Product information

mzr-11557 · Hermetic inert pump series

Description

The mzr-11557 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 ceramic components
- Thermical heating
  optional double shell technology
- Chemically inert pump head
  alloy C22, SSiC, Al2O3 and ZrO2-ceramics
- High-power motor
  AC-motor for use with external frequency inverter
- Low pulsation
  rotary micro annular gear technology, no valves

Applications

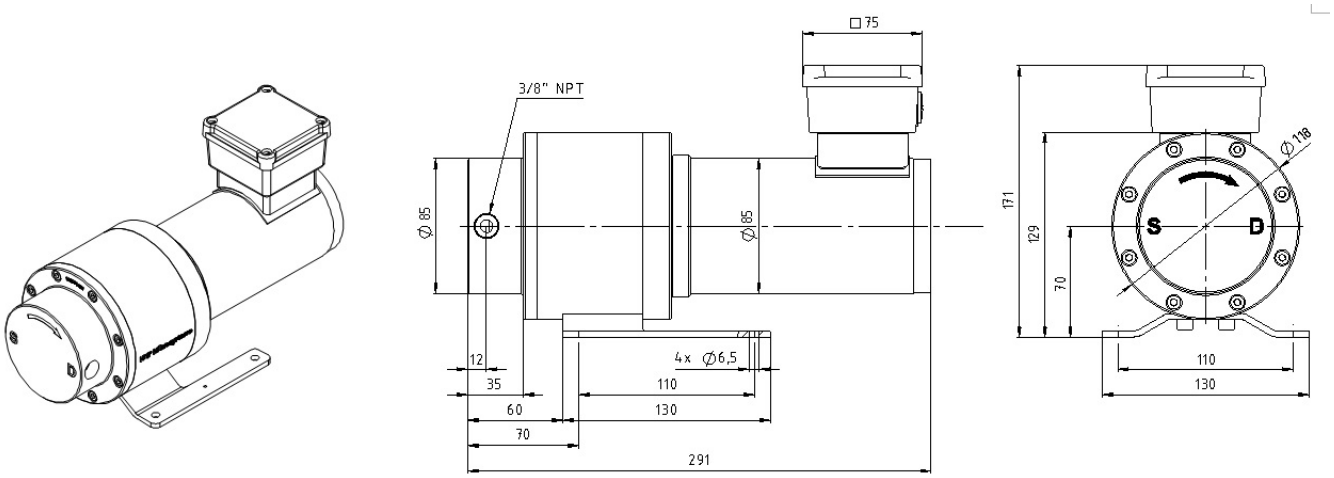
- Flow chemistry
- Microreaction technology
- Mini plant technology

Technical data

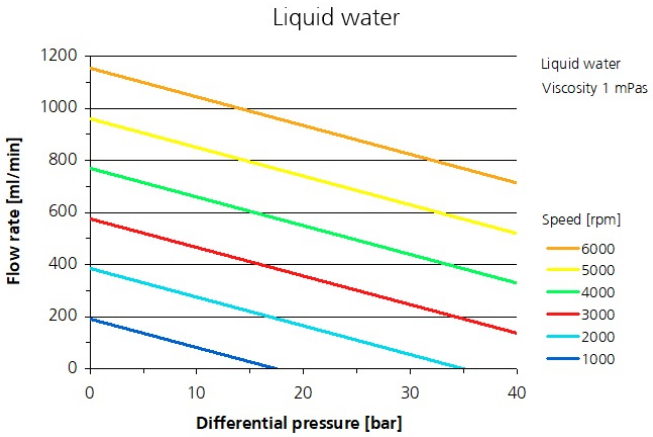
Flow rate	29 - 1152 ml/min
Displacement volume	192 µl
Maximum system pressure	60 bar (870 psi) (200 bar (2900 psi)*) (inlet pressure + differential pressure)
Differential pressure range	0 – 60 bar
Liquid temperature range	-5 ... +60 °C (-20 ... +100 °C *)
Viscosity range	0.3 - 1000 mPas
Precision CV	< 1% (Coefficient of variation CV)
Velocity range	300 - 6000 rpm
Fluid connection	3/8" NPT internal thread, lateral
Wetted parts	Pump case alloy C22 (2.4602), optional: stainless steel 316L; seals FFKM (Kalrez® Spectrum™ 6375), optional: FPM, EPDM; shaft/bearing sintered silicon carbide (SSiC); bearing and wetted functional parts Al2O3 ceramics; rotors TAZ composite ceramics, optional: tungsten carbide Ni-based
Coupling	6-pole NdFeB magnetic coupling
Motor	AC-motor, IEC-Size 056, 4 poles, IP 55, rated voltage 240/400 V, rated frequency 100 Hz, 240 W
Temperature protection	Thermal contact (NC)
Dimensions (L x W x H)	291 x 130 x 171 mm
Weight	approx. 11 kg
Remarks	* with optional heat insulation module, Customized solutions on request.

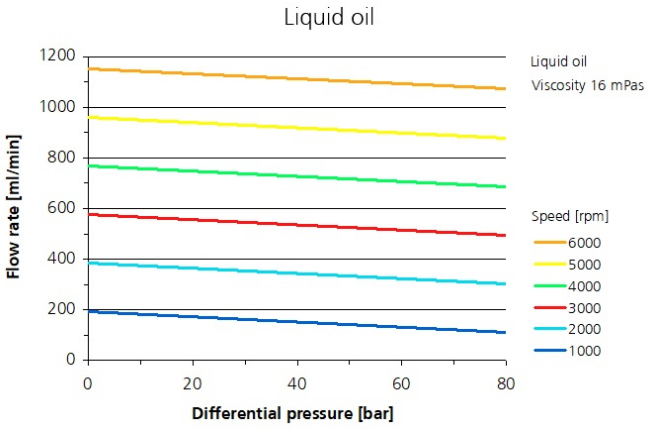
Notice
Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme. Actual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

Dimensions



Flow charts





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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Last update 2019/10