

Dosing Computer EXADOS®-EK 6

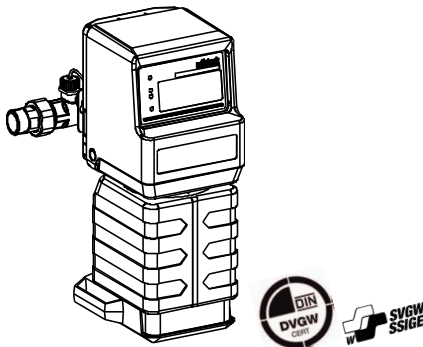


Fig. 1: Dosing computer EXADOS® EK 6

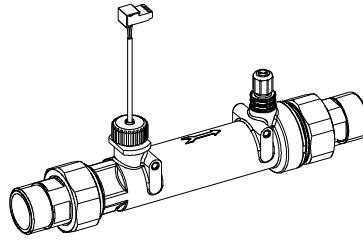


Fig. 2: Turbine water meter with pulse generator

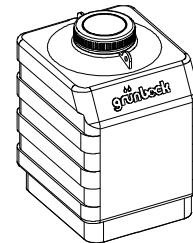


Fig. 3: Dosing tank lift, content 3 litres

Designated application

The dosing computer EXADOS®-EK 6 is 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). It protects the water pipes and the connected water carrying system components (fittings, devices, operating facilities, appliances, boilers, 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When water is withdrawn, a contact water meter measures the water quantity flowing through.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 checks 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 and thus protects the pump from running dry. The necessary replacement of the tank is indicated visually (blinking of a red light-emitting diode) and in addition 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 EXADOS®-EK 6 consists of a contact water meter and a control/pump unit with tank lift.

The contact water meter is designed as a turbine-type flow meter, with pulse generator, pulse cable and water meter screw connections; 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 suction pipe and the tray for the dosing tank. 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 3 litre tank on a tray (drip tray) which is lifted by means of a tank lift and hinged into a locking device directly at the control/pump unit. 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.

The various solutions of mineral-based EXADOS®-agents 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, pulse generator, pulse cable and dosing point with non-return valve.
- Control/pump unit with fastening material to be mounted to the contact water meter or on the wall; 1.5 m dosing line; transformer with 1.5 m cable. (dissolving tank for mineral-based dosing agent not included in scope of supply).

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

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.

Dimensions: 160 x 240 x 160 mm

Order no. 115 850

Installation requirements

Local installation guidelines, general regulations and technical specifications must be observed.

The dosing computer EXADOS®-EK 6 is DVGW-certified and may be installed without any additional safety device

(system separator, large pipe loop). The device must be preceded by a fine filter (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. 1.2 m from the device.

Technical specifications/dimensions		Dosing computer EXADOS® EK 6
Connection data		
Nominal connection diameter		R 1" DN 25
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
Protection		IP 54
Performance data		
Pressure loss at max. flow	[bar]	0.4
Nominal pressure		PN 10
Dosing sequence	[l/imp.]	0.33
Operating range	[l/h]	40-6000
Tank volume	[l]	3
Dimensions and weights		
A Overall length of water meter with screw connections	[mm]	272
B Overall length of water meter without screw connections	[mm]	190
C Overall height of dosing computer	[mm]	415
Additional height required for replacement of tank	[mm]	250
Max. suction height	[mm]	250
Min. distance from wall to centre of pipe	[mm]	55
Operating weight, approx.	[kg]	9.2
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.		115 100

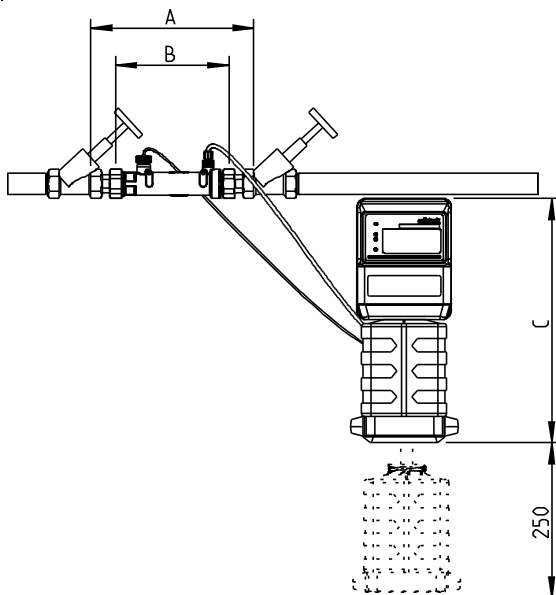


Fig. 4: Dimensional drawing/installation drawing