Dosing system GENODOS®
DM-BO 6
DM-BO 10
DM-BO 20
DM-BO 30

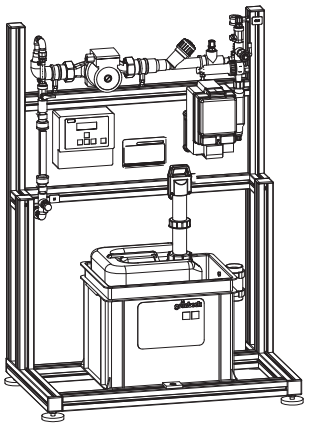


Fig. 1: GENODOS® DM-BO dosing systems

Designated application

The GENODOS® DM-BO dosing systems are designed for the dosing of GENO®-Baktox in the drinking and industrial water sector.

GENO®-Baktox is used for the quick disinfection of drinking and process water as well as for the disinfection of pipes, water storage tanks, filter systems, well and spring tappings. GENO®-Baktox is mainly used where common disinfectants either fail (e. g. GENO®-Chlor A in case of high pH values) or have an adverse effect due to undesired side effects (e. g. odours, formation of ammonium compounds, THMs or bromates).

After disinfection by means of GENO®-Baktox, the rate of renewed bacterial growth is considerably lower than if conventional disinfectants are used.

The amount of the GENO®-Baktox dosing to be applied is volume-controlled.

According to the German Drinking Water Ordinance (TrinkwV 2001), dosing volumes of 0.2 mg/l ClO_2 are admissible for disinfection dosing (standard dosing).

In general, GENO®-Baktox is still effective in the drinking water after a period of 48 hours. As a rule, a concentration of 0.1 mg/l of ClO_2 is still adequate for the effective deactivation of free micro-organisms contained in the drinking water.

When handling GENO®-Baktox, GENO®-Baktox A and GENO®-Baktox B, wearing the compulsory, personal safety equipment is essential.

Attention! The simultaneous use of other disinfectants is prohibited.

Function

When water is withdrawn, a water meter measures the water volume flowing through and then - according to the pulse interval of the water meter - transmits the control pulses to the electronics of the online chlorine dioxide measurement.

The electronics unit controls the dosing pump. Thanks to the volume-controlled dosing of the disinfecting solution, a constant drinking water quality can be ensured. By means of a suction lance with integrated empty signal, the GENO®-Baktox solution is sucked directly from the disposable canister.

By means of the dosing pump, the sucked in dosing solution is delivered into the drinking water pipe via the dosing line, the dosing valve and the blending module.

The blending module has a partial flow circulating between the water meter with dosing point and the withdrawal point for measuring water, thus preventing clouding in case of fluctuating water withdrawal and periods of standstill.

The electric level monitoring visually indicates the required replacement of the canister by means of the yellow LED on the control electronics and automatically stops the operation of the pump, if required. As a pre-warning signal, the yellow LED is flashing and the pump continues dosing. As the same time, a signal is transmitted via the collective fault signal output to the possibly connected central building control system. If the tank is empty, the LED is illuminated permanently, the pump stops dosing and once again a signal is transmitted to the possibly connected central building control system.

Scope of supply

The GENODOS® dosing system DM-BO as rack system, ready-for-connection, consists of: Control unit, connections provided for warning and alarm signals with transfer to central building control as well as integrated blending module with online chlorine dioxide measurement and chemical collecting tray.

Self-priming membrane dosing pump with synchronous motor 230 V / 50/60 Hz, self-deaerating against pressure. Pump is preset and under seal. Pressure maintaining valve, water meter with pulse cable for online chlorine dioxide measurement and injection valve for blending module.

All GENODOS® DM-BO dosing pumps are completely preset.

Accessories

Personal safety set GENO®-Baktox
Order no. 569 815

Digital test device Scuba+
(to regularly check the ClO_2 concentration at the withdrawal points)
Order no. 211 145

Room air monitoring for chlorine dioxide
Order no. 569 820

USB data logger
Order no. 569 825

Consumables

GENO®-Baktox 3 l canister (for DM-BO 6)
Order no. 170 450

GENO®-Baktox 10 kg container
(for DM-BO 10/20/30)
Order no. 170 460

GENO®-Baktox 20 kg container
(for DM-BO 10/20/30)
Order no. 170 470

Neutralising powder for GENO®-Baktox
Order no. 569 838

Indicator for Scuba+
(reagents for the determination of chlorine dioxide)
Order no. 211 221

Installation requirements

For the proper adjustment of the online chlorine dioxide measurement right at start-up, we recommend replacing the pipe section between points 4 and 5.

