LEAK PREVENTION TECHNOLOGY

For a clean and protected environment

Pressure leak detector for pipes

DLR-G

Variants • Equipment • Accessories

CONTENT

Legend

suitable for underground tanks

suitable for aboveground tanks

suitable for pipes

SGB‘s headquarter in Siegen, Germany

Safety in leak monitoring of double-walled tanks and pipes

Leak detectors made by SGB offer the highest safety and reliability in environmental and water protection. They monitor double-walled tanks and double-walled pipes as well as single-walled containments with a leak protecting lining or a leak protecting jacket safely and permanently for leaks – 365/24/7. Due to the functional principle of the SGB leak detector working with pressure or vacuum, no stored or transported liquid can enter the environment or the groundwater!

- SGB is certified according to DIN EN ISO 9001 (since 1999)
- SGB‘s leak detectors conform the high requirements of class I of the European Standard
- SGB‘s leak detectors are individually as well as TÜV tested

Know-how and experience since 1962

More than 430 000 SGB leak detectors globally in use guarantee safety for man and environment in tank farms, refineries, chemical plants, gas stations, drilling rigs, data centers as well as domestic heating oil tanks and many more. Over 55 years of experience with leak detection technology make SGB leak detectors a recognized brand product – at home and abroad.

Pressure leak detectors DLR ..

DLR = **D**ruck- (= Pressure) -**L**eak detector for **R**ohrleitungen (= pipes)

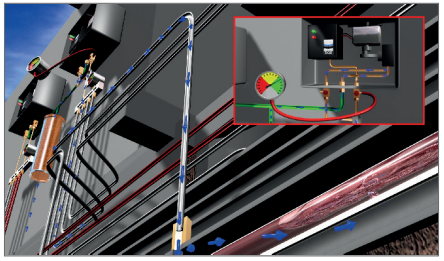
On the following pages we present you our pressure leak detector DLR-G for leak monitoring on pipes with gas – with its‘ equipment options, accessories and services. Further information on our innovative products, services and specialist training can be found on **www.sgb.de**.

Contact

In case of any inquiries please do not hesitate to contact us. Phone us on **+49 271 48964-0** or send an e-mail to **sgb@sgb.de**.
We are happy to be of any help!

Monitoring principle „overpressure“

With the DLR leak detectors an overpressure is built up in the interstitial space of the pipe. Therefore air or gas is used. The operating pressure and the alarm pressure of the leak detector are higher than the pressure of the transported good or the groundwater against the pipe‘s walls. In case of a leak in one of the two walls, air/gas escapes from the interstitial space. An escape of the transported material into the environment is thus reliably prevented!



> Leak detectors with refilling function like DLR-G or DLR-P compensate minor leaks in the system.

> Relevant leaks lead to a pressure drop. When the alarm pressure is reached, the visual and/or optical alrm is triggered.

Naming of the leak detectors

DLR-**G ..** = **D**ruck-**L**eckanzeiger **R**ohrleitung **G**as. This is a pressure leak detector for pipes working with gas. A pressure cylinder (nitrogen) is used for pressure built-up.

DLR-**GS ..** = **D**ruck-**L**eckanzeiger **R**ohrleitung **G**as **s**tatisch. This is a pressure leak detector for pipes working with gas, static. For the pressure built-up a pressure generator must be brought to the building site. The leak detector has neither a pump nor an automatic refilling device.

DLR-**P ..** = **D**ruck-**L**eckanzeiger **R**ohrleitung **P**umpe. This is a pressure leak detector for pipes with an integrated pump which is used for building up the pressure.

DLR-**P .. CV** = **D**ruck-**L**eckanzeiger **R**ohrleitung **P**umpe und Rückschlagventil (**C**heck **V**alve). This is a pressure leak detector for pipes equipped with a pump and a check valve.

.. = The ellipsis dots or the numerical value stand for the alarm pressure of the leak detector in bar.

Optional equipment

P (= Protected)

Protection against external weather influences like sunshine, rain, snow, salt water ... Also appropriate depending on the intended use (transported fluid, requirements of the systems).
Material: stainless steel

Si (= Service indication)

When commissioning the leak detector, the time for the prescribed functional test can be freely selected within the specified maintenance interval. There are time intervals from 1 up to 63 months. The service indicator (yellow LED) visually indicates the upcoming function test for the leak detector.

DLR-G

Pressure leak detector with re-filling function from a stationary connected nitrogen bottle or a compressed gas network (operating mode C = continuous). With optional function for operating mode I (= interval) without automatic re-filling function. A leak detector operating with inert gas (nitrogen) for the leak monitoring of double-walled pipes.

