of ILK Dresden is closely connected with the „Dresden School of Thermodynamics and Refrigeration“.

Up to now you can see the traces of this connection and they give our work important impulses.

Our clients profit directly from the networking of the fields of air-conditioning, refrigerating, heating and solar engineering on basis of latest Computer technique.

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Environment Protecting, Losses Cutting, Correct Testing ...

...with Reference Leaks for Installation Leakage Testers



Reference Leaks for Installation Leakage Testers

Valuable losses

It is well known, that refrigeration plants are subject to leakage losses of refrigerants. These leakages increase operating costs and are detrimental to our environment. Small and handy installation leakage testers are preferred when testing for leakages from refrigeration systems under building site conditions. As these devices offer only a limited performance range, it is especially to check their proper functioning, above all the detection sensitivity, at relatively short intervals. For this purpose a simple, favourably priced and extremely stable reference leak has been developed.

Functional testing

The reference leak is used for functional testing of installation leakage testers which are sensitively to HFCs. The equivalent R134a leakage rate of the reference leak amounts to 30 g/a*. This permits the monitoring of one of the common minimum requirements with regard to the detection sensitivity of installation leakage testers in practice. To check the functioning, the sensor of leakage tester is placed vertically on the reference leak until the maximum display is recorded. A comparison of the display of the reference leak and the leakage of the refrigeration plant permits the estimation of the leakage rate. Regular checking of the installation leakage testers in use enables a simple determination of changes in the properties relevant for proper functioning.

* The reference leak has been designed such that the display obtained on the leakage tester corresponds to the display produced by an R134a leakage at a leakage rate of 30 g/a.

Application

Testing to date has shown the reference leak to be suitable for function monitoring of the following installation leakage testers: L 790a, D-TEK, TIF 5650, TIF 5750, Robinair 16500 and AN 134 (on enquiring other testers too). The named testers are available from the usual trade outlets, for example from Schiessl, Fischer, Reiss-Kälte-Klima, ITE, Refco, SPX Europe-Robinair Division and Mesystec.

Lifetime

The reference leak is ready for use as long as still visibly contains liquid. The reference leak opening should always be kept opened. If the slotted

opening of reference leak is covered completely, this may lead to an enrichment and a temporarily higher display value.

Safety comments

The liquid is classified for inhalation as "practical non-toxic" (maximum working place concentration: 600 ppm). It is non-flammable and has a good behaviour with sensitive plastics. At the atmosphere the liquid is light-volatile (boiling point: 60 °C). The reference leak is break-proof through the special glass bott-

le and plastic cover at normal strain. Do not manipulate at the reference leak opening (e.g. opening of aluminium cap by force or piercing through of reference leak opening).

New 5 g/a reference leak of 3rd generation

A new reference leak of 5 g/a leakage rate with a higher sensitivity was developed additionally to the reliable reference leak with an equivalent R134a leak rate of 30 g/a. The demands on tightness of refrigeration plants were considerably increased caused by ecologic, techni-

cal and economical reasons. From the 30th of June, 2008 the permissible single leak rate of a refrigeration systems with HFCs will amount to 5 g/a in Germany acc. to VDMA 24 343 part 1 (VDMA = Association of German Machine and Plant Builders). Latest from this date the use of the installation leakage testers of 3th generation with a detection sensitivity of minimum 5 g/a are required. The ILK Dresden has been developed this new reference leak with an equivalent R134a leakage rate of 5 g/a for installation leakage testers which fulfil the demands of the 3th generation even today.