Warning! When using disinfection processes, the materials used on site must be checked for their resistance to chemicals and corrosion.

Please observe local installation directives, general guidelines (e. g. DIN, VDE, DVGW, ÖVGW resp. SVGW) and technical specifications.

On principle, a fine filter must be installed upstream of the system. In case water heaters (boilers, flow-through heaters, etc.) are installed downstream, a non-return valve must be installed. As the water meter of the GENODOS® DM-BO dosing system features an integrated non-return valve, it must not be installed between hot water heaters and their relief pressure valves.

Dosing into the cold water pipe and into the make-up water feed of the warm water pipe is possible.

For the electrical connection, a shock-proof socket (230 V/50/60Hz) is required within a range of approx. 1.5 m of the system.

According to DIN EN 1717, GENODOS® DM-BO dosing systems used in drinking water treatment need to be secured by means of a system separator if they are connected to the public water supply network.

The operator needs to make sure that all requirements for a structurally and technically safe and optimum operation of the system as indicated below are fulfilled before installing the system.

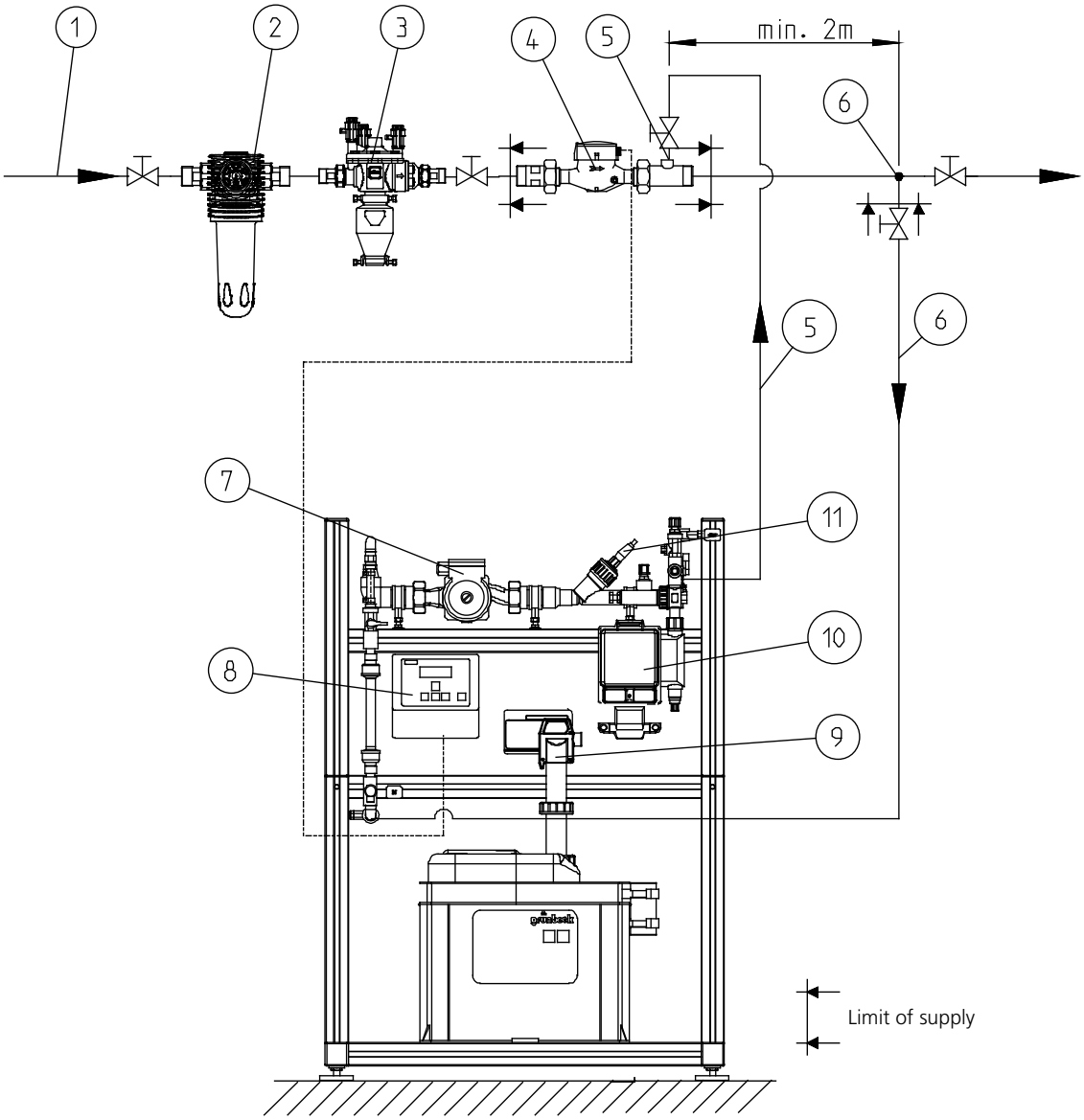
☞ **Note:** Only for temporary continuous dosing.

