#### LEAK PREVENTION TECHNOLOGY

For a clean and protected environment



### Pressure leak detectors for pipes

**DLR-G** 

**DLR-GS** 

**DLR-P** 

DLR-P .. CV







Variants • Equipment • Accessories

shop sqb, de online



#### CONTENT

- 03 About SGB's leak detectors
- 04\_ Monitoring principle "overpressure" Naming of the leak detectors
- 05\_ Optional equipment

#### **DLR - PRESSURE LEAK DETECTORS FOR PIPES**



- 06 DLR-G
- 09\_ DLR-GS .. N
- 11\_ DLR-P
- 14 DLR-P .. CV

#### **ACCESSORIES**

- 18\_ Installation pumps / testing devices
- 19\_ Testing devices



#### About SGB's leak detectors

#### 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 he-

ating 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 detectors DLR for leak monitoring on pipes – with their equipment options and accessories.

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!

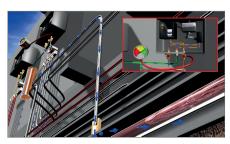
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### Options and additional functions

#### 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.. = Druck-Leckanzeiger Rohrleitung Gas. This is a pressure leak detector for pipes working with gas. A pressure cylinder (nitrogen) is used for pressure built-up.
- DLR-GS.. = Druck-Leckanzeiger Rohrleitung Gas statisch. 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.. = Druck-Leckanzeiger Rohrleitung Pumpe. This is a pressure leak detector for pipes with an integrated pump which is used for building up the pressure.
- DLR-P .. CV = Druck-Leckanzeiger Rohrleitung Pumpe und Rückschlagventil (Check Valve). 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**

#### M (= Manometer/Pressure gauge)

The leak detector is equipped with a digital pressure display in the cover on the housing. It shows the current pressure of the system.



#### 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.



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#### **Article report DLR-G**

#### **DLR-G**



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.

#### ! Technical standard:

- potential-free relay contacts for the alarm notice as changeover contact
- flexible power supply with 100–240 VAC, 50/60 Hz, alternative 24 VDC

#### Operating modes:

- C ("Continuous"): for aboveground and underground double-walled pipes
- I ("Intervall"): only for underground or inside a building laid double-walled pipes

#### Optional equipment:

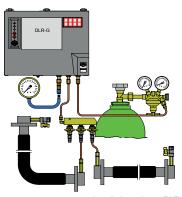
- **Si** (Service indication): variably adjustable, time intervals from 1 to 63 months
- **P** (Protected): weatherproof stainless-steel housing

#### Conformity:

EN 13160 class I



DLR-G with digital pressure display (M)



Installation scheme DLR-G

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

# Leak detector Art.-No. Description Euro Qty 073030M04 Leak Detector DLR-G 3 M, 100-240VAC, pl-box, CF8/6 1 pce 074030M04 Leak Detector DLR-G 3 PM, 100-240VAC, ss-box, CF 8/6 1 pce

available in pressure steps from 1 bar to 20 bar (at same price)

Pressure regulator	ArtNo.	Description	Euro	Qty
Ø ,Ø	342516-03	Pressure Regulator, 2-stage, 10bar,CF6/4 Inlet 200bar, Deliv. 10bar, W24,32x1/14"		1 pce

Flexible hose	ArtNo.	ArtNo. Description		Qty
	260721	SS-Flex-hose, PN80, shaft 80mm, 6mm i.d., length 1.2m		1 pce
	Connection pressure res	pipe between pressure regulator and leak detect istant.	or. Flexible, m	etallic and

Manifolds	ArtNo.	Description	Euro	Qty
	196230	Manifold 2 pipes, shut-off valves, gauge till 4bar, CF6/4		1 pce
88	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
<b>့</b> စုံစုံစုံစုံ	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
<b>0000000000000000000000000000000000000</b>	196830	Manifold 8 pipes, shut-off valves, gauge till 4bar, CF6/4		1 pce

#### **Article report DLR-G**

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

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
atan/Amin	332230	Heater 250 Watt with radiator+Thermostat		1 pce
	332230	for Protective Box KS 1467 and larger		Трос

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

#### DLR-GS .. N



Static pressure leak detector working with nitrogen for monitoring a manually applied overpressure. When monitoring liquids with a flash-point > 55 °C, air can be used instead of nitrogen. With pre-alarm function.

