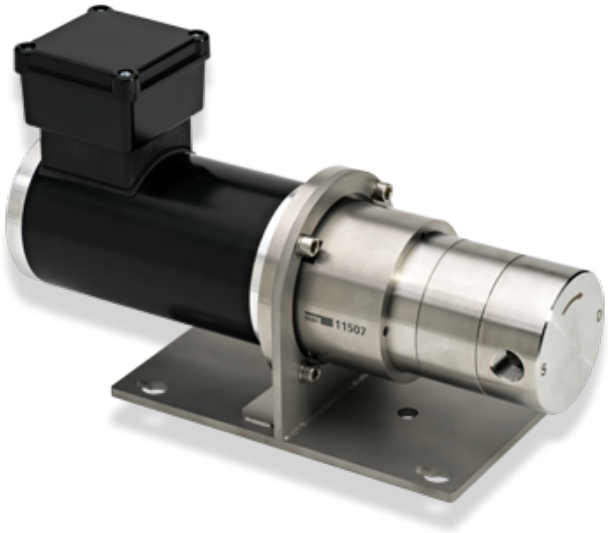
# Product information

mzr-11507 · High performance pump series



## Description

The micro annular gear pump mzr-11507 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 three-phase AC-motor the pump has a compact design and covers the flow range from 29 ml/min to 1152 ml/min. The mzr-11507 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
- High-power motor AC-motor for use with external frequency inverter
- Compact dimensions length 303 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

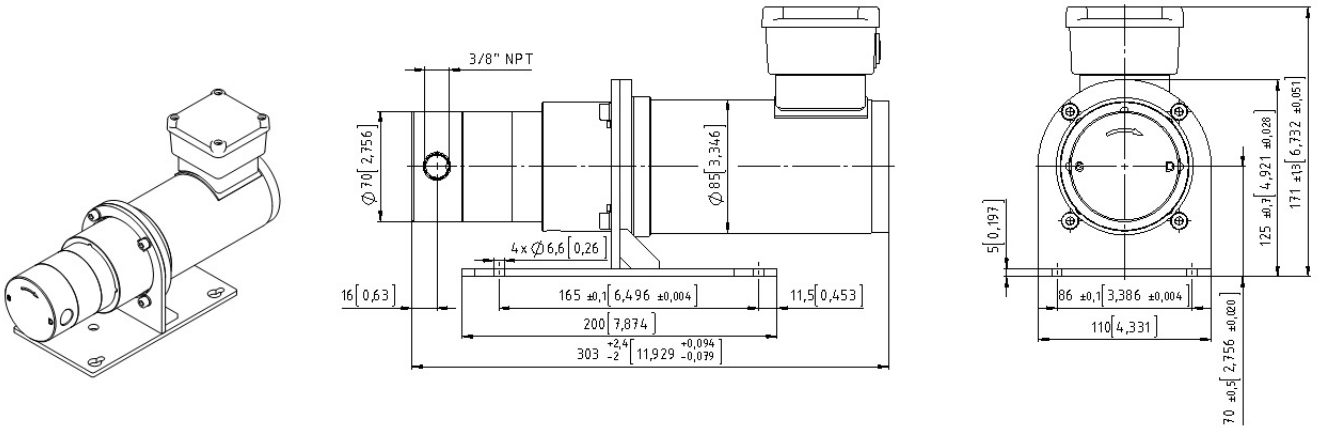
| | |
|---|---|
| Flow rate | 29 - 1,152 ml/min |
| Displacement volume | 192 µl |
| Differential pressure range | 0 – 140 bar (2,030 psi) |
| Maximum inlet pressure | 10 bar (145 psi) |
| Ambient temperature range | -20 ... +40 (-4 ... +104 °F)°C |
| Liquid temperature range | -5 ... +60 °C (-20 ... +120 °C *) (+23 ... +140 °F (-4 ... +248 °F)) |
| Viscosity range | 0.3 – 150,000 mPas |
| Precision CV | < 1% (Coefficient of variation CV) |
| Velocity range | 150 - 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 | 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) | 303 x 110 x 171 mm |
| Weight | approx. 9,300 g |
| Remarks | * with optional heat insulation or heating module, Customized solutions on request. |

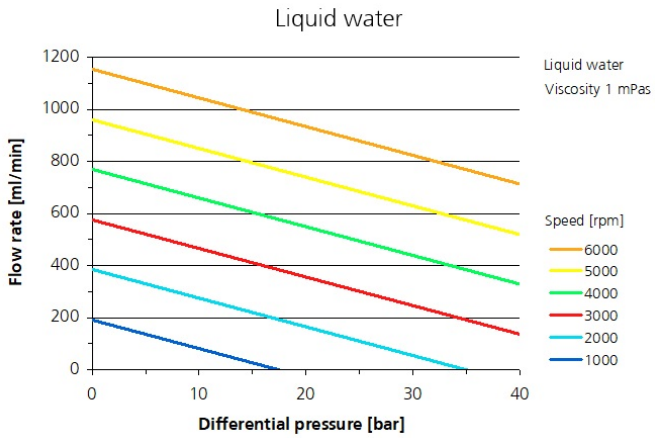
**Notice**
Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme.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

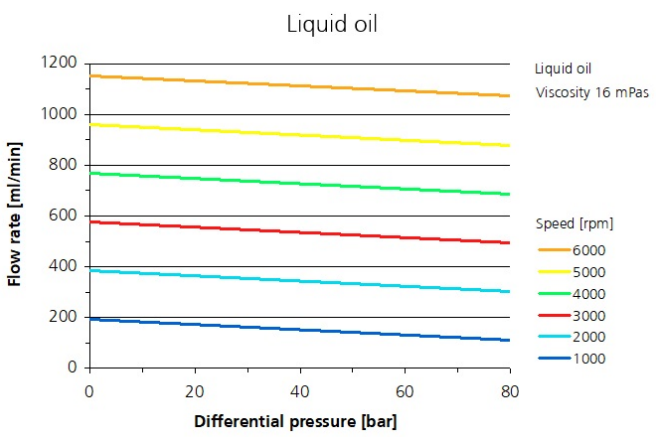
## Accessories

- Heat insulation module
- Electrical heating module
- Flange connection HYG
- Reservoir Plastic
- Double shell heating module

## 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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