Product information

mzr-11558X1 · Hermetic inert pump series

Description

The mzr-11558 micro annular gear pump of the hermetic and chemically inert series is, considering its almost universal suitability for aggressive and corrosive media, a revolution in the pump technology. Its rotors and functional elements being made of ceramics, the pump shows the highest chemical resistance and an outstanding resistance to wear. Thanks to the use of ceramics as bearing and shaft material, a magnetic coupling, and case components made out of alloy C22 (DIN 2.4602), this pump will take up any challenge in the chemical industry applications.

Advantages

- High resistance to corrosion oxidizing and reducing media, acids and bases
- Hermetically sealed magnetic coupling (NdFeB)
- Long service life wear-resistant tungsten carbide
- Chemically inert pump head alloy C22, SSiC, Al2O3 and ZrO2-ceramics
- Dynamic precision motor brushless DC-motor with encoder
- High differential pressures achievable even for low viscosity liquids
- Precise dosage, low pulsation rotary micro annular gear technology, no valves

Applications

- Flow chemistry
- Microreaction technology
- Mini plant technology

Technical data

Flow rate	0.192 - 768 ml/min
Smallest dosage volume	100 µl
Displacement volume	192 µl
Maximum system pressure	60 bar (870 psi) (200 bar (2900 psi) *) (inlet pressure + differential pressure)
Differential pressure range	0 – 20 bar (290 psi) (depending on liquid and viscosity)
Liquid temperature range	-5 ... +60 °C (-20 ... +100 °C *)
Viscosity range	0.3 - 1000 mPas
Precision CV	< 1% (Coefficient of variation CV)
Velocity range	1 - 4000 rpm
Fluid connection	3/8" NPT internal thread, lateral
Wetted parts	Pump case alloy C22 (2.4602), optional: stainless steel 316L; seals FFPM (Kalrez® Spectrum™ 6375), optional: FPM, EPDM; shaft sintered silicon carbide (SSiC); bearing and wetted functional parts Al2O3 ceramics; rotors TAZ composite ceramics, optional: tungsten carbide Ni-based
Motor	brushless DC-motor, IP 54, 36 V DC, max. 201 W
Electrical connection	motor cable length 2 m, 6-pole plug for motor winding, 5-pole plug for hall sensors
Dimensions (L x W x H)	257 x 130 x 129 mm
Weight	approx. 8300 g
Remarks	* with optional heat insulation module, Customized solutions on request.

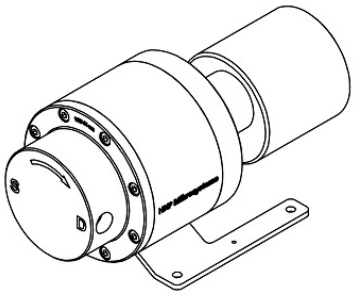
Notice

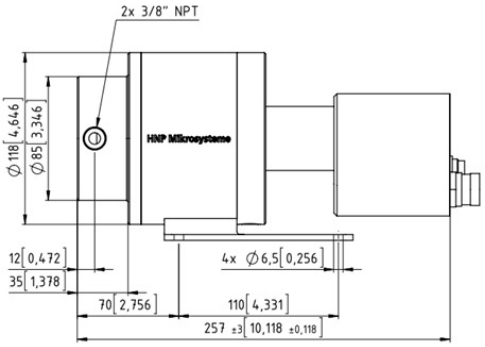
Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme. Actual performance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

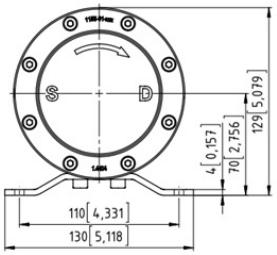
Accessories

- Heat insulation module
- S-BL
- mzr-Touch Control
- Flange connection HYG
- S-F10

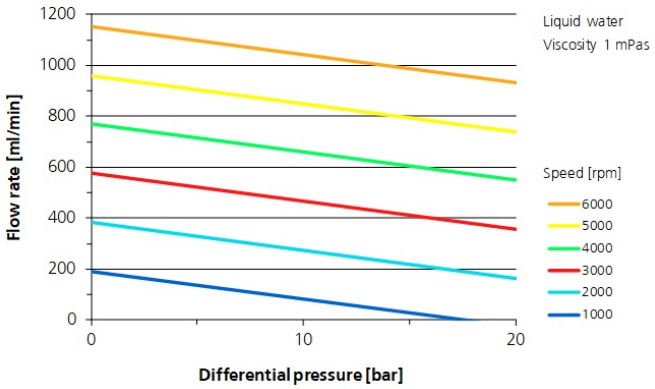
Dimensions



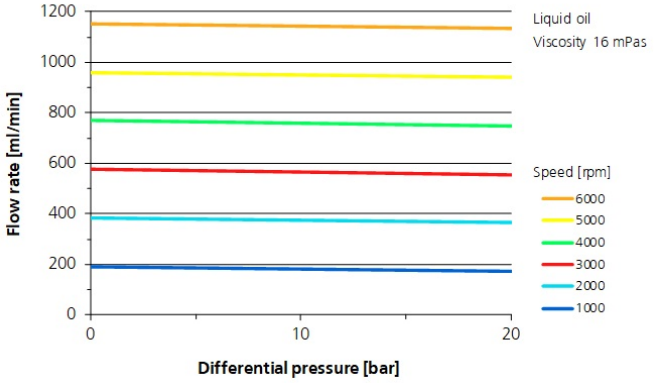




Liquid water



Liquid oil



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.
HNPM®, mzr®, MoDoS®, µ-Clamp®, µDispense®, LiquiDoS®, smartDoS®, colorDoS®, MSM®, are registered German trademarks of HNP Mikrosysteme GmbH.

Contact

HNP Mikrosysteme GmbH
Bleicherufer 25
19053 Schwerin
Germany

T +49 385 52190-300
F +49 385 52190-333
sales@hnp-mikrosysteme.de

Last update 2026/04