Dosing computer EXADOS®
EGS 20, EGS 30, EGS 80, EGS 100

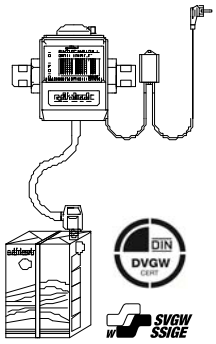

Fig. 1: Dosing computer
EXADOS® EGS 20, EGS 30

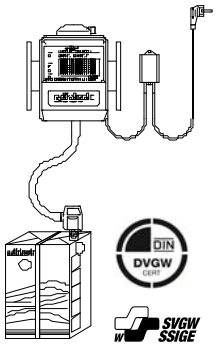

Fig. 2: Dosing computer
EXADOS® EGS 80, EGS 100

Designated application

The dosing computers EXADOS® EGS 20 – EGS 100 are designed for the dosing of mineral-based EXADOS®-dosing solutions (refer to product data sheet mineral-based EXADOS®-agents) into the drinking and industrial water of residential buildings (in case of dosing in industrial buildings, the dosing systems GENODOS® DME (refer to product data sheet D29) must be used). They protect the water pipes and the connected water carrying system components (fittings, devices, operating facilities, appliances, boilers, production systems, etc.) from malfunctions and damage caused by scale deposits and/or corrosion.

Function

When water is withdrawn, a contact water meter measures the water quantity flowing through. Even at a low flow rate (see technical specifications), the water meter is transmitting pulses to the control electronics via the pulse cable, triggering the dosing strokes required. At each dosing stroke, a defined quantity of the mineral-based dosing agent is sucked in by the pump via a suction lance and is added to the water flowing by via a dosing point.

The electronics of proven modular technology and in cassette design (self-regulating) controls the driving motor of the dosing pump and ensures the exact addition of the mineral-based dosing agent.

The dosing frequency is indicated by the alternating blinking of two yellow light-emitting diodes. An electronic level control switches off the pump automatically when the tank for the mineral-based dosing solution is empty; thus the pump is protected against dry-running. The necessary replacement of the tank is indicated visually (blinking of a red light-emitting diode) and additionally by an acoustic alarm (an interrupted acoustic signal tone).

In case of possible disturbances, the self-control system of the electronics prevents an inadmissible over-dosage by switching off the device.

Design

The dosing computer consists of a contact water meter and a control/pump unit.

The contact water meter is designed as a impeller-type flow meter, with pulse generator, pulse cable and water meter screw connections; (in case of EXADOS®-EGS 80 and EXADOS®-EGS 100 with flanges according to DIN 2642, without counter-flanges). The dosing point with non-return valve is integrated in the outlet piece. The control/pump unit is suitable for installation at the pipe, the contact water meter or on the wall. It incorporates the control electronics with light emitting diodes for operation, dosing frequency, tank replacement as well as the driving motor with pump.

The driving motor is a synchronous motor with overload protection, the dosing pump is a combined membrane piston pump with pre-delivery. The suction lance with suction and return pipe is fixed permanently to the dosing pump. It has a level control which automatically switches off the dosing pump as soon as the mineral-based dosing solution has been consumed (dry-run protection). Dosing is made from a disposable 10 or 20 kg canister or from a 100 l resp. 200 l supply tank which is available as optional equipment (refer to optional accessories).

Via a dosing line of 1.5 m in length, the dosing pump is connected to the dosing point with non-return valve. The dosing volume is factory-set according to the DVGW directives. The control/pump unit is protected from unauthorised access by means of a cover with clear-view screen and child-proof protection. The systems are RFI suppressed. Power is supplied by means of a transformer with 1.5 m cable. The system itself is operated with protective low voltage 24 V/50 Hz.

All water contacting parts are in compliance with the requirements of the Food and Feed Act (LFGB).
The various mineral-based EXADOS®-solutions must not be mixed as this might cause malfunctions of the dosing computer.

Scope of supply

Dosing computer, complete, consisting of:

- Contact water meter with water meter screw connections, (in case of EXADOS®-EGS 80 and EXADOS®-EGS 100 with flanges according to DIN 2642, without counter-flanges), pulse generator, pulse cable and dosing point with on-return valve.
- Control/pump unit with fastening material to be mounted to the pipe, the contact water meter or on the wall; 1.5 m dosing line; transformer with 1.5 m cable. (dissolving tank for the mineral-based dosing agent not included in scope of supply).
- Suction lance with level control.

