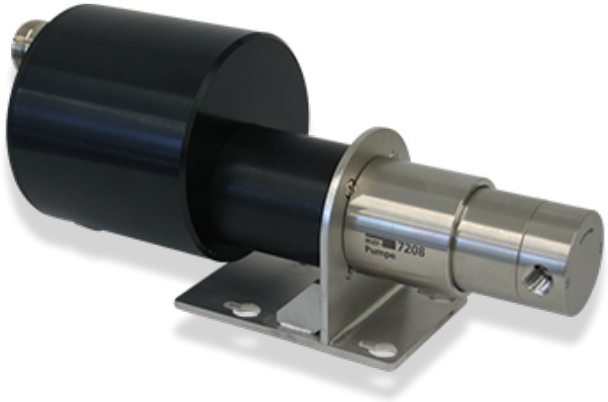
Product information

mzr-7208X1 · High performance pump series



Description

The micro annular gear pump mzr-7208X1 covers the flow rate range 0.048-288 ml/min. To the main assets of the device belong high precision, low pulsation, low volume dosage even of non-lubricating liquids or at high pressures. Driven by a high-power DC-servomotor the pump allows dosage in a broad viscosity range and shows small, economic dimensions. The mzr-7208X1 targets applications in industrial production and process technology. The pump has been designed for continuous delivery and discrete dosage of water, watery solutions, solvents, methanol, oil, lubricants, adhesives, inks and paints as well as other high viscosity liquids.

Advantages

- High dosage precision precision CV < 1% at low volumes
- High differential pressures achievable even for low viscosity liquids
- Long service life wear-resistant tungsten carbide
- Broad viscosity range methanol, water, solvents, adhesives, grease, gel
- Compact dimensions length 211 mm
- Dynamic precision motor brushless DC-motor with encoder
- Low pulsation delivery, low shear stress rotary micro annular gear technology

Applications

- Industrial and plant engineering
- Packaging
- Medical and pharmaceutical industry
- Spraying
- Dispensing of adhesives
- Ink and paint dosage
- Vacuum applications
- Mini plant technology
- Chemical processing

Technical data

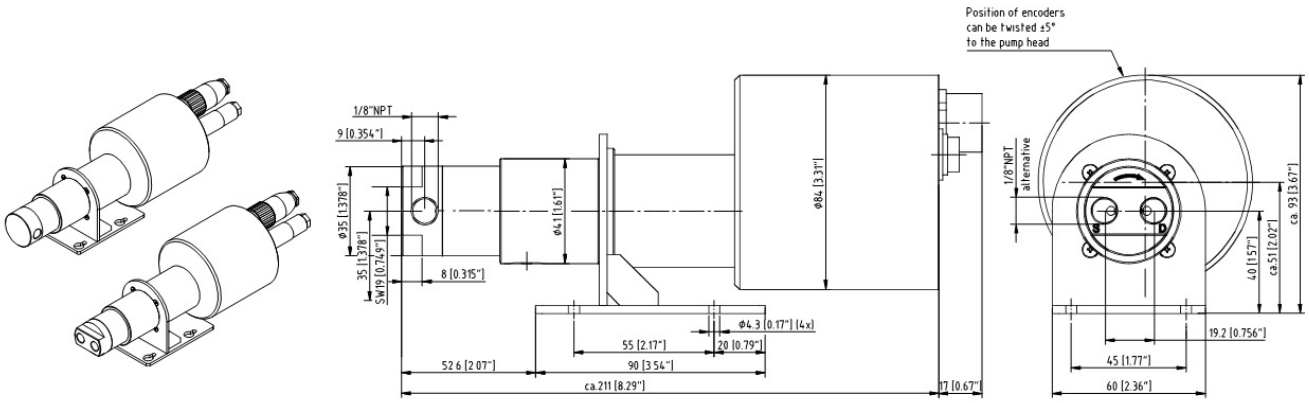
Flow rate	0.048 - 288 ml/min
Smallest dosage volume	30 µl
Displacement volume	48 µl
Differential pressure range	0 – 120 bar (1,740 psi)
Maximum inlet pressure	5 bar (73 psi)
Liquid temperature range	-5 ... +60 °C (-20 ... +150 °C *) +23 ... +140 °F (-4 ... +302 °F *)
Viscosity range	0.3 – 1,000,000 mPas
Precision CV	< 1% (Coefficient of variation CV)
Velocity range	1 - 6,000 rpm
Fluid connection	1/8" NPT internal thread, lateral; optional: 1/8" NPT internal thread, frontal
Wetted parts	stainless steel 316L (1.4404, 1.4435), tungsten carbide Ni-based; shaft seal: graphite-reinforced PTFE, 316; static seals: FPM, optional: EPDM, FFPM
Motor	brushless DC-servomotor, IP 54, winding 36 V DC, output power 201 W, max. continuous torque 192 mNm
Encoder	1000 counts per turn, analog hall sensors
Dimensions (L x W x H)	211 x 84 x 93 mm
Weight	approx. 2,100 g
Remarks	* depending on accessories, Customized solutions on request.

