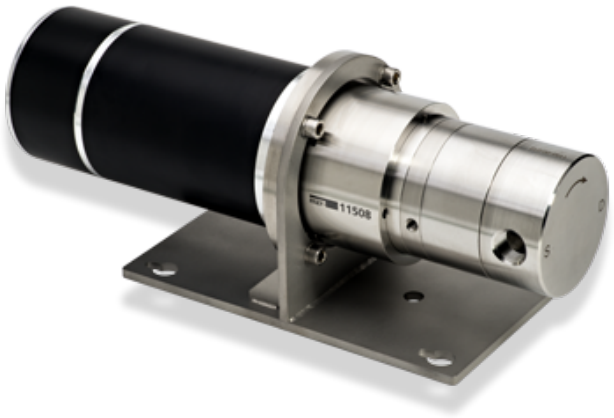
Product information

mzr-11508 · High performance pump series



Description

The micro annular gear pump mzr-11508 is equipped with tungsten carbide rotors and bearings. Hard construction material and precision manufacturing techniques guarantee excellent dosage precision, high service life and wear resistance for low volume dosage of non-lubricating liquids. Driven by a high-power DC-motor the pump has a compact design and covers the flow range from 0.19 ml/min to 1152 ml/min. The mzr-11508 is suitable for continuous delivery and discrete dosage of low and high viscosity liquids. It achieves high differential pressures and provides a low pulsation flow. Its robustness and the available accessories make it suitable for challenging applications.

Advantages

- High dosage precision precision CV < 1% at low volumes
- Long service life wear-resistant tungsten carbide
- Broad viscosity range methanol, water, solvents, adhesives, grease, gel
- Dynamic precision motor brushless DC-motor with encoder
- Compact dimensions length 313 mm
- High differential pressures achievable even for low viscosity liquids
- 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

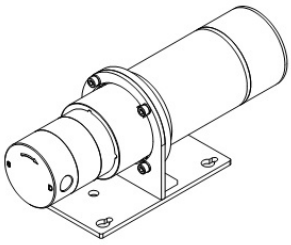
Flow rate	0.19 - 1,152 ml/min
Smallest dosage volume	100 µl
Displacement volume	192 µl
Differential pressure range	0 – 100 bar
Maximum inlet pressure	10 bar
Liquid temperature range	-5 ... +60 °C (-20 ... +120 °C *) (+23 ... +140 °F (-4 ... +248 °F))
Viscosity range	0.3 - 150,000 mPas
Precision CV	< 1% (Coefficient of variation CV)
Velocity range	1 - 6,000 rpm
Fluid connection	3/8" NPT internal thread, lateral optional 3/8" NPT internal thread, frontal
Wetted parts	stainless steel 316L (1.4435), tungsten carbide Ni-based; shaft seal: graphite-reinforced PTFE, alloy C276 (2.4819); static seals: FPM, optional: EPDM, FFPM
Motor	Brushless DC-motor, IP 54, 42 V DC, max. 368 W
Encoder	500 counts per turn, type HEDL 5640
Electrical connection	motor cable length 3 m, 6-pole plug for motor winding, 12-pole plug for encoder and hall sensors
Dimensions (L x W x H)	313 x 110 x 125 mm
Weight	approx. 8,000 g
Remarks	* with optional heat insulation or heating module, Customized solutions on request.

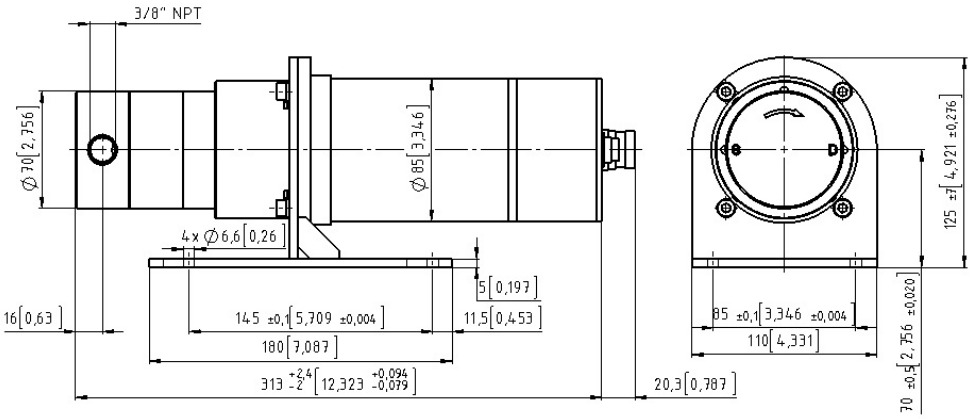
Notice
Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme. Actual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

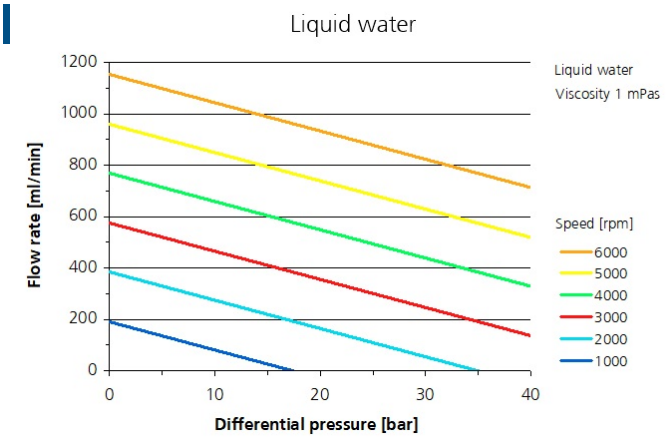
Accessories

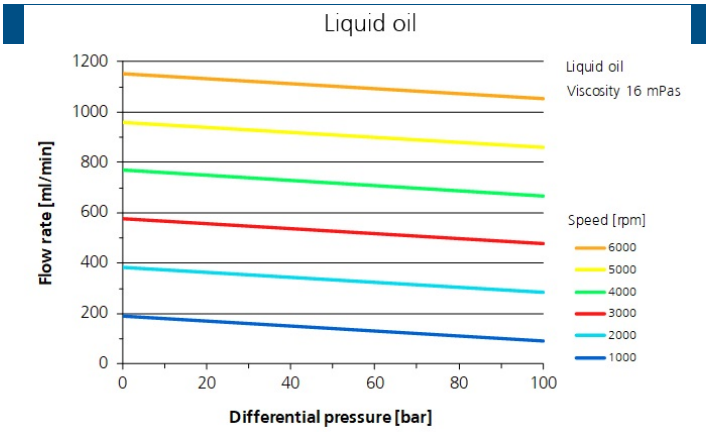
- Heat insulation module
- Electrical heating module
- Flange connection HYG
- S-HP-E
- Reservoir Plastic
- Double shell heating module
- S-F10
- S-HV12

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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