#### Technical standard:

- potential-free relay contacts for the alarm notice as changeover contact
- flexible power supply with 100–240 VAC, 50/60 Hz, alternative 24 VDC



now relay contact for "refilling required" (N) as standard

#### Optional equipment:

- M (manometer): digital pressure display
- Si (service indication): variably adjustable, time intervals from 1 to 63 months
- P (protected): weatherproof stainless-steel housing

#### Monitorable pipes:

- suitable double-walled pipes
- for up to 15 bar operating pressure in the inner pipe

#### Monitorable liquids:

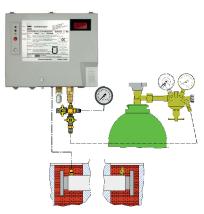
water polluting liquids e.g. petrol, gasoline, heating oil, diesel, ley, acids

#### Conformity:

EN 13160 class I



DLR-GS .. N: now with relay contact for refilling as standard



Installation scheme DLR-GS with leak detector, test device and installation kit

DLR-GS Type/alarm pressure	1	2	3	4	6	8	10	13	16
Operating pressure inner pipe	pressu- reless	< 1	< 2	< 3	< 5	< 7	< 9	< 12	< 15
Set pressure	5	6	7	8	10	12	14	17	20
Test pressure interstice	> 6,5	> 8,0	> 9,0	> 10	> 13	> 16	> 18	> 22	> 26

Pressure values in bar; special switching values on request

#### **Article report DLR-GS**

Leak detectorArt-No.DescriptionEuroQty



070040-04	Leak Detector DLR-GS 4 N, 100-240VAC, pl-box, CF8/6	1 pce
070040M09	Leak Detector DLR-GS 4 MN, 100-240VAC, pl-box, FU6/4	1 pce
070610M04	Leak Detector DLR-GS 1 PMN, 100-240VAC, ss-box, CF8/6	1 pce
104852	Additional price service indication, version Si (1-63 months)	1 pce

Alarm pressure up to 16 bar available as standard.



10

We are happy to advise you in the selection of the right leak detector – please feel free to contact us: +49 271 48964-0

Testing device	Art-No.	Description	Euro	Qty
	115520	Testing Device DLR-GS		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

<b>Manifolds</b>	Art-No.	Description	Euro	Qty
T-record				
99	196280	Manifold 2 pipes, shut-off valves, gauge till 25bar, CF6/4		1 pce
l	196380	Manifold 3 pipes, shut-off valves, gauge till 25bar, CF6/4		1 pce
<b>0</b> 00000000000000000000000000000000000	196480	Manifold 4 pipes, shut-off valves, gauge till 25bar, CF6/4		1 pce
	196580	Manifold 5 pipes, shut-off valves, gauge till 25bar, CF6/4		1 pce
<b>0</b> 000000	196680	Manifold 6 pipes, shut-off valves, gauge till 25bar, CF6/4		1 pce
	196780	Manifold 7 pipes, shut-off valves, gauge till 25bar, CF6/4		1 pce
\$\$\$\$\$\$\$\$\$	196880	Manifold 8 pipes, shut-off valves, gauge till 25bar, CF6/4		1 pce

#### **DLR-P**



Pressure leak detector working with air for monitoring double-walled pipes. Available in different pressure ratings. When monitoring liquids with a flashpoint < 55 °C only for pipes with a permeation tight inner wall (e.g. metallic).

#### The leak detector:

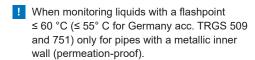
The DLR-P continuously monitors the pipe's interstitial space (filled with air) for leaks. In pipes with permeation-proof inner walls to transport explosive liquids, monitoring with air is cheaper than with nitrogen. For example in DRK pipe systems, corrugated pipe systems by Brugg or the MONO.S.DWR by Löw Tanktechnik.