- The operator must provide an installation site that complies with the following requirements:
- It must be protected against sunlight, dust and vapours. It must be frost-proof, well-ventilated and sufficiently illuminated (system must not be installed outdoors).

  It must comply with the requirements regarding air temperature, humidity, admissible operating temperature of the components and dilution water quality stipulated in the Technical Specifications.
- It must provide access to the main water pipe.
- It must have a floor drain to rinse off chemicals.
- It must have separate storage rooms for empty and full chemical canisters.
- It must be separated from other rooms in a fire-safe way.
- It must be secured against unauthorised access and comply with the accident prevention regulations.
- Staff should not stay in the room for longer periods of time (max. stay in the room: 2 hours/day).

Technical specifications/Dimensions		**GENODOS® dosing system**			
System type		**DM-BO 6**	**DM-BO 10**	**DM-BO 20**	**DM-BO 30**
Connection data					
Nominal connection diameter of water meter	[inch / DN]	R 1“ / 25	R 1¼“ / 32	R 1½“ / 40	R 2“ / 50
Electrical data		230 V / 50/60 Hz			
Power input, min./max.	[VA]	28/91			
Protection		IP 54			
Performance data					
Nominal flow Q_N	[m³/h]	3	5	10	15
Maximum admissible flow Q_{max}	[m³/h]	6	10	20	30
Pressure loss at Q_{max}	[bar]	0.5	0.5	0.7	0.8
Pulse sequence of water meter	[l/pulse]	0.33	0.33	5	5
Nominal pressure (PN)		PN 8			
Dimensions and weights (entire system)					
Total height approx.	[mm]	1100			
Depth, approx.	[mm]	480			
Width, approx.	[mm]	785			
Empty weight, approx.	[mm]	27			
Dimensions and weights (water meter)					
Installation length of water meter without screw connection	[mm]	190	190	300	270
Installation length of water meter with screw connection	[mm]	276	280	432	387
GENODOS®-pump					
GENODOS®-pump GP (Baktox version)		6/40			
Max. suction height		1.0 mWC			
Ambient data					
Ambient temperature	[°C]	5-20*			
Water temperature	[°C]	5-30			
Control unit of online chlorine dioxide measurement					
Displays		Measured value with corresponding unit as well as operating state			
Outputs		Voltage-free warning and alarm contact for transfer to the central building control system			
Order no.		**163 865**	**163 875**	**163 885**	**163 895**

* If the ambient temperature is >20 °C, the service life of the disinfectant is considerably shorter.



① Main water pipe
② BOXER® fine filter
③ System separator
④ Contact water meter
⑤ Return of measuring water incl. dosing
⑥ Withdrawal of measuring and dilution water
⑦ Blending module with circulation pump, online measuring sensor for chlorine dioxide and dosing point
⑧ Control unit of online chlorine dioxide measurement
⑨ Suction lance
⑩ Dosing pump GENODOS® GP 6/40 (Baktox version)
⑪ Chlorine dioxide measuring sensor

Fig. 2: Installation diagram of GENODOS® DM-BO