

Diaphragm pumps

DR (DM) 409.1-...(e)



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Seybert & Rahier

sera-Diaphragm pumps

are leakproof oscillating displacement pumps for volumetric dosing up to (3x) 190 l/h and max. 10 bar depending on the flow capacity.



Application

Free-flowing media with aggressive, odorous, abrasive, radioactive, flammable, viscous or toxic properties.

Advantages

- Completely leakproof
- Optimum dosing precision
- Completely safe if run dry
- Capable of continuous operation with low maintenance
- High quality materials
- High operational safety

The new diaphragm pump series DR (DM) 409.1-...(e) extends the range of **sera** - dosing pumps which has been successful for decades.

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Single diaphragm pump

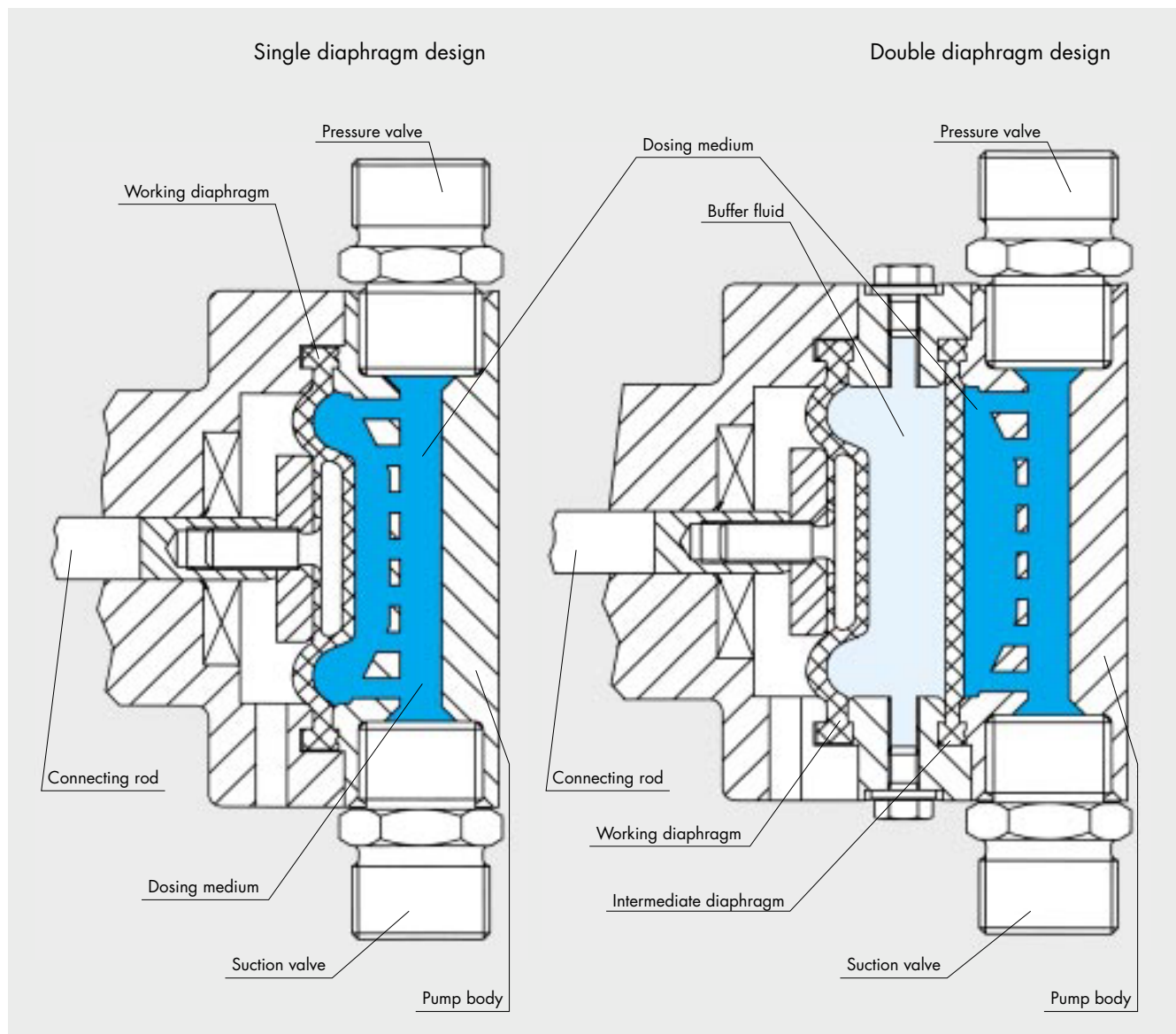
The mechanically coupled working diaphragm acts directly upon the chemical.

