



VACUUM CHLORINE GAS DOSING SYSTEMS

Handling, transport and storage of chlorine for water disinfection is a challenge to systems engineering. This is the reason why the vacuum principle has been used in dosing systems for a long time already. The pressure of the chlorine gas is reduced to the vacuum. This method successfully avoids chlorine gas leakage. In the event of a pipe breakage, no chlorine gas can escape, only ambient air is drawn in.

Vacuum chlorine gas dosing systems are composed of two principal components.

Vacuum regulator

The vacuum regulator is a pressure reducing valve that reduces the overpressure from the chlorine tank side to the negative pressure on the vacuum side. The valve opens when a sufficient vacuum is present on the outlet side. Vacuum regulators with pressure gauge and liquid trap are available for more safety.

Dosing regulator

The chlorine gas volume flow is adjusted with the dosing regulator. This can be effected manually or automatically via motor control. VGB models combine a vacuum regulator and a dosing unit in a compact enclosure. They are not available with change-over device or servomotor for dosing regulator.

Compact dosing unit Vaccuperm VGB-103

Vacuum regulator and dosing regulator in a single unit for direct mounting on a chlorine gas cylinder. Available in 7 capacity ranges up to 4000 g/h.

Vaccuperm VGA-111

Vacuum regulator for direct installation on a chlorine cylinder or a header line. Capacity range up to 4000 g/h.

Vaccuperm VGA-113

Dosing regulator for 9 capacity ranges up to 4000 g/h.

Applications

- Drinking water
- Industrial water
- Waste water

Technical data

	VGB-103 compact unit	VGA-111 vacuum regulator	VGA-113 dosing regulator
Medium	Chlorine gas	Chlorine gas	Chlorine gas
Capacity range	up to 4000 g/h	up to 4000 g/h	up to 4000 g/h
Adjustment ratio	1:20		1:20
Accuracy	± 4 %		± 4 %
Measuring device	According to the floater principle, measuring tube 70 mm		According to the floater principle, measuring tube 70 mm
Empty indication	Visible automatic signal for lack of chlorine	Visible automatic signal for lack of chlorine	
Materials	<ul style="list-style-type: none"> • Enclosure: PVC • Inlet valve: Silver/PTFE/special alloy • Springs: Coated with nickel-chrome alloy • Diaphragm: FEP • Rate valve: PVC • O-rings: FKM 		
Connections	Pressure side chlorine: Union nut 1", G 3/4, G 5/8, yoke USA Vacuum line: PE hose 8/11 mm Vacuum safety line: PE hose 8/11 mm	Pressure side chlorine: Union nut 1", G 3/4, G 5/8, yoke USA, flexible copper line 6/8 mm (1/2") Vacuum line: PE hose 8/11 mm Vacuum safety line: PE hose 8/11 mm	Vacuum line: PE hose 8/11 mm
Options	<ul style="list-style-type: none"> • Manometer: 0 to 16 bar • Internal filter • External filter 	<ul style="list-style-type: none"> • Manometer: 0 to 16 bar • Limiting nozzle full vacuum • Internal filter • External filter • Liquid trap 	<ul style="list-style-type: none"> • Automatic control with servomotor (4-20 mA or direct control)
Weight	1.3 up to 2.0 kg	2.3 kg	0.9 kg; 3.1 kg (with servomotor)

