

CANgas

The gas canister programme for small quantities



Being the largest privately managed specialist for industrial gases, Messer has a large number of high-purity gases and gas mixtures in its conventional gas cylinder programme, generally provided in 10 or 50 litre cylinders. For many tests or measurements, however, gases are only required in small quantities, leaving the residual gas in such large cylinders unused.

A heavy steel cylinder is not always necessary for testing sensors in explosion areas or for monitoring ambient air. All that is needed is a small and light gas canister.

Also, for special applications in research and development only a small quantity of a certain gas or gas mixture is often required. For these purposes Messer offers gas canisters in different sizes which are simple to handle.

For the safe withdrawal and application of gases or gas mixtures from disposable canisters an extensive valve portfolio is available.



Fully automated filling of pressure cans

Small, light and flexible

CANgas canisters are small, light, handy and can be stored almost anywhere. The handling of gas canisters is extremely simple and only the required amount of gas is provided. This is environmentally friendly and the compact design saves space.



Blood gas analysis



Car exhaust emission testing

Gas Canisters

All gas canisters applied by Messer are made of aluminium. Aluminium is light and compatible with all common components, especially reactive ones.

Applications

Gas canisters are used wherever small quantities are required for sporadic or mobile use, making conventional refillable gas cylinders impractical. Disposable canisters are small, light, handy and contain only the required gas quantity.

Test gases are used, for example, for testing sensors which monitor the threshold values of toxic and flammable gases in hazardous areas or which raise the alarm when environmentally hazardous substances are released. The sensors are usually tested on site using an appropriate test gas.

In analytics, e.g. automobile exhaust emission control (Lambda gas mixture) or blood gas analysis, operating and calibration gases in gas canisters are also utilised when only small quantities are required.

Gas canisters also provide advantages in research and development if low volumes are needed.



Aerosol Canisters

Aerosol canisters are particularly lightweight and easy to handle. They are suitable for up to 12 litres (gas content) of non-toxic and non-corrosive pure gases or gas mixtures. Aerosol canisters have a built-in shut-off valve and are equipped with an NPT 1/8" connection.



High Pressure Canisters

High pressure canisters with a capacity of 34, 58 and 110 litres of gas are available. They are also suitable for toxic and corrosive pure gases and gas mixtures. The built-in shut-off valve is provided with the industrial connection C10.

	Gas Canister 0.5 litre	Gas Canister 1 litre	Gas Canister 34 litres	Gas Canister 58 litres	Gas Canister 110 litres
Gas content	6.7 l	12 l	34 l	58 l	110 l
Geometric volume	0.56 l	1.0 l	0.9 l	1.6 l	1.6 l
Empty weight	approx. 80 g	approx. 113 g	approx. 500 g	approx. 1000 g	approx. 1000 g
Dimensions (height x diameter)	190 mm x 65 mm	260 mm x 75 mm	278 mm x 75 mm	348 mm x 90 mm	348 mm x 90 mm
Filling pressure	12 bar	12 bar	38 bar	36 bar	69 bar
Valve	NPT 1/8"		5/8" 18UNF (C10)		
According to directive	Directive 75/324/EEC - aerosol dispensers		ISO 11118		

Products

Messer provides an extensive range of pure gases and gas mixtures in different gas canisters.

Test gas mixtures are delivered with a certificate of conformity which is found on the aluminium canister body label. It contains information on the exact composition, the tolerances and the stability of the gas mixture.

Depending on the gas mixture a certificate of analysis can also be supplied which provides more detailed information on the real value of the corresponding component and its uncertainty.

	Aerosol Canisters	High Pressure Canisters
Pure Gases - e.g. O ₂ , H ₂ , N ₂ , Ar, He, synth. air, HC (CH ₄ , C ₂ H ₆ , C ₂ H ₄ , C ₃ H ₈ , C ₃ H ₆) ...	x	x
Standard gas mixtures with non-corrosive components (1-/2- components in balance gas) e.g. O ₂ in N ₂ ; CO ₂ in He; Ne in Ar; CO ₂ /O ₂ in N ₂ ; ...	x	x
Standard gas mixtures with corrosive components (1 component in balance gas) e.g. H ₂ S in N ₂ ; NO in N ₂ ; NO ₂ in synth. air; ...	-	x
Standard gas mixtures with flammable components (1-/2- components in balance gas) CO in N ₂ ; H ₂ in N ₂ ; CH ₄ in synth. air; C ₂ H ₂ in He; n-C ₄ H ₁₀ /CO ₂ in N ₂ ...	x	x
Multi component gas mixtures, e.g.		
• Lambda gas mixtures e.g. C ₃ H ₈ /CO/CO ₂ /(O ₂) in N ₂	x	x
• QUAD gas mixtures e.g. H ₂ S/CH ₄ /CO/O ₂ in N ₂	-	x

Withdrawal Systems

For withdrawing the gases from the gas canisters special withdrawal systems are utilised which can be screwed directly onto the built-in shut-off valve which is thereby opened.

The gas canister valves have the same connection for all types of gases. Thanks to only a few different components, maximum flexibility of application can be achieved. The NPT 1/8" female thread on the outlet or the hose nozzle permit a wide variety of connections for further gas transfer.

For the use of **aerosol canisters** the following withdrawal fittings made of aluminium have been established:

The dosing valve is used if:

- pressure reduction is not necessary
- dosing only takes place for a short time (because of the falling primary pressure, constant discharge over a prolonged period is only possible with readjustment.)
- the connected system can withstand a pressure of 12 bar, or is open to the atmosphere

Due to its special construction the **TOP Valve** provides:

- evacuation up to the closed gas canister valve
- avoidance of contamination during withdrawal

The pressure regulator reduces the output pressure to 0.6 bar (fixed factory setting). The flow rate can be adjusted with the integrated dosing valve. The pressure in the canister is indicated at all times on the primary pressure gauge.

This valve offers:

- exact dosing at reduced working pressure
- virtually constant discharge pressure with falling primary pressure
- limitation of the pressurisation of the connected system (e.g. glass apparatus or measuring instrument).

For **high pressure canisters** flow regulators with an integrated pressure reducer (fixed factory set pressure value) and a primary pressure gauge, indicating the pressure in the canister, are available:

The **S70 pressure regulator** is optimised for laboratory and field applications

- compact, light-weight design
- fixed factory set outlet pressure of 4.13 bar
- fixed factory set flow rate, optionally from 0.25 to 7 l/min
- available in brass or stainless steel

The **S75** is equipped with a flow selector (10 positions) allowing 3 different maximum outlet flows (3, 5 or 15 l/min)

- fixed factory set outlet pressure of 3.5 bar
- integrated safety relief valve
- available only in brass

Service and support

Every application has specific requirements concerning the gases and gas mixtures used and the optimal withdrawal systems. Many pure gases and mixtures as well as valves are available for immediate delivery from stock.

Whatever the conditions, we are here to support you.

MESSER 
Gases for Life

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