

Diaphragm pumps



The new 4 series

robust, durable, versatile, economic...

sera - diaphragm pumps

of series 409.2 and 410.2 are oscillating displacement pumps for dosing and feeding liquids in a variety of industries.

Performance range between 0,4 l/h and 1450 l/h, pressures up to max. 10 bar.

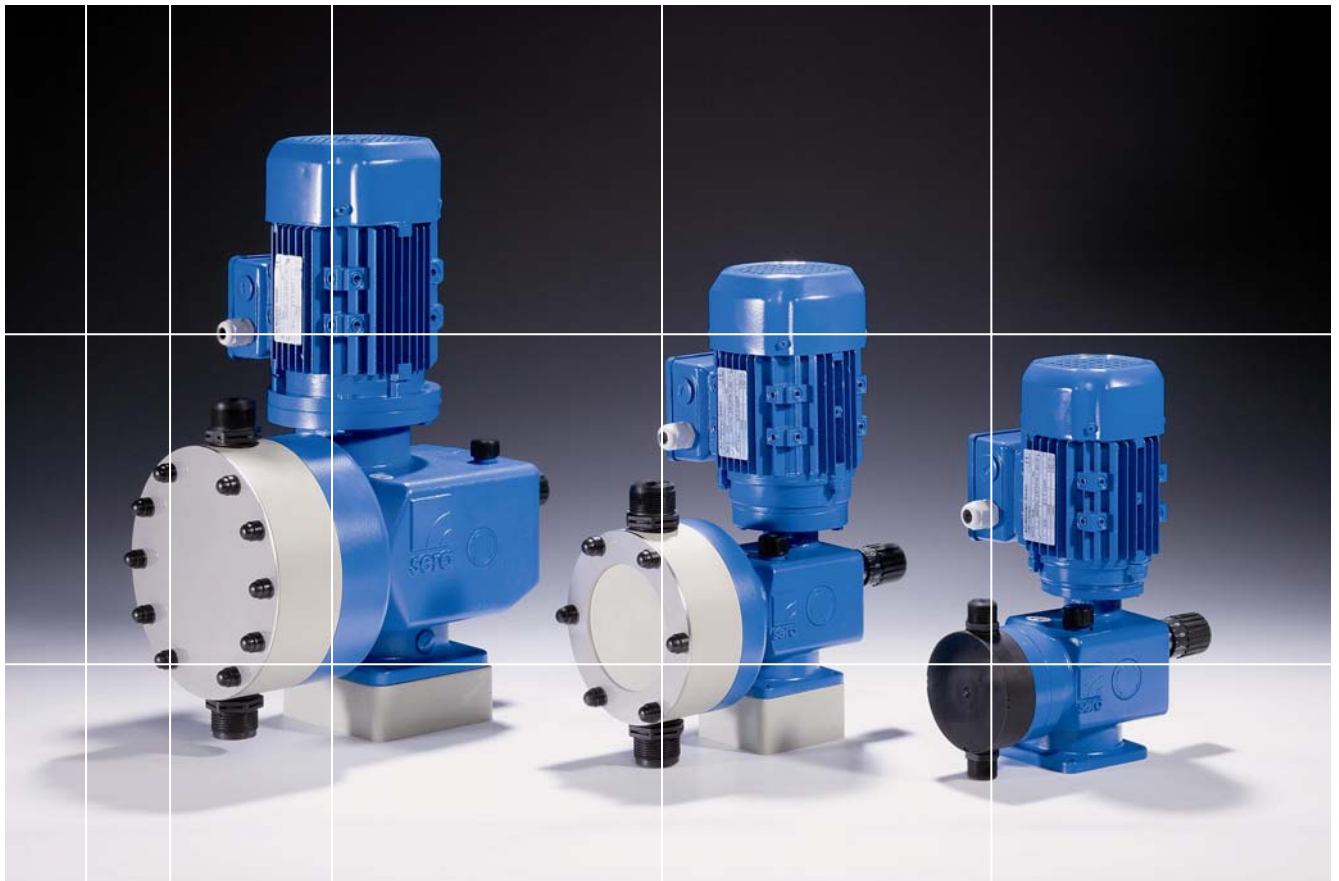
Application

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

...further features of performance

- high dosing accuracy
- long service life of diaphragms*
- high-quality materials
- linear control characteristic
- low maintenance
- low operating expenses
- leakage-free
- unlimitedly to run dry
- easy to operate
- designs according to ATEX
- low weight

* compared to common conventional diaphragms



Diaphragm pumps

Design options

The single pump has one head – technical data according to the performance schedule.

