Piston pumps

TÜV CERT DIN EN ISO 9001 12 100 8443

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sera - Piston pumps

for displacing a defined volume up to 175 l/h and 180 bar – depending on the capacity – are oscillating displacement pumps.

Application

Non-abrasive or non-hazardous pure liquids.

Advantages

- Highest dosing accuracy
- Wide pressure range
- Little wear and tear
- Trouble-free continous operation
- High quality materials
- High operational reliability

Ask us to submit a quotation to meet your specific requirements!

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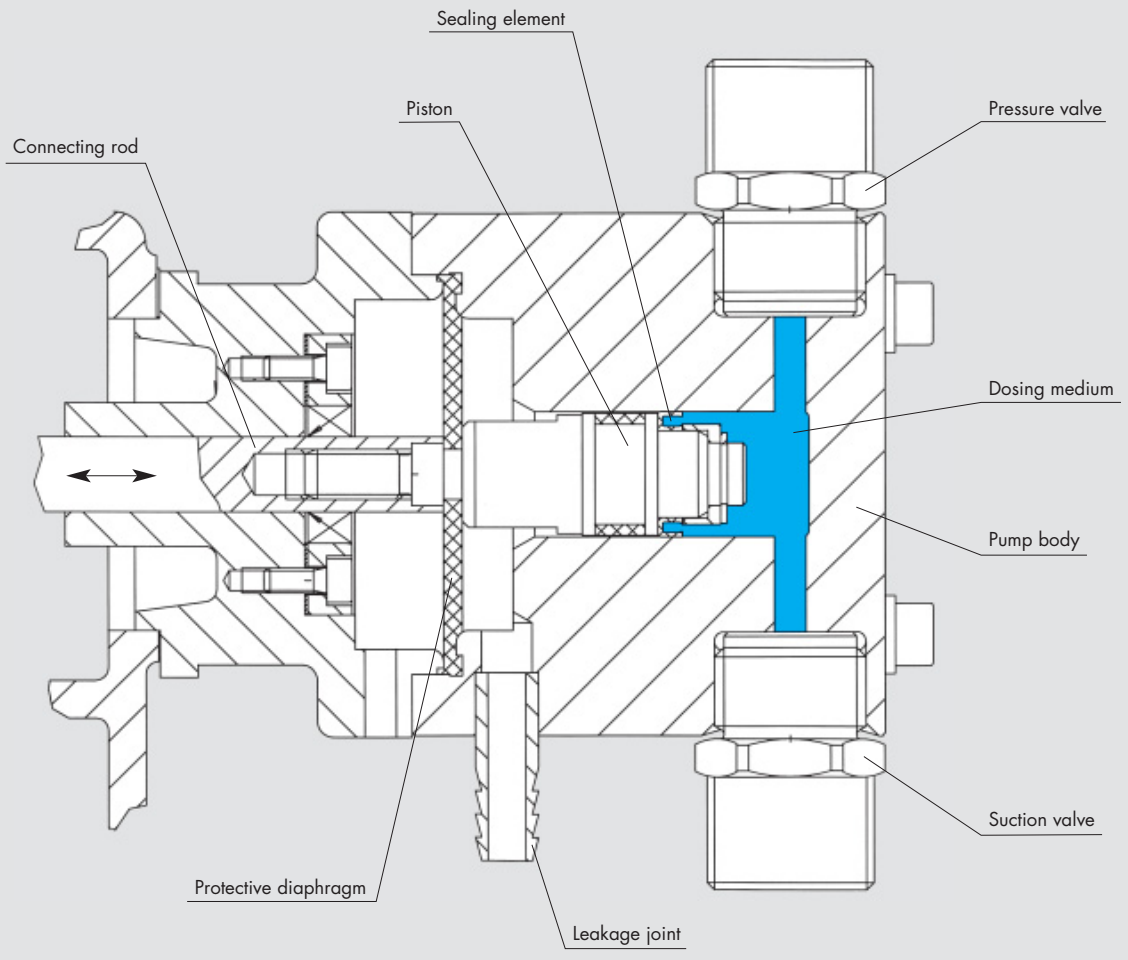
Designs

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 twin or multi-headed pumps with each pump head sized individually according to the requirements in respect of material, size and control.

The pump must be provided with a protection against running dry.
Therefore commissioning of the pumps is only advisable with the suction line filled completely.
Otherwise the piston seal is likely to be damaged.

With this construction the sealing of the piston is ensured by a spring-elastic sealing element.



