

Self ventilating Controllable diaphragm pumps

CS 409.2



sera

Seybert & Rahier

The new 4 CS-designs

intelligent, multifunctional, versatile, economic...

sera - controllable diaphragm pumps

of serie CS 409.2 are electronically controlled dosing pumps which can be used for many applications. They are designed for industrial use and guarantee highest operational reliability. Performance range between 18 l/h and 25 l/h, pressures up to max. 10 bar.

Application

Liquid chemicals with aggressive, odorous, abrasive, radioactive, flammable, viscous or toxic properties.

...further features of performance

- self ventilating
- directly controllable
- high dosing accuracy
- long service live of diaphragms*
- high-quality materials
- linear control characteristic
- low maintenance
- low operating expenses
- leakagefree
- unlimitedly safe to run dry
- easy to operate
- low weight

* compared to common conventional diaphragms



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Functions of the control electronics

Function

Function

| |
|--|
| Manual operation |
| Manual stroke frequency adjustment |
| Profibus® DP – Interface ¹⁾ |
| External START |
| External STOP |
| Pulse operation |
| Fractionation |
| Cycle delay |
| Analogue operation 0 – 20 mA |
| Analogue operation 4 – 20 mA |
| Analogue operation standardization |
| Charge manual |
| External charge START |
| Charge with timer |
| Speed control / Slow mode |
| 3 LEDs for status indication |
| Multiline illuminated text display |
| Operating messages in plain text |
| Fault indication in plain text |
| Menu - driven parameterization |
| Flow indication |
| Calibration |
| Working hour meter |
| Password protection |
| 4 – key operation |
| 2 digital outputs (SPS) |
| 1 digital input (SPS or contact signal) |
| 2 analogue / digital inputs (optionally reversible) |
| Programmable input/output functions |
| Connection / evaluation 2-stage level monitoring |
| Connection / evaluation diaphragm rupture monitoring |
| Connection / evaluation flow monitoring |
| Connection / evaluation flow metering |

¹⁾ available from July 2007

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Technical Data

| Pump type | Nominal capacity | | max. counter-pressure | max. suction height | Inlet-/Outlet-size | Driving power (motor) | Nominal stroke-frequency |
|---------------|------------------|--------------|-----------------------|---------------------|--------------------|-----------------------|--------------------------|
| | 50/60Hz | Q_{stroke} | p_2 max. | | DN | P_M | n_N 50/60 Hz |
| | [l/h] | [ml/Stroke] | [bar] | [mWS] | [mm] | [kW] | [min ⁻¹] |
| C 409.2 – 18e | 0 – 18 | 0 – 3,0 | 10 | 3 | 10 | 0,18 | 100 |
| C 409.2 – 25e | 0 – 25 | 0 – 3,0 | 10 | 3 | 10 | 0,18 | 150 |

- Noise level
(Noise level measurement
DIN 45635-01-KL3): 60 +/- 5 dB (A)
- Weight: 13 - 20 kg
- Permitted ambient temperature: +2°C to +40°C
- Permitted humidity: approx. 90%

Electrical data (electronics)

- Operating voltage: 100 – 240 V
(50/60 Hz)
- Inlet voltage control input: 5...30 V DC
- Minimale contact signal time: 50 ms
- Analogue input resistance: 100 Ω
- Digital Output: PNP,
15...30 V DC,
250 mA
- Pump protection type: IP 65
- Insulation class: F

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Materials

The high quality of the materials ensures continuous and reliable operation. We have the optimum material* for each requirement.

Vent valve:

PVC, PP, PVDF

Pump body and valves:

PVC, PP, PVDF, 1.4571, Titan,
PP-FRP, PVDF-FRP

Valve balls:

Glass, PTFE, 1.4401

Valve seals:

EPDM, FPM, FEP-covered

Working diaphragm:

EPDM, FPM, PTFE-faced

Intermediate diaphragm:

CSM, PTFE, PTFE-faced

* please ask us for any material required but not mentioned here

Drive

Each drive unit consists of a proven motor coupled to a stroke mechanism in a robust aluminium housing.

sera – aluminium housings can cope with even extreme operating conditions due to the thickness of the material and the surface treatment.

Automatic ventilation

The vent valve is approached directly by the pump electronics. Both venting time and venting period can be programmed according to the application. An additional feature is to operate the venting automatic in a "manual" mode.

The automatic vent valve is mounted on the pump pressure joint and makes sure that gas volumes - accumulated during downtimes also in the pump head - can be discharged fast and without difficulty thus allowing a steadily accurate dosing process.

Accessories

- Control cable
- Diaphragm rupture monitoring
- Flow controller
- Flow meter

For the optimum installation of a dosing pump we can supply all the necessary accessories such as valves, pulsation dampers, injection fittings, dosing tanks, etc. against your order.



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Dosing
Feeding
Compressing

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