

## Product information

### mzr-7255 · Hermetic inert pump series



#### Description

The mzr-7255 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 SSiC (pressureless sintered silicon carbide) 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
- Long service life wear-resistant ceramic components
- Hermetically sealed magnetic coupling (NdFeB)
- Compact, chemically inert pump head 146 mm long, alloy C22, SSiC, Al<sub>2</sub>O<sub>3</sub> and ZrO<sub>2</sub>-ceramics
- Precision motor and user-friendly control dynamic DC-servomotor with encoder and microcontroller,
- RS-232 or CAN-Bus, analog, I/O
- Precise dosage, low pulsation rotary micro annular gear technology, no valves

#### Applications

- Mini plant technology
- Microreaction technology

## Technical data

Flow rate	0.048 - 288 ml/min
Smallest dosage volume	30 µl
Displacement volume	48 µl
Maximum system pressure	80 bar (1160 psi) (inlet pressure + differential pressure)
Differential pressure range	0 – 40 bar
Liquid temperature range	-5 ... +60 °C (-20 ... +200 °C *)
Viscosity range	0.3 - 1000 mPas
Precision CV	< 1% (Coefficient of variation CV)
Velocity range	1 - 6000 rpm
Fluid connection	1/8" NPT internal thread, lateral optional: 1/8" NPT internal thread, frontal
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 Al <sub>2</sub> O <sub>3</sub> ceramics; rotors TAZ composite ceramics, optional: tungsten carbide Ni-based
Coupling	8-pole NdFeB magnetic coupling
Motor	DC-servomotor, 24 V DC, 44 W, with microcontroller
Interface	0–10 V, 0 (4) –20 mA, RS-232, 1 digital input/output, optional: CAN-Bus
Dimensions (L x W x H)	146 x 70 x 72 mm
Weight	approx. 1650 g
Remarks	* with optional heat insulation module, Customized solutions on request.

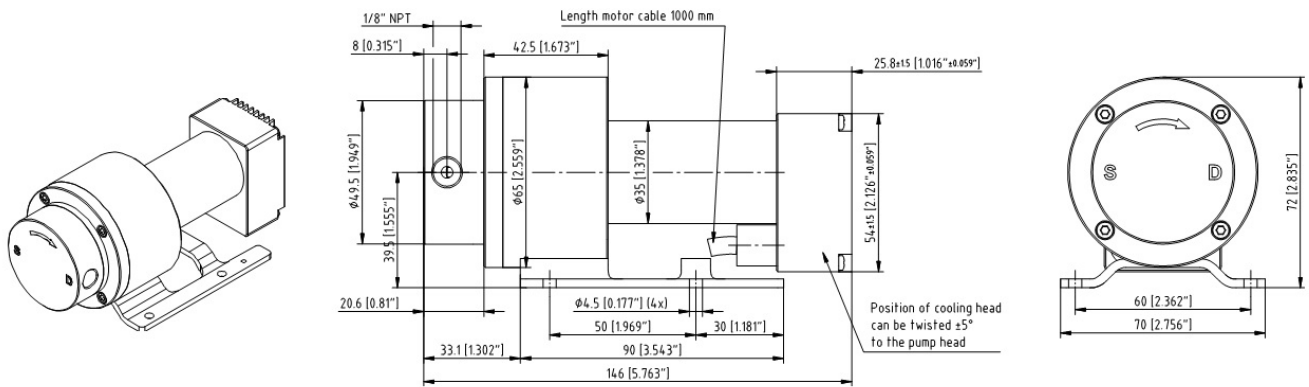
### Notice

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.