Accessories

Switch box
For voltage-free signal (empty signal and disturbance signal) to the central control station. Including connecting cable with plug to dosing computer.
Dimensions: 105 x 105 x 60 mm
Order no. 115 700

Supply tank
made of shock-resistant plastic (PE, transparent) with impressed litre graduation, filling orifice with screwed lid, PVC suction lance with 1.5 m PVC suction and return line and level monitoring with cable and coupling plug for connection to control/pump unit.

By retrofitting the dosing system with a supply tank, the DVGW test mark will expire. According to EN 1717, the dosing system must then be protected by a system separator.

100 l supply tank:
Ø 465 mm, height 780 mm
Order no. 115 800

200 l supply tank:
Ø 560 mm, height 1045 mm
Order no. 115 810

M-Bus measuring transducer D-DAM complete
To transmit the flow and counter reading as well as the statistical values of a water meter via M-Bus (IEC 870). In addition, flow-controlled pulse output, analogue output and relay contacts to Grünbeck control unit.
Order no. 115 850

Suction lances with level control for supply tanks
PVC suction lances with 1.5 m PVC suction and return lines and level monitoring with cable coupling plug for connection to the control/pump unit.

Suction lance for 100 l supply tank
Order no. 115 545

Suction lance for 200 l supply tank
Order no. 115 548

Installation conditions

Local installation guidelines, general regulations (e.g. WVU, EVU, VDE, DIN, DVGW or ÖVGW or SVGW) and technical specifications must be observed.

The dosing computers EXADOS®-EGS 20 up to EXADOS®-EGS 100 are DVGW-certified and may be installed without additional safety device (pipe separator, large pipe loop). The devices must be preceded by a fine filter (e. g. BOXER®) to protect it from foreign particles. The installation site must be frost-proof, and protect the systems from chemicals, dyes, solvents and vapours. The ambient temperature and radiation temperature in the direct vicinity must not exceed 40 °C. For the electrical connection, a separate socket (230 V/50 Hz) must be available at a distance of approx. 1.5 m from the device.

Technical dimensions/weights		**Dosing computer EXADOS®**			
		EGS 20	**EGS 30**	**EGS 80**	**EGS 100**
Connection data					
Nominal connection diameter		R 1 ½" DN 40	R 2" DN 50	DN 80	DN 100
Type of contact		Hall			
Power supply		230 V / 50 Hz operation with protective low voltage 24 V / 50 Hz			
Power input during operation = max. / standby	[VA]	18 / 15		26 / 15	
Protection		IP 54			
Performance data					
Pressure loss at max. flow	[bar]	0.8	0.8	0.6	0.8
Nominal pressure		PN 10			
Dosing sequence	[l/Imp.]	0.93	1.33	3.8	3.8
Operating range	[l/h]	50-20000	100-30000	100-80000	100-100000
Tank volume		standard 10/20 kg; 100/200 l***** **on demand**			
Dimensions and weights					
A Overall length of water meter with screw connections	[mm]	312	356	–	–
A Overall length with flange connection	[mm]	–	–	310	310
B Overall length of water meter without screw connections	[mm]	190	240	––	–
C Min. distance from wall to centre of pipe	[mm]	65	90	100	110
D Overall height of dosing computer	[mm]	260			
E Max. suction height	[mm]	1200			
Operating weight, approx.	[kg]	7.7	12	23	24
Consumption data					
Mineral-based EXADOS®-agents	[ml/m³]	100			
Test mark/Certification mark					
DVGW registration number		NW-9101CM0333			
SVGW certificate number		8211 - 1236			
Ambient data					
Max. water temperature	[°C]	30			
Max. ambient temperature	[°C]	40			
Order no.		**115 400**	**115 500**	**115 501**	**115 502**

***** By retrofitting the dosing system with a supply tank, the DVGW test mark will expire. According to EN 1717, the dosing system must then be protected by a system separator.

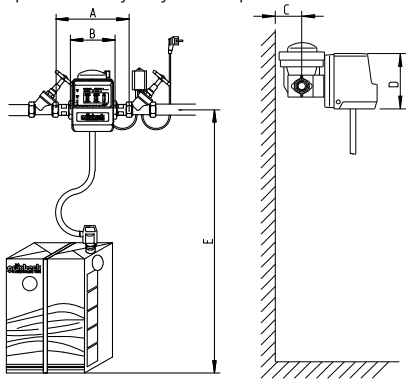

Fig. 3: EXADOS® EGS 20 - EGS 30

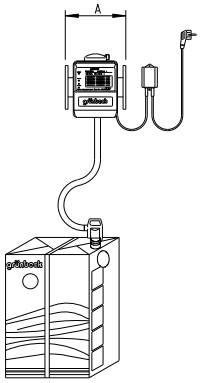

Fig. 4: EXADOS® EGS 80 - EGS 100