

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, SiC, 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. |

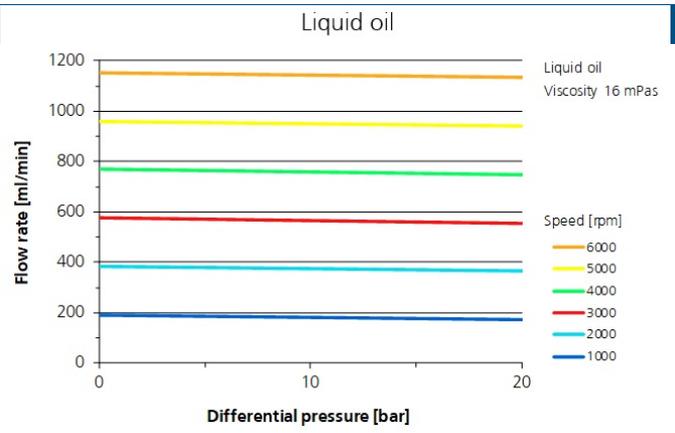
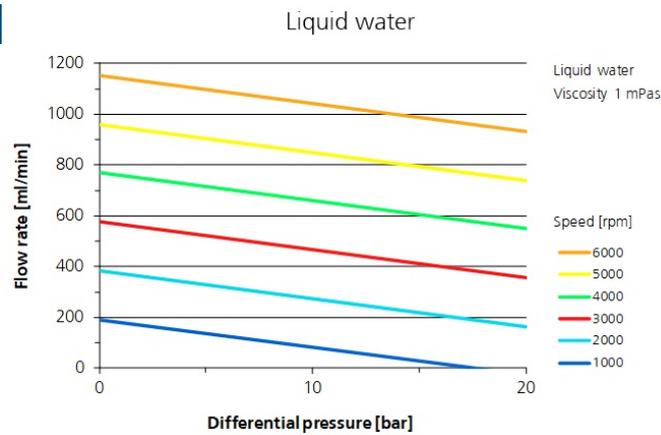
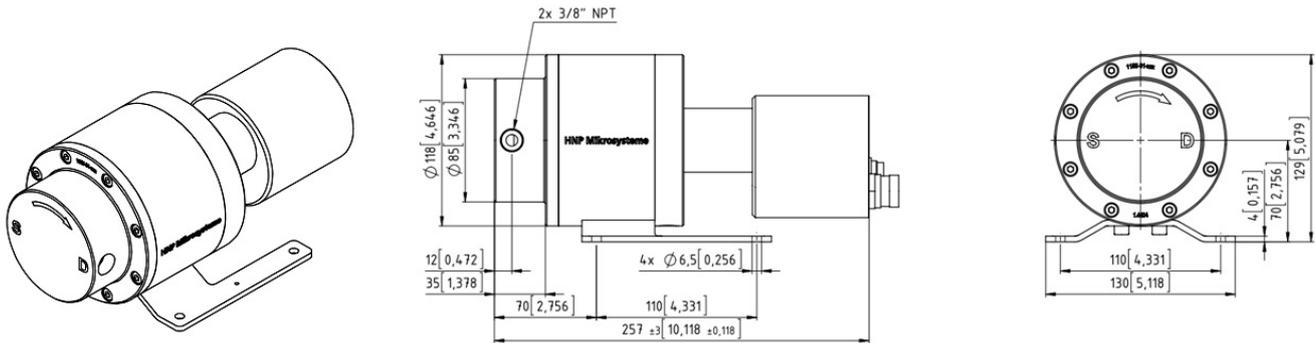
Notice

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



Patents and trademarks

Micro annular gear pumps (and housings) are protected by assigned patents: EP 1 354 135 B1; US 7,698,818 B2; DE 10 2011 001 041 B4; CN 103 348 141 B; US 10,012,220 B2; CN 103 732 921 B; US 9,404,492 B2; US 6,520,757 B1.

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