#### Optional equipment:

- P: protected, weatherproof housing
- M: digital pressure display on the housing lid
- FC (filter control): dry filter monitoring to ensure maintenance of the filter in time. With this, corrosion by condensate accumulation in the interstitial space is avoided.
- Si (service indication): variably adjustable, time intervals from 1 to 63 months

#### Monitorable liquids:

water polluting liquids, e. g. petrol, gasoline, heating oil, diesel, ley, acids



#### Conformity:

EN 13160 class I



DLR-P 1.1 with pulsation damper

#### Switching values:

DLR-P	1.1	2.0*	2.3	2.5	3.0	4.5**
Feed pressure	pres- sure- less	< 1.0	< 1.3	< 1.5	< 2.0	< 3.5
Alarm pressure	> 1.1	> 2.0	> 2.3	> 2.5	> 3.0	> 4.5
Set pres- sure	< 1.45	< 2.4	< 2.8	< 2.9	< 3.4	< 5.5
Test pressure interstice	> 2.0	> 3.0	> 3.5	> 3.5	> 4.2	> 7.5

Pressure levels in bar; special switching values on request

\* DLR-P 2.0: The leak detection system test center requires at least 2 bar alarm pressure when monitoring filling lines

\*\* DLR-P 4.5: When monitoring pipes of pressuresupplied diesel satellite columns

### Article report DLR-P

# Leak detector

ΑП	I-INO.	Description	Euro	Qty
0780	011-07	Leak Detector DLR-P 1.1, 100-240VAC, pl-box, QU8/6		1 pce
078	111-07	Leak Detector DLR-P 1.1, pul-d, 100-240VAC, pl-box, QU8/6		1 pce
As option: all leak detectors available with dry filter control (FC)				

Art No Description



078120-07	Leak Detector DLR-P 2.0, pul-d, 100-240VAC, pl-box, QU8/6	1 pce
079320M04	Leak Detector DLR-P 2.0 PM, Pul-d, 100-240CAC, ss-box, CF8/6	1 pce



07345M04	Leak Detector DLR-P 4.5 M,w.Gauge, 230V	1 pce
	Pulsat- Damper,Steel Hous.,8mm Compr.Fe.	



We are happy to advise you in the selection of the right leak detector – please feel free to contact us: +49 271 48964-0

Art-No. Description

Dry filter		

340343	Dry filter TF600, hose connection, dry filter agent, wall holder	1 pce
340345	Dry filter TF1200, hose connection, dry filter agent, wall holder	1 pce



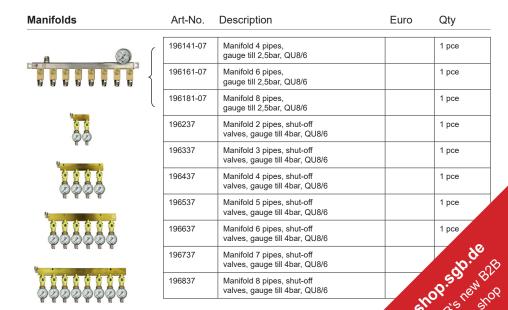
Art-No.	Description	Euro	Qty
260519	PA-hose, PN6, off-white, 8/6x1mm, 100m roll		1 roll

Installation kit	Art-No.	Description	Euro	Qty
	190726	Inst. kit pipe, 1/4""m - CF8/6, for CU-pipe 8/6x1mm		1 pce
4 - 4. U -	190792-07	Pipe Connection, 1/4"-QV 8/6, MS Brass, 1/4"" Male, 8/6 mm Quick Union		1 pce

**Article report DLR-P** 

Test valve	Art-No.	Description	Euro	Qty
	190700	Test Valve 1/4""K, Brass with Cock PN63 and Plug		1 pce

Testing device	Art-No.	Description	Euro	Qty
	115395	Testing Device-Press. Resist. up to 4Bar for Overpressure Leak Detector		1 pce



Euro

Qty

#### DLR-P...CV



Air based pressure leak detector especially tailor-made for the requirements of double-walled plastic pipes.

#### The leak detector:

The DLR-P .. CV continuously monitors the pipe's interstitial space (filled with air) for leaks. The different pressure levels cover a wide range of applications. The pipeline/pipe must have the necessary pressure resistance of 5 bar in the interstitial space.

The DLR-P .. CV is equipped with a check valve in the connection line. The check valve avoids that gas may flow towards the leak detector (zone reduction). This avoids that explosive vapors may enter the leak detector. Thus, the leak detector can be used for pipes with a low permeation.