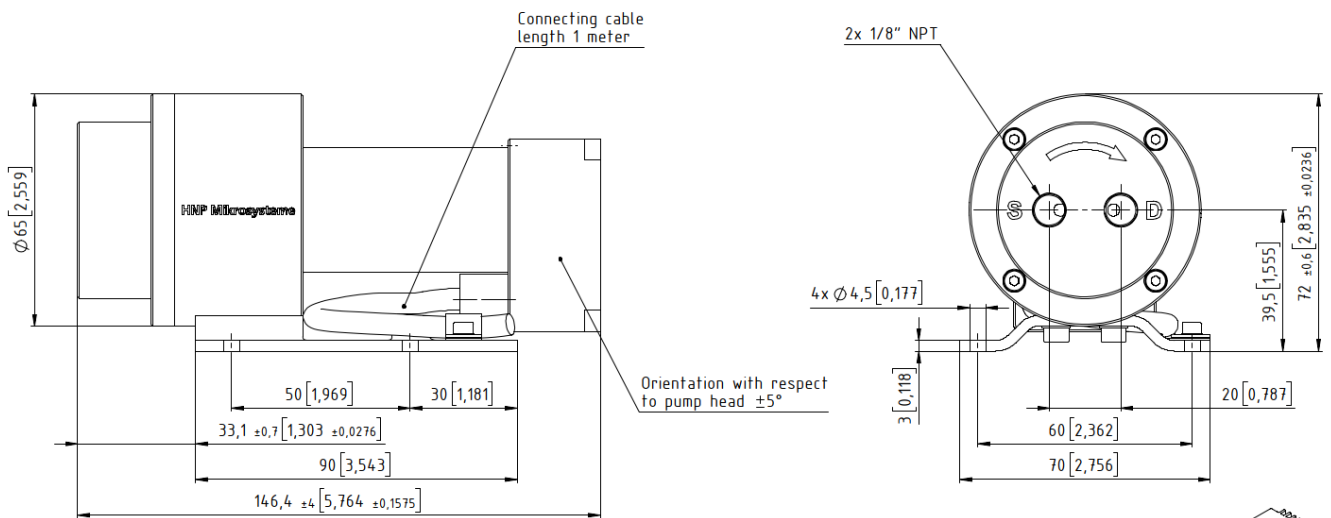
## Accessories

- Heat insulation module
- Flange connection HYG
- mZr-Touch Control
- Electrical heating module
- Terminal box S-G05

## Dimensions mZR-7255 S (Fluid connection 1/8" NPT internal thread, lateral)

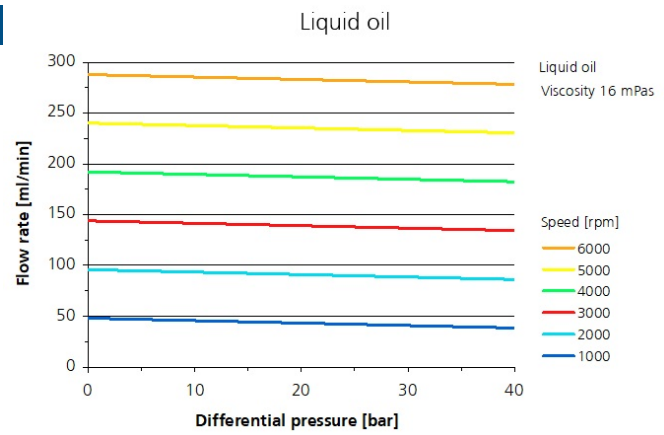
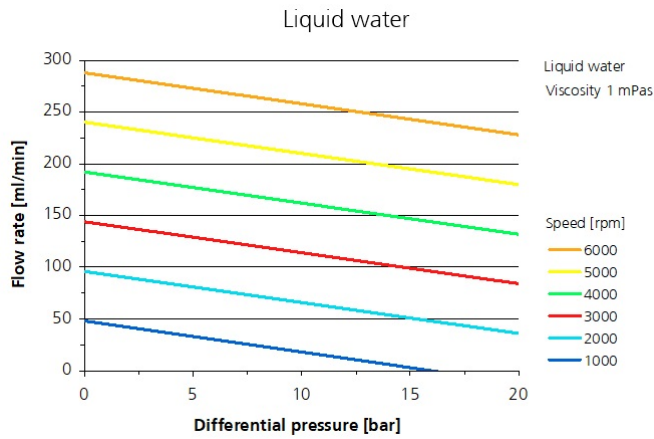


## Dimensions mZR-7255 F (Fluid connection 1/8" NPT internal thread, frontal)



Dimensions are millimeters next to [inches].  
Drawing is subject to change without notice.

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## 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 2023/07