Multi headed or combination pumps with a single drive are reasonably priced – combination pumps with each pump head sized individually according to the requirements in respect of material, size and control.

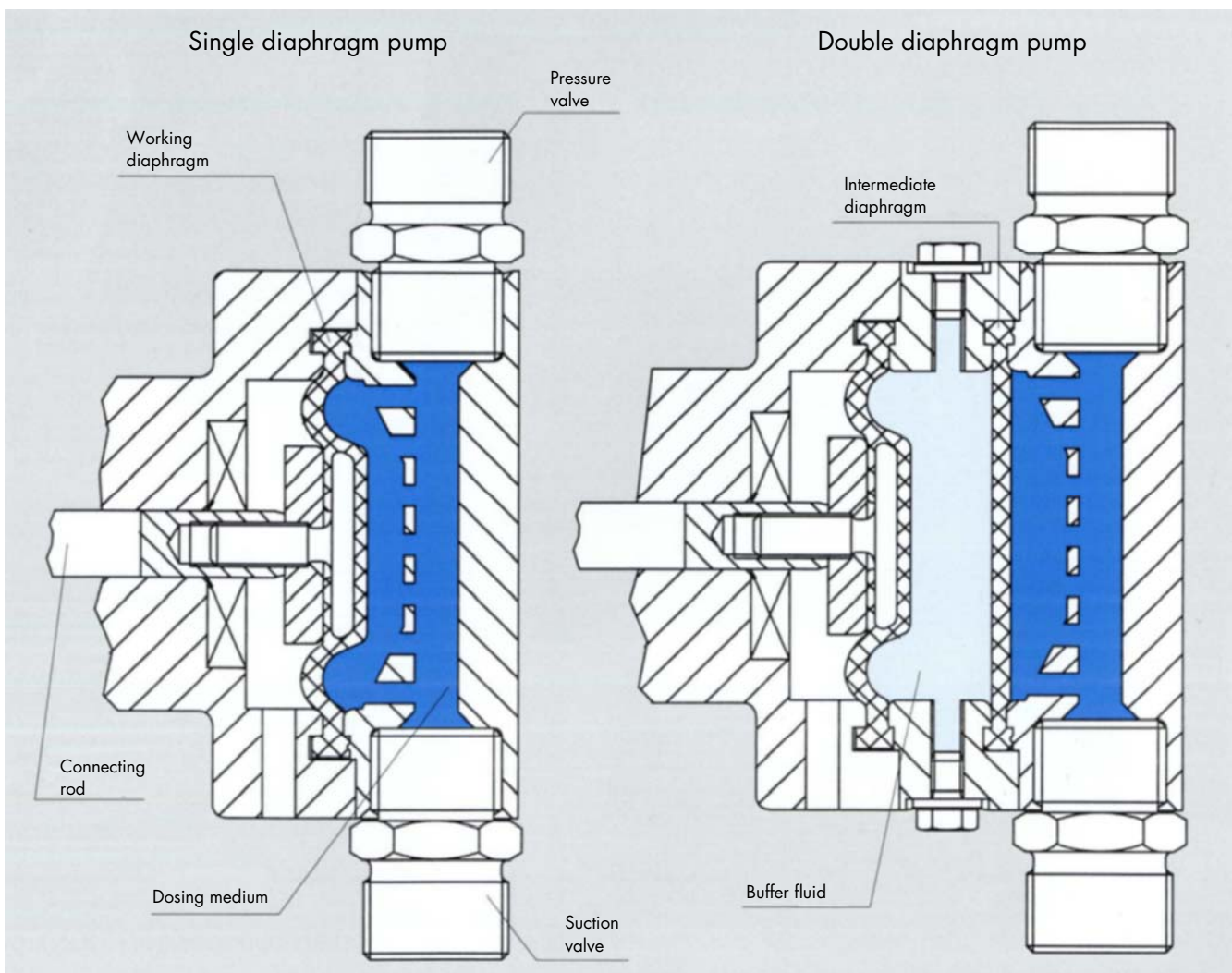
Single diaphragm pump

The mechanically coupled working diaphragm acts directly upon the chemical.