The functional test can be done quickly and easily with SGB's testing device.

For pipes transporting explosive liquids, monitoring with air is less expansive in the long term than with nitrogen.

#### Optional equipment:

- P: protected, i. e. weatherproof housing
- M: digital pressure display
- FC (filter control): dry filter monitoring to ensure maintenance of the filter in time. With this, corrosion by condensate accumulation in the interstitial space is avoided.
- **Si** (service indication): variably adjustable, time intervals from 1 to 63 months

#### Monitorable pipes:

double-walled pipes for which suitability is given

#### Monitorable liquids:

water polluting liquids, e. g. petrol, gasoline, heating oil, diesel, ley, acids

#### Conformity:

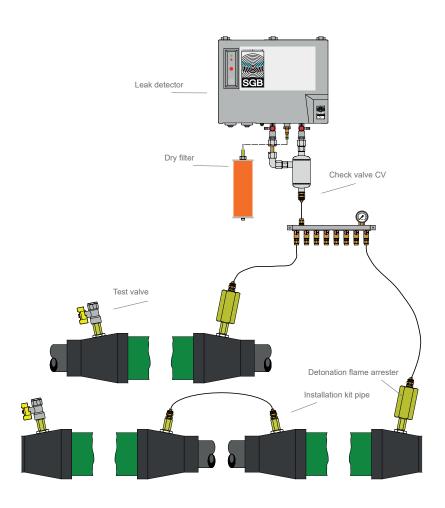
EN 13160 class I



DLR-P 1.1 CV with pulsation damper

DLR-P CV Type/Alarm pressure	1.1	2.0
Feed pressure inside inner pipe	pressure- less	< 1.0
Set pressure	< 1.4	< 2.4
Test pressure interstice	> 2.0	> 5.0

Pressures in bar; further pressure levels on request



#### Article report DLR-P .. CV

Leak detector Art-No. Description Euro Qty



078420-07	Leak Detector DLR-P 2.0 CV, pul-d, 100-240VAC, pl-box, QU8/6	1 pce

Overpressure leak detector DLR-P 2.0 CV with a check valve in the connection line towards the interstitial space. The check valve avoids that gas may flow towards the leak detector. This avoids that explosive vapors may enter the leak detector. Therefore the function test of the leak detector only can be excecuted by ventilation with a test valve at a pipe end or with the SGB testing device. The interstitial space shall be rated for 5 bar overpressure.

Alternatively, in case 1.1 bar alarm pressure is sufficient:

078411-07	Leak Detector DLR-P 1.1 CV, pul-d, 100-240VAC, pl-box, QU8/6	1 pce
104852	Additional price service indication, version Si (1-63 months)	1 pce

Dry filter	Art-No.	Description	Euro	Qty



340	0343	Dry filter TF600, hose connection, dry filter agent, wall holder	1 pce
340	0345	Dry filter TF1200, hose connection, dry filter agent, wall holder	1 pce

Manifolds	Art-No.	Description	Euro	Qty









196237	Manifold 2 pipes, shut-off valves, gauge till 4bar, QU8/6	1 pce
196337	Manifold 3 pipes, shut-off valves, gauge till 4bar, QU8/6	1 pce
196437	Manifold 4 pipes, shut-off valves, gauge till 4bar, QU8/6	1 pce
196537	Manifold 5 pipes, shut-off valves, gauge till 4bar, QU8/6	1 pce
196637	Manifold 6 pipes, shut-off valves, gauge till 4bar, QU8/6	1 pce
196737	Manifold 7 pipes, shut-off valves, gauge till 4bar, QU8/6	1 pce
196837	Manifold 8 pipes, shut-off	1 pce

PA hose	Art-No.	Description	Euro	Qty
	260519	PA-hose, PN6, off-white, 8/6x1mm, 100m roll		1 roll

Test valve e.g. KPS Art-No. Description Euro Qty

190702 Testvalve for KPS-Pipe Con.,KV6 o. 1/4" 1 pce with Cock PN10 and Plug

Pipe connection e.g. KPS Art-No. Description Euro Qty



190795-07	Pipe Connection, KPS - QV8/6 KV6 or 1/4" - 8/6 mm Quick Union,Brass	1 pce



Installation kits (i.e. test valves and pipe connections) for connecting the leak detector are available for all common pipes (types/manufacturers)! We are happy to be of any help – just call us on: +49 271 48964-0

Testing device Art-No. Description Euro Qty

115395 Testing Device-Press. Resist. up to 4Bar for Overpressure Leak Detector 1 pce

Detonation flame arrester Art-No. Description Euro Qty

The detonation flame arrester shall be tested for overpressures. The detonation flame arrester type F502 is suitable for pressures up to 3 bars.