The leak detector:
The leak detector monitors permanently the interstitial space filled with compressed gas. The pressure in the interstitial space is displayed digitally in all versions.

Operating modes:
- C („Continuous“): The nitrogen bottle is permanently attached to the leak detector. For above-ground and underground double-walled pipes and fittings
- I („Intervall“): The pressurized gas cylinder is connected for commissioning/functional testing. Only for applications in which no temperature fluctuations of more than +/- 10 °C occur (e.g. double-walled pipes/fittings installed underground or indoors; no hot media)

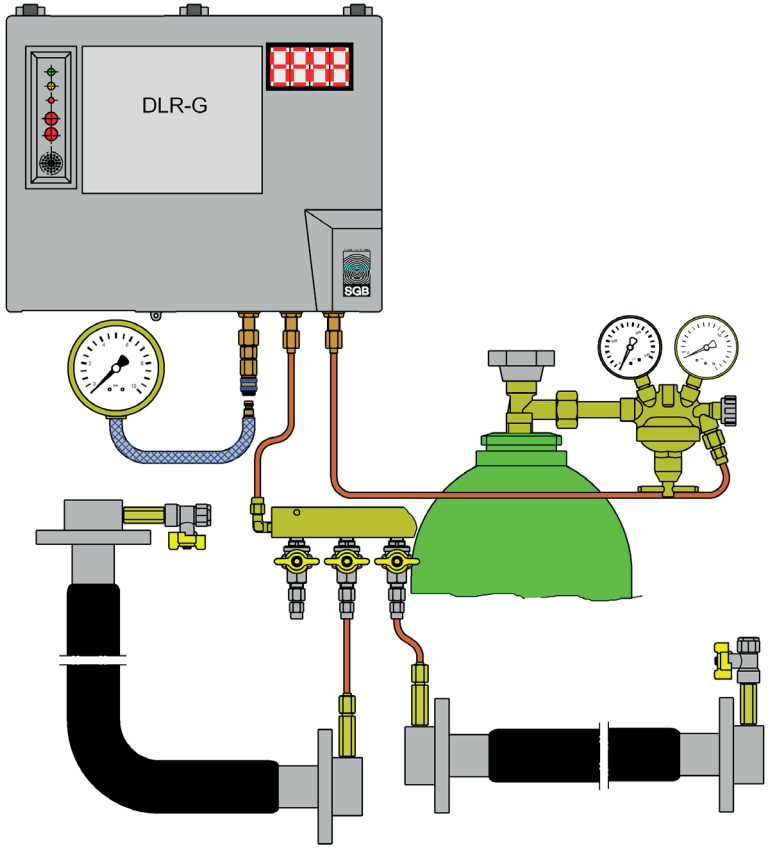
Monitorable pipes:
Double-walled sufficiently pressure-resistant pipes and fittings made of metal or plastic in factory or on-site construction.

DLR-G with digital pressure display (M)

Monitorable liquids:
Water-polluting liquids, even with a flash point ≤ 60 °C (for Germany ≤ 55 °C acc. to TRGS and TRBS). The conveyed product may not react with the leak detection medium used! Examples: petrol, methanol, diesel, chemicals, acids, lyes.

Installation:
Outside Ex areas

Conformity:
EN 13160 class I



DLR-G ... Type/alarm pressure	1	2	3	4	5	6	7	8	9
Operating pressure Inner pipe	pressu-reless	< 1	< 2	< 3	< 4	< 5	< 6	< 7	< 8
Set pressure	< 2	< 3	< 4	< 5	< 6	< 7	< 8	< 9	< 10
Test pressure interstice	> 3,4	> 4,5	> 5,6	> 6,7	> 7,8	> 8,9	> 10,0	> 11,1	> 12,2

DLR-G ... Type/alarm pressure	10	11	12	13	14	15	16	17	18
Operating pressure Inner pipe	< 9	< 10	< 11	< 12	< 13	< 14	< 15	< 16	< 17
Set pressure	< 12	< 13	< 14	< 15	< 16	< 17	< 18	<19	< 20
Test pressure interstice	> 15,4	> 16,5	> 17,6	>18,7	> 19,8	> 20,9	> 22	> 23,1	> 24,2

