

Controllable piston diaphragm pumps

C 409.2-...KM



The new controllable piston diaphragm pumps generation 4

- Future-orientated pump concept by integral multi-functional control electronics
- High operational safety by multi-layer diaphragm technology
- Checking of the diaphragm by permanent and automatic diaphragm rupture monitoring
- Integral overpressure safety device
- Excellent priming characteristics without additional equipment
- Easy commissioning with "Plug & Dose" standard configuration
- High application security with viscous media due to slow-mode technology



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Controllable piston diaphragm pump type C 409.2

Functions of the control electronics

Function

Manual operation
Manual stroke frequency adjustment
PROFIBUS DP - Interface
External ON
External STOP
Pulse operation
Fractionation
Cycle delay
Analogue operation (PROFIBUS)
Analogue operation 0 – 20 mA ¹⁾
Analogue operation 4 – 20 mA ¹⁾
Analogue operation standardization ¹⁾
Charge manual ¹⁾
External charge START
Charge with timer ¹⁾
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 (PLC) ¹⁾
1 digital input (PLC or contact signal) ¹⁾
2 analogue / digital inputs (optionally reversible) ¹⁾
Programmable input/output functions ¹⁾
Connection / evaluation 2-stage level monitoring
Connection / evaluation diaphragm rupture monitoring
Connection / evaluation flow monitoring
Connection / evaluation flow metering
Operating panel for wall mounting (option)

¹⁾ inapplicable when supplied with PROFIBUS DP-interface

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Piston diaphragm pump

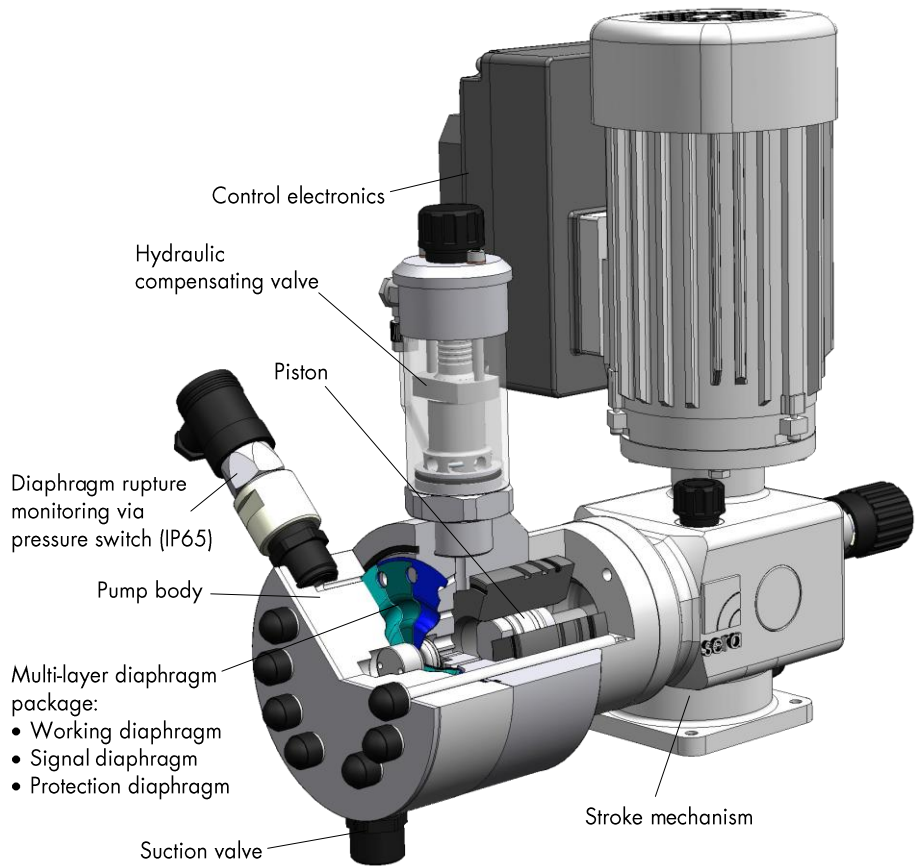
The stroke movement of the mechanically coupled piston is transferred hydraulically to the multi-layer diaphragm.

An integral compensation valve ensures highest dosing accuracy and offers highest overload protection.

In case of unacceptably high counterpressure the hydraulic fluid escapes into the compensating valve.

By using the multi-layer diaphragm these pumps can now handle dosing tasks with higher requirements regarding safety because the diaphragm rupture signalisation (pressure switch, manometer etc.) fulfils such demands.

Furthermore the lifetime of these diaphragms is much higher than the lifetime of single layer diaphragms.



Technical data

Pump type	Nominal capacity		max. counter-pressure p_2 max.	max. suction height [mWC]	Inlet/Outlet size DN [mm]	Driving power (motor) P_M [kW]	Nominal stroke-frequency 50/60Hz [l/h]
	50/60Hz [l/h]	Q_{stroke} [ml/Stroke]					
C 409.2							
C 409.2 – 07,5KM	0 – 07,5	0 – 1,25	80	2	10	0,37	150
C 409.2 – 010KM	0 – 010	0 – 1,1	80	2	10	0,37	150
C 409.2 – 012KM	0 – 012	0 – 2	70	2	10	0,37	100
C 409.2 – 018KM	0 – 018	0 – 2	50	2	10	0,37	150
C 409.2 – 030KM	0 – 030	0 – 5	35	2	10	0,37	100
C 409.2 – 045KM	0 – 045	0 – 5	25	3	10	0,37	150
C 409.2 – 070KM	0 – 070	0 – 11,6	20	3	15	0,37	100
C 409.2 – 095KM	0 – 095	0 – 10,6	16	3	15	0,37	150
C 409.2 – 135KM	0 – 135	0 – 22,5	10	3	15	0,37	100
C 409.2 – 190KM	0 – 190	0 – 21,1	8	3	15	0,37	150

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Electrical data (electronics)

- Operating voltage (50/60 Hz): 1~115 V ²⁾;
1~230 V;
3~400 V/N/PE ³⁾
- Inlet voltage control input: 5...30 V DC
- Minimum contact signal time ⁴⁾: 55 ms
- Analogue input resistance ⁴⁾: 100 Ω
- Digital Output ⁴⁾: PNP,
internal supply:
max. 15V DC, 50 mA
external supply:
max. 30V DC, 350 mA
- Pump protection type: IP 65
- Insulation class: F
- Permitted ambient temperature: +2°C to +40°C
- Permitted humidity: approx. 90%

Option PROFIBUS

- PROFIBUS DP-V0 Slave Interface
- Transmission rate: 9,6 kbit/s ... 12 Mbit/s
- Connection socket M12x1, 5-pole, B-coded

²⁾ Series C 410.2 is not available for 115V-voltage

³⁾ For series C 410.2 with driving power 0,75 and 1,5 kW

⁴⁾ Inapplicable when supplied with PROFIBUS DP-interface

Materials

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

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:

PTFE (3-ply)

* 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.

Accessories

- Control cable
- Flow controller
- Flow meter
- PROFIBUS Y - connector
- PROFIBUS T - connector
- PROFIBUS termination resistor



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.

Local **sera** - Representative:

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