Brass, 1/4" Male, 8/6 mm Quick Union

Installation accessories

#### Installation accessories

Euro

Qty

#### Installation pumps Art-No. Description Euro Qty



		1	1
200820	Vacuum Pump VP218, 240 V, 1,5KW incl. Liquid Stop, Condensate Trap, HM		1 pce

With extra high vacuum volume flow very useful for producing vacuum on large interstitial spaces as on large tanks, double bottoms of flat bottom tanks or with flexible linings. Not explosion protected. Weight 17 kg

Art-No.	Description	Euro	Qty
---------	-------------	------	-----



200840	pressure-vacuum pump ÜVP218, 240V, 1,5KW liquid Stop, Conden trap, valves, manome	1 pce	

Overpressure and vacuum pump with high performance. Useful accessories as valves, manometers, liquid stop valves realises comfortable operation. Not explosion protected. Max. underpressure 850 mbar, max overpressure 8 bar, weight 18 kg

Art-No. Description Euro	Qtv



200860	Ex-Vacuum-Pump N026 St.9E EX, 230 V	1 pce
	Category 2 in-outside, 1m³/h, G1/4"	

Explosion-protected vacuum pump for evacuating interstitial spaces in which ex-vapors

#### **Testing devices** Qty Art-No. Description Euro



115360	Digital Measuring Device DM 12-2, -1 +2 bar, incl. case	1 pce

Field of use: The sensor is suitable for non-corrosive and non-ionizing gases and liquids (DO NOT use for water-air or hydrofob filters!).

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115381	Digital Measuring Device DM 115 Ex, expl protect.,-1+1,5 bar,incl tubing + case		1 pce
Digital overpressure/underpressure measuring device, ex-pro		oof	

Testing devices	Art-No.	Description	Euro	Qty
	115371	Pressure Measuring Device CPH 6200 incl.suitcase, without Sensor		1 pce
· Crist	mbar. The m	held pressure indicator with measuring ranges for easuring range of the connected pressure senso lapter for leak detector.		
	Art-No.	Description	Euro	Qty
and.			1	

Art-No. Description



115373	Pressure sensor for CPH 6200 -10 bar, process connection 1/2"	1 pce
115375	Pressure sensor for CPH 6200 025 bar, process connection 1/2"	1 pce



Art-No.	Description	Euro	Qty
115376	Manual hand Pump CPP30, incl. connecting cable 0,5m, G1/4" femaile thread		1 pce
		e i i	0.50

For test pressure generation up to max. 35 bar. Vaccum generation down to max. -950 mbar is also possible through the change-over switch. Incl. adapter for leak detector.



115392	Testing Device, max Pressure 1,0 bar Over- and Underpressure Leak Detectors	1 pce

For a simple and quick function test of leak detectors, (overpressure and vacuu) with a pressure of max. 1000 mbar. With a port to connect a gauge. With ventilation device for controlled pressure / vacuum drop. Volume 1 liter. Height 380 mm.



Art-No.	Description	Euro	Qty

115395	Testing Device-Press. Resist. up to 4Bar for Overpressure Leak Detector	1 pce

For a simple and quick function test of leak detectors, (overpressure and vacuum) with a pressure of max. 4 bar. With a port to connect a gauge. With ventilation device for controlled pressure / vacuum drop. Volume 0,75 liter. Height 380 mm.

Art-No.	Description	Euro	Qty
115520	Testing Device DLR-GS		1 pce



Contact and Imprint

SGB GmbH Hofstr. 10 57076 Siegen Germany

T +49 271 48964-0 E sgb@sgb.de

I www.sgb.de

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