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Pump type	Nominal capacity Q_N 50 Hz [l/h]	Q_N 60 Hz [l/h]	Max. counter-pressure p_2 max. [bar]	Maximum suction height [mWC]	Nominal width Inlet / Outlet DN [mm]	Motor size P_M [kW]	Nominal stroke frequency n_N at 50 Hz [min^{-1}]	n_N at 60 Hz [min^{-1}]
R 409.1-7 K.1 / 14	0 – 7	0 – 8.4	80	3*	10	0.18	100	120
R 409.1-8,5 K.1 / 14	0 – 8.5	0 – 10.2	140	3*	10	0.37	100	120
R 409.1-11 K.1 / 14	0 – 11	0 – 11	80	3*	10	0.18	160	160
R 409.1-13 K.1 / 14	0 – 13	0 – 13	140	3*	10	0.37	160	160
R 409.1-14 K.1 / 20	0 – 14	0 – 16.8	40	3*	10	0.18	100	120
R 409.1-17 K.1 / 20	0 – 17	0 – 20.4	80	3*	10	0.37	100	120
R 409.1-22 K.1 / 20	0 – 22	0 – 22	40	3*	10	0.18	160	160
R 409.1-26 K.1 / 20	0 – 26	0 – 26	80	3*	10	0.37	160	160
R 409.1-28 K.1 / 28	0 – 28	0 – 33.6	20	3*	10	0.18	100	120
R 409.1-34 K.1 / 28	0 – 34	0 – 40.8	40	3*	10	0.37	100	120
R 409.1-44 K.1 / 28	0 – 44	0 – 44	20	3*	10	0.18	160	160
R 409.1-52 K.1 / 28	0 – 52	0 – 52	40	3*	10	0.37	160	160
R 409 K.1 – 14 ss / 160	0 – 10	0 – 10	160	2*	5	0.37	85	85
R 409 K.1 – 20 ss / 160	0 – 20	0 – 20	160	2*	5	0.37	85	85
R 409 K.1 – 28 ss / 80	0 – 40	0 – 40	80	2*	5	0.37	85	85
RK 409 K.1 – 14 sss / 180	0 – 10	0 – 10	180	2*	5	0.75	85	85
RK 409 K.1 – 20 sss / 180	0 – 20	0 – 20	180	2*	5	0.75	85	85
RK 409 K.1 – 28 sss / 150	0 – 40	0 – 40	150	2*	5	0.75	85	85
R 411 K.1 – 40 / 20	0 – 90	0 – 90	20	2*	10	0.37	140	140
R 411 K.1 – 56 / 10	0 – 180	0 – 180	10	2*	10	0.37	140	140
R 411 K.1 – 40 s / 40	0 – 80	0 – 80	40	2*	10	0.37	85	85
R 411 K.1 – 56 s / 20	0 – 160	0 – 160	20	2*	10	0.37	85	85
RK 411 K.1 – 40 ss / 80	0 – 80	0 – 80	80	2*	10	0.75	85	85
RK 411 K.1 – 56 ss / 40	0 – 160	0 – 160	40	2*	10	0.75	85	85
MK 411 K.1 – 40 c / 160	85	85	160	2*	10	1.5	85	85
RK 411 K.1 – 40 c / 160	17 – 85	17 – 85	160	2*	10	1.5	85	85
MK 411 K.1 – 56 c / 80	175	175	80	2*	10	1.5	85	85
RK 411 K.1 – 56 c / 80	35 – 175	35 – 175	80	2*	10	1.5	85	85

*Please note instructions for initiation.

Pump heads made of plastic material can only be used up to a max. pressure of 10 bar.

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Materials

The high quality of the materials ensures continuous and reliable operation.

- Pump head:
  1.4122 V
- Valves:
  1.4571, 1.4571 / 1.4581
- Valve ball:
  1.4401
- Valve seals:
  EPDM, FPM, FEP-covered
- Piston:
  1.4571
- Piston seal:
  PTFE / PE
- Protective diaphragm:
  CR

Drive

The drive is a proven motor coupled to a stroke mechanism in a robust cast iron housing which can cope with even the most extreme operating conditions.

Depending on the size of the pump the stroke mechanisms are spring cam or slider crank-type.

Control

In standard design the capacity is normally altered manually by adjusting the stroke length.

Whilst using the full stroke length the maximum capacities quoted can be reduced by fitting special motors with lower output speeds (nominal stroke frequency of pump).

Manual capacity control via:

- Adjustment of stroke length
- Adjustment of nominal stroke frequency

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

- Threephase motors with frequency converter for changing the nominal stroke frequency
- Actuators with position controllers for adjusting the stroke length

Accessories

All accessories required for the optimum installation of dosing pumps, such as valves, pulsation dampers, dosing valves, dosing tanks, flow controllers, etc. can be ordered at **sera**.

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