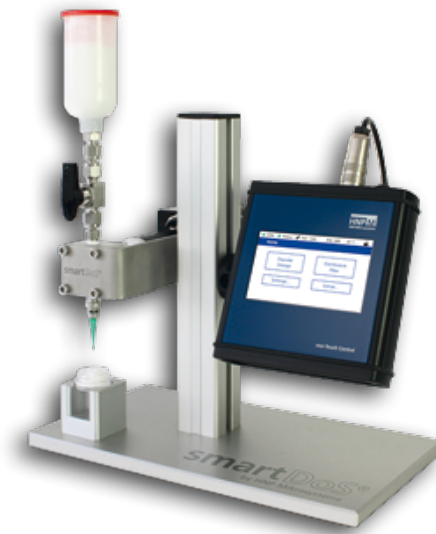


## Product information

### Dosing and filling system · smartDoS



#### Description

smartDoS® is a flexible dosing and filling system that is configured according to customer requirements. On the one hand smartDoS® is suitable for the ergonomic design of manual workstations for small and pilot series. On the other hand, production processes can be automated due to the integrability of mechanics and control technology.

#### Advantages

- Dosing volumes in the microliter and milliliter range
- Adjustable dosing dynamic
- Wide viscosity range
- Self-priming micro pump
- Graphical user interface
- Signal exchange with PLC
- Gentle, bubble-free dosage
- No liquid quality loss
- Effective use of raw materials
- Cost and time savings
- Easy emptying, rinsing and adaption

#### Applications

- Dosing in cosmetics
- Filling in the pharmaceutical sector
- Dosing of ink and colorants
- Bubble-free filling of oil dampers

## Technical data

Pumps	Micro annular gear pumps of the Low pressure and High performance pump series, of the Hermetic inert, Magnetic hermetic and Modular pump series
Flow rate	0.0015 – 288 *ml/min
Differential pressure range	0 – 40 bar *
Liquid temperature range	-20 ... +150 °C (-4 ... 302 °F) *
Maximum inlet pressure	1 – 10 bar *
Viscosity range	0.3 – 50,000 (1,000,000) *mPas
Precision CV	< 1 %% (Coefficient of variation CV)
Fluid connection	1/8" NPT, 1/4"-28 UNF
Wetted parts	stainless steel 1.4404/1.4435 (316L), tungsten carbide Ni based; shaft seal: graphite-reinforced PTFE, stainless steel 316L; static seals: FPM, optional: EPDM, FFPM
Controller	mzr-Touch Control with 4,3"-Touch Display and graphical user interface
Power supply	24 V DC / 3 A (5 A *)
Interface	0 – 10 V, socket 6-pole according to DIN 45321
Digital outputs	Open Collector, 24 V, 0.5 A
Remarks	* Options depending on the chosen configuration. Customized solution 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.

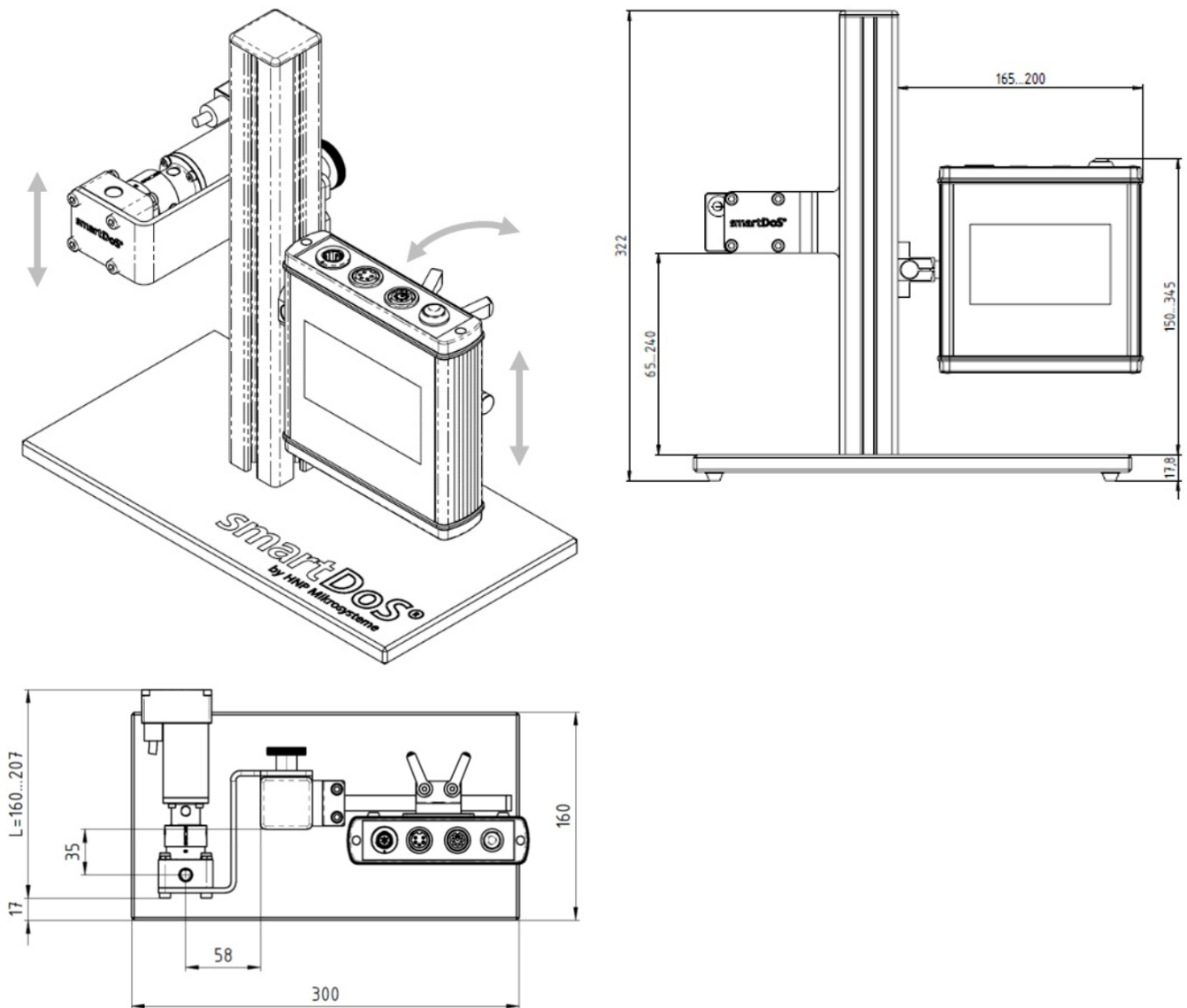
## System components

- Micro annular gear pump
- Smart, intuitive control with
- mzr-Touch Control
- Filters, different sizes and mesh width
- Reservoir
- Shut-off valve
- Dosing needle
- Hand or foot switch

## Typical liquids

- Oils, greases, silicones, waxes
- Adhesives, UV-adhesives, colorants
- Solvents
- Additives in process engineering, pharma and food industry

## 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.

HNPM<sup>®</sup>, mZr<sup>®</sup>, MoDoS<sup>®</sup>, µ-Clamp<sup>®</sup>, µDispense<sup>®</sup>, Centifluidic Technologies<sup>®</sup>, LiquiDoS<sup>®</sup>, smartDoS<sup>®</sup>, ColorDoS<sup>®</sup> are registered German trademarks of HNP Mikrosysteme GmbH.

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