

## High performance series

### Dosage module

Dispensing unit for precise low volume dosage



- **High dosage precision**  
precision CV < 1% at low volumes
- **Exchangeable reservoir**  
for cartridges 30 ml and 55 ml
- **Constant precision**  
pump parts made of tungsten carbide
- **Broad viscosity range**  
adhesives, oil, grease, polymers, gel
- **Compact dimensions**  
120 x 60 x 200 mm, including controller and cartridge
- **Precision motor and sophisticated control**  
DC-servomotor with integrated microcontroller
- **Dosage of small amounts**  
discrete dosage and continuous delivery

The dosage module for the mzz-2505, mzz-2905 and mzz-4605 pumps can be used for volumetric dosage of adhesives like UV cure adhesive, epoxy resin, screw fixing varnish, lubricants and silicon. The dosage module suits the dispensing of smallest amounts of liquids requiring highly

precise handling (small beads or spots) and the absence of after-run. The liquid can be supplied from a 30 ml or 55 ml disposable cartridge which is directly connected to the pump. For liquids with higher viscosity, pressure of up to 5 bar may be applied to the cartridge. An air discharge screw

enables to bleed the system after cartridge exchange or to supply flushing liquid for cleaning. The dosing needles can be directly connected to the Luer-Lock male adapter of the pump. With the fixing bracket the module may be mounted onto the handling device.

#### Applications

- Bead dispense
- Filling technology
- Assembly stations
- Backfill of electronic components
- Labeling
- Oil dispensing
- Adhesive dispensing
- Grease dispensing
- Silicon dispensing

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.

#### Technical data

	mzz-2505	mzz-2905	mzz-4605
Smallest dosage volume	0.25 µl	0.5 µl	2 µl
Diff. pressure range (>16 mPas)	0 – 15 bar (217 psi)	0 – 30 bar (435 psi)	0 – 50 bar (725 psi)
Initial pneumatic pressure	0 – 5 bar (73 psi)		
Viscosity range	up to 25,000 mPas	up to 50,000 mPas (max. 100,000 mPas)	
Precision	< 1 % Coefficient of Variation CV		
Dosing needle connection	Luer-Lock male		
Cartridge connection	Luer-Lock female		
Wetted parts	stainless steel 316L, Ni-based tungsten carbide, shaft seal: graphite-reinforced PTFE, 316L; static seals: FPM, optional: FFFPM, EPDM		
Motor	DC-servomotor, 24 V DC, 44 W		
Interface	0–10 V, RS-232, 1 digital input/output		
Controller	integrated 16-bit microcontroller with 7936 Bytes program memory for dosage tasks		
Dimensions (L x W x H)	120 x 64 x 230 mm		
Weight	approx. 1040 g		

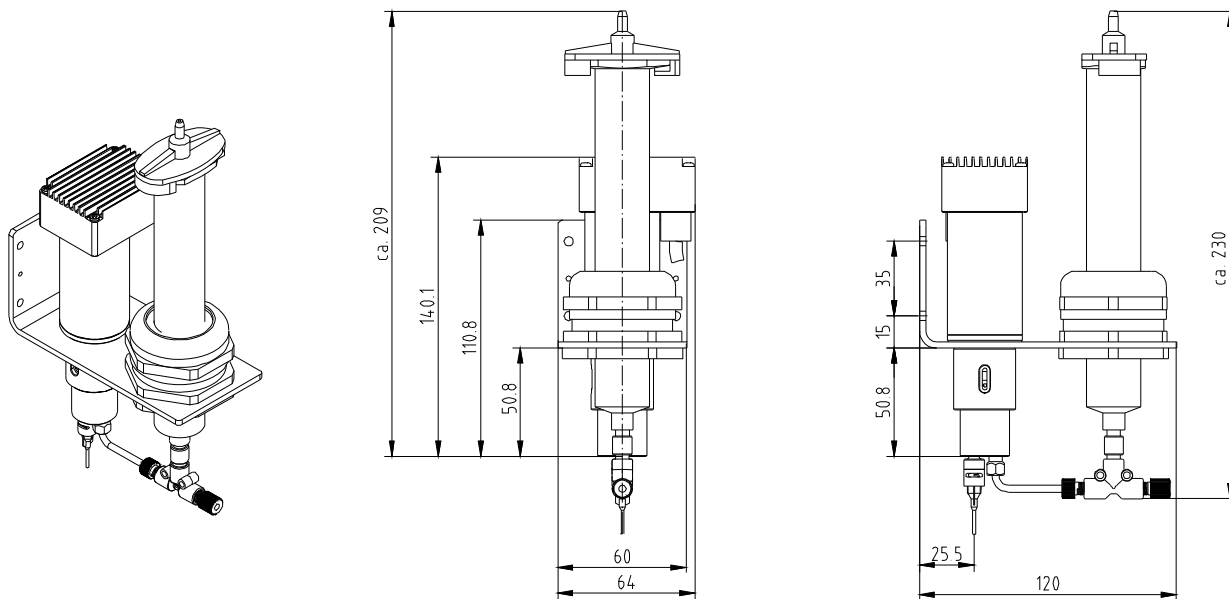
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## Dimensions



Subject to technical changes.

## Item number

00 07 01 00	Dosage module (pump not included) for micro annular gear pumps mzr-2505, mzr-2905, mzr-4605, adapter for assembly, 55 ml disposable cartridge with Luer-Lock male connector, adapter for inlet pressure, cartridge holder Ø 1 inch, complete tubing, purge valve and precision tip adapter
10 01 02 05	pump mzr-2505, terminal box, null-modem cable and software »Motion Manager«
10 01 01 05	pump mzr-2905, terminal box, null-modem cable and software »Motion Manager«
10 02 01 05	pump mzr-4605, terminal box, null-modem cable and software »Motion Manager«

## Accessories

*Liquid supply accessories*      cartridges, dosage needles, check valves etc.

Micro annular gear pumps (and housings) are protected by assigned patents: EP 1115979 B1, US 6,520,757 B1, EP 852674 B1, US 6,179,596 B1, EP 1354135, US 7,698,818 B2. Patents pending DE 10 2011 001 041.6, PCT/IB2011/055108, EP 11 81 3388.3, US 13/884,088, CN 2011 8006 5051.7, HK 13 11 2934.9, DE 10 2011 051 486.4, PCT/EP2012/061514, EP 12 728264.8, US 9,404,492 B2, CN 2012 8003 8326.2. In the US, Europe and China additional patents are pending. mzr®, MoDoS®, µ-Clamp®, HNPM® are registered German trademarks of HNP Mikrosysteme GmbH.