These triplex pumps are equipped with only one drive motor and are therefore an economic alternative to single pumps.

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 to the intermediate diaphragm.

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



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| Pump type | Nominal capacity adjustable by changing stroke length or stroke frequency | | Maximum permissible pressure at outlet of pump | Maximum suction height | Inlet- / Outlet nominal size | Nominal stroke frequency | Maximum stroke length |
|------------------|---|---------------------------------|--|------------------------|------------------------------|--------------------------|-----------------------|
| | Q _N [l/h] with 50 Hz | Q _N [l/h] with 60 Hz | p ₂ max. [bar] | [mWC] | DN [mm] | n _N [1/min] | h ₁₀₀ [mm] |
| DR 409.1- 18 (e) | 3 x 0- 18 | 3 x 0- 21,5 | 10 | 3 | 8 | 100 | 6 |
| DR 409.1- 27 (e) | 3 x 0- 27 | 3 x 0- 27 | 10 | 3 | 8 | 160 | 6 |
| DR 409.1- 50 (e) | 3 x 0- 50 | 3 x 0- 60 | 10 | 3 | 8 | 100 | 8 |
| DR 409.1- 75 (e) | 3 x 0- 75 | 3 x 0- 75 | 10 | 3 | 15 | 160 | 8 |
| DR 409.1- 90 (e) | 3 x 0- 90 | 3 x 0-108 | 8 | 3 | 15 | 100 | 10 |
| DR 409.1-115 (e) | 3 x 0-115 | 3 x 0-138 | 4 | 3 | 15 | 100 | 10 |
| DR 409.1-150 (e) | 3 x 0-150 | 3 x 0-150 | 8 | 3 | 15 | 160 | 10 |
| DR 409.1-190 (e) | 3 x 0-190 | 3 x 0-190 | 4 | 3 | 15 | 160 | 10 |
| DM 409.1- 18 (e) | 3 x 18 | 3 x 21,5 | 10 | 3 | 8 | 100 | 6 |
| DM 409.1- 27 (e) | 3 x 27 | 3 x 27 | 10 | 3 | 8 | 160 | 6 |
| DM 409.1- 50 (e) | 3 x 50 | 3 x 60 | 10 | 3 | 8 | 100 | 8 |
| DM 409.1- 75 (e) | 3 x 75 | 3 x 75 | 10 | 3 | 15 | 160 | 8 |
| DM 409.1- 90 (e) | 3 x 90 | 3 x 108 | 8 | 3 | 15 | 100 | 10 |
| DM 409.1-115 (e) | 3 x 115 | 3 x 138 | 4 | 3 | 15 | 100 | 10 |
| DM 409.1-150 (e) | 3 x 150 | 3 x 150 | 8 | 3 | 15 | 160 | 10 |
| DM 409.1-190 (e) | 3 x 190 | 3 x 190 | 4 | 3 | 15 | 160 | 10 |

The flow capacity with the DR...-designs is adjustable via the stroke length adjustment at the stroke mechanism. ("R" in the type designation means: adjustable).

The flow capacity with the DM...-designs is constant. ("M" in the type designation means: not adjustable).

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Materials

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

Pump head and valves:
PVC, PP, PP-FRP, PVDF, PVDF-FRP, 1.4571,
1.4571/1.4581

Valve balls:
Glass, PTFE, 1.4401, Hastelloy

Valve seals:
EPDM, FPM, FEP-covered, PTFE-covered

Working diaphragm:
EPDM, FPM (Viton), PTFE-faced

Intermediate diaphragm:
CSM, FPM (Viton), PTFE, PTFE-faced

* Please ask us for any material required
but not mentioned here.

Drive

The drive unit consists of a proven motor coupled to a stroke mechanism in a robust cast iron housing.

sera-cast iron housings can cope with even extreme operating conditions due to the thickness of the material and the surface treatment. They resist even chemical attack.

Control

The capacities of the dosing pumps are constant or infinitely variable.

Manual capacity control via:

- Adjustment of stroke length
- Adjustment of stroke frequency
- Adjustment of stroke length and stroke frequency

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

- Threephase motors with frequency converters to change the stroke frequency
- Actuators with position controllers for adjusting the stroke length

Special designs

For special dosing tasks we offer individual solutions:

Pump heads with special nominal widths, 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 with monitoring signal etc.

Accessories

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

CE

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Dosing
Feeding
Compressing

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