Pressure values in bar

Technical standard DLR-G

Power supply 100-240 V AC, 50/60 Hz and 24 V DC

- Standard design of the potential-free relay contact for the alarm message as a change-over contact
- Flexible power supply by using a switching power supply of 100 to 240 V AC, 50/60 Hz. At the same time, a 24 V DC supply can be implemented in the same leak detector.
- Quick and easy connection of the electrical connection lines using tension spring terminal technology
- Latest SMD electronic components

Pressure sensor

Solenoid valve

Easy to change

Proven advantages of the electronic version

- Electronic control of the pressure sensor
- Simple change of the operating mode or, if necessary, the pressure level by means of a dip switch (Note the setting of the pressure relief valve if necessary!)
- Integrated electronic leakage indicator for the entire system
- Drilling patterns in the housing base (plastic housing)
- 2-pin port for querying/forwarding all operating states of the leak detector

Article report/installation accessories DLR-G

Pressure regulator

Art.-No.	Description	Euro	Qty
342516-03	Pressure Regulator, 2-stage, 10bar,CF6/4 Inlet 200bar, Deliv. 10bar, W24,32x1/14“		1 pce

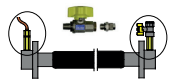
Flexible hose

Art.-No.	Description	Euro	Qty
260721	SS-Flex-hose, PN80, shaft 80mm, 6mm i.d., length 1.2m		1 pce
Connection pipe between pressure regulator and leak detector. Flexible, metallic and pressure resistant.			

Manifolds

Art.-No.	Description	Euro	Qty
196230	Manifold 2 pipes, shut-off valves, gauge till 4bar, CF6/4		1 pce
196330	Manifold 3 pipes, shut-off valves, gauge till 4bar, CF6/4		1 pce
196430	Manifold 4 pipes, shut-off valves, gauge till 4bar, CF6/4		1 pce
196530	Manifold 5 pipes, shut-off valves, gauge till 4bar, CF6/4		1 pce
196630	Manifold 6 pipes, shut-off valves, gauge till 4bar, CF6/4		1 pce
196730	Manifold 7 pipes, shut-off valves, gauge till 4bar, CF6/4		1 pce
196830	Manifold 8 pipes, shut-off valves, gauge till 4bar, CF6/4		1 pce

Installation kit



Art-No.	Description	Euro	Qty
190721	Inst. kit pipe, 1/4““m - CF6/4, for CU-pipe 6/4x1mm		1 pce

CU-Rohr

Art-No.	Description	Euro	Qty
421001	Copper pipe, 6/4 x 1mm, soft, 50-m-ring		m

Article report/installation accessories DLR-G

Protecting box	Art-No.	Description	Euro	Qty
	220696	Aluminium cabinet with plexiglass window 800x1800x400mm, roof, mounting rails		1 pce
	Cupboard made from aluminium: width 800, height 1800, depth 350 inclusive roof and mounting rails, door with window from plexiglass 400 x 400 mm (leak detector, heating device, inert gas bottle and pressure reducing device not included), ca. 6 weeks delivery time			

Heating	Art-No.	Description	Euro	Qty
	332230	Heater 250 Watt with radiator+Thermostat for Protective Box KS 1467 and larger		1 pce

Hood for housing	Art-No.	Description	Euro	Qty
	412261	Hood for housing, stainless steel 1.4301		1 pce

Testing devices	Art-No.	Description	Euro	Qty
	115371	Pressure Measuring Device CPH 6200 incl.suitcase, without Sensor		1 pce
	Digital hand-held pressure indicator with measuring ranges from 0…25 bar to -1000…0 mbar. The measuring range of the connected pressure sensor will be detected automatically. Incl. adapter for leak detector.			

Pressure sensor	Art-No.	Description	Euro	Qty
	115375	Pressure sensor for CPH 6200 0…25 bar, process connection 1/2“		1 pce

Service

Customized type plates:
We are happy to customize individualized type plates for you or your customers. The customization includes the intake of both the client‘s logo as well as the client‘s address.

Professional training:
The choice, the construction and commissioning of leak detectors is not always easy due to the wide variety of liquids to be stored, containers, different types of leak detectors, and their differentiated use. There are pressure leak detectors, vacuum leak detectors, several versions for indoor and outdoor use as well as version for the use in ex-zones ... Especially for „newbies“ it is difficult to keep track of when each leak detector is required and how it must be put into operation.
Our professional seminar helps here – with in-depth background information and many practical demonstrations.

More information and booking on:
www.sgb.de/en/seminare

Content excerpts:
- legal background
- technology and functioning
- monitoring of tanks and liquids
- application areas and the limitation of use
- assembly, maintenance, and testing
- presentation of essential products

Picture above: SGB‘s training room

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