Double diaphragm pump

In order to protect the working diaphragm from chemical attack and for additional safety an intermediate diaphragm is fitted. The action of the working diaphragm is transferred hydromechanically (via a buffer fluid) to the intermediate diaphragm.

This construction principle is well-known today – but originally a sera - patent!



Diaphragm pumps



sera

Seybert & Rahier

Technical Data

Serie 409.2

Pump type	Nominal capacity		max. counter-pressure p_2 max. [bar]	max. suction height [mWC]	Inlet-/Outlet-size DN [mm]	Driving power (motor) P_M [kW]	Nominal stroke frequency	
	Q_N 50 Hz	Q_N 60 Hz					n_N 50 Hz	n_N 60 Hz
	[l/h]	[l/h]					[min ⁻¹]	[min ⁻¹]
R 409.2 – 0,4e	0 – 0,4	0 – 0,48	10	2	4	0,18	50	60
R 409.2 – 0,8e	0 – 0,8	0 – 0,96	10	2	5	0,18	100	120
R 409.2 – 1,6e	0 – 1,6	0 – 1,9	10	3	5	0,18	100	120
R 409.2 – 2,4e	0 – 2,4	0 – 2,9	10	3	5	0,18	150	180
R 409.2 – 4,0e	0 – 4,0	0 – 4,8	10	3	5	0,18	100	120
R 409.2 – 7,0e	0 – 7,0	0 – 8,4	10	3	5	0,18	150	180
R 409.2 – 12e	0 – 12	0 – 14,4	10	3	10	0,18	67	80
R 409.2 – 18e	0 – 18	0 – 21,5	10	3	10	0,18	100	120
R 409.2 – 25e	0 – 25	0 – 30	10	3	10	0,18	150	180
R 409.2 – 50e	0 – 50	0 – 60	10	3	10	0,18	100	120
R 409.2 – 75e	0 – 75	0 – 90	10	3	15	0,18	150	180
R 409.2 – 90e	0 – 90	0 – 108	8	3	15	0,37	100	120
R 409.2 – 115e	0 – 115	0 – 138	4	3	15	0,18	100	120
R 409.2 – 140e	0 – 140	0 – 168	8	3	15	0,37	150	180
R 409.2 – 180e	0 – 180	0 – 216	4	3	15	0,18	150	150
R 409.2 – 250e	0 – 250	0 – 300	3	3	15	0,37	100	120
R 409.2 – 350e	0 – 350	–	3	3	15	0,37	150	–

Serie 410.2

Pump type	Nominal capacity		max. counter-pressure p_2 max. [bar]	max. suction height [mWC]	Inlet-/Outlet-size DN [mm]	Driving power (motor) P_M [kW]	Nominal stroke frequency	
	Q_N 50 Hz	Q_N 60 Hz					n_N 50 Hz	n_N 60 Hz
	[l/h]	[l/h]					[min ⁻¹]	[min ⁻¹]
R 410.2 – 200e	0 – 200	0 – 240	8	5	15	0,75	76	91
R 410.2 – 280e	0 – 280	0 – 336	8	5	15	0,75	97	116
R 410.2 – 450e	0 – 450	0 – 480	6	5	15	0,75	76	91
R 410.2 – 570e	0 – 570	0 – 680	6	5	15	0,75	97	116
R 410.2 – 700e	0 – 700	0 – 840	5	3	20	0,75	76	91
R 410.2 – 900e	0 – 900	0 – 1080	5	3	20	0,75	97	116
R 410.2 – 1100e	0 – 1100	0 – 1320	5	3	25	1,5	76	91
R 410.2 – 1450e	0 – 1450	–	5	3	25	1,5	97	–

Diaphragm pumps



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:

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.

Control

The capacities of the sera – diaphragm pumps are constant or infinitely variable.

Manual capacity control via:

- Adjustment of the stroke length

Automatic capacity control, dependent on analogue or digital input signals via:

- Three-phase motors with frequency converters
- Actuators with position controllers for adjusting the stroke length

Special designs

For special dosing problems we offer individual solutions:

Pump heads with special nominal bores, heating devices, etc.

Double valve assemblies, spring loaded, with elastic seats, etc.

Flushing devices for intermittent and final cleaning to prevent sedimentation in the pump body.

Stroke transmitting device, diaphragm rupture alarm.

Accessories

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



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Dosing
Feeding
Compressing

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