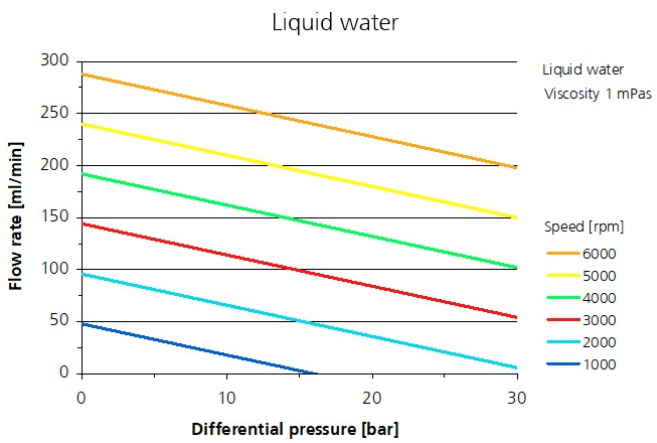
Notice
Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme. Actual performance may vary. Specifications are subject to change without notice. This document is subject to change without notice.

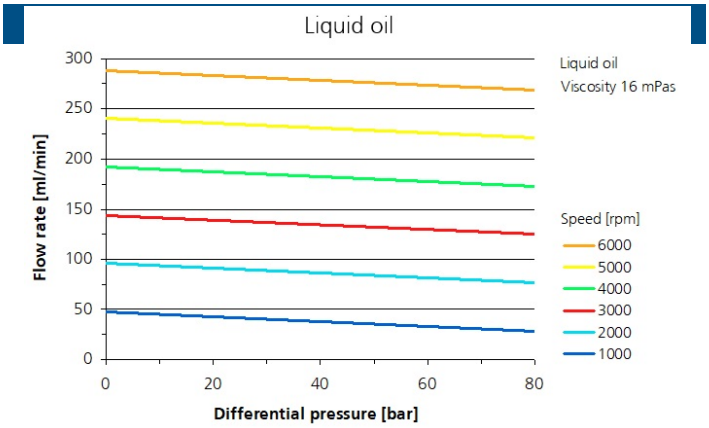
Accessories

- mzr-Touch Control
- S-BL
- Reservoir Plastic
- Double shell heating module
- S-F10
- Heat insulation module
- Electrical heating module
- Flange connection HYG

Dimensions







Patents and trademarks

Our products are protected by the following national and international patents: DE 10 2018 129 631.2 B3; EP 3 884 162; CN 113 302 399 B; DE 10 2018 129 633.9 B3; EP 3 884 160; CN 113 272 553 B; DE 10 2018 129 634.7 B3; EP 3 884 527; DE 10 2018 129 635.5 B3; EP 3 762 165; DE 10146 793.1; EP 1 354 135 B1; US 7,698,818 B2; DE 10 2011 051 486 B4; EP 2 726 740 B1; US 9,404,492 B2; CN 103 732 921B; EP 2 640 977 B1; US 10,012,220 B2; CN 103 348 141 B; HK 1 185 648 B.
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