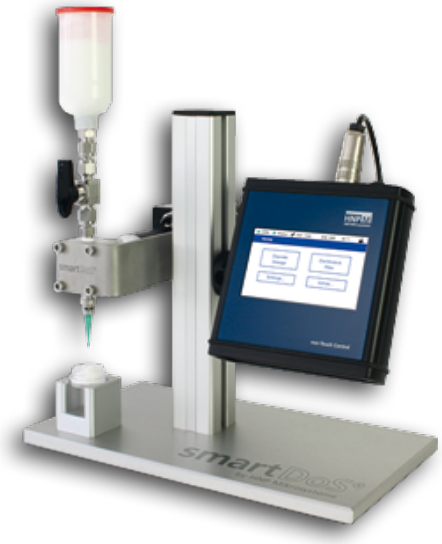
Product information

Dosing and filling system · smartDoS



Description

smartDoS® is the flexible dosing and filling system for industrial production. On the one hand, smartDoS is suitable for the ergonomic design of manual workstations for small batches and pilot series. An optional hand switch or foot switch easily provides a start-stop function.

On the other hand, the dosing system can be integrated mechanically and in terms of control technology. It is suitable for automated production processes in liquid filling.

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
- Ink and color dosing
- Bubble-free filling of oil dampers
- Microencapsulation

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 316; 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.

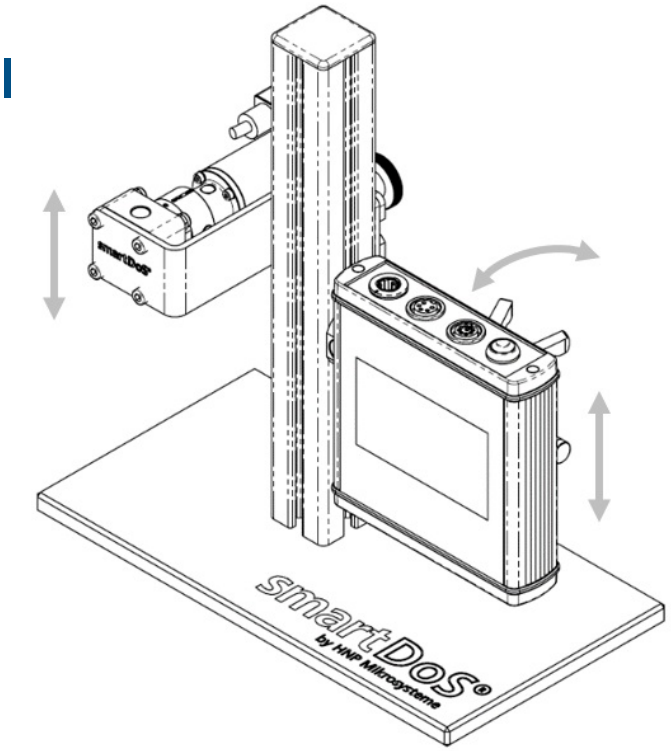
Notice
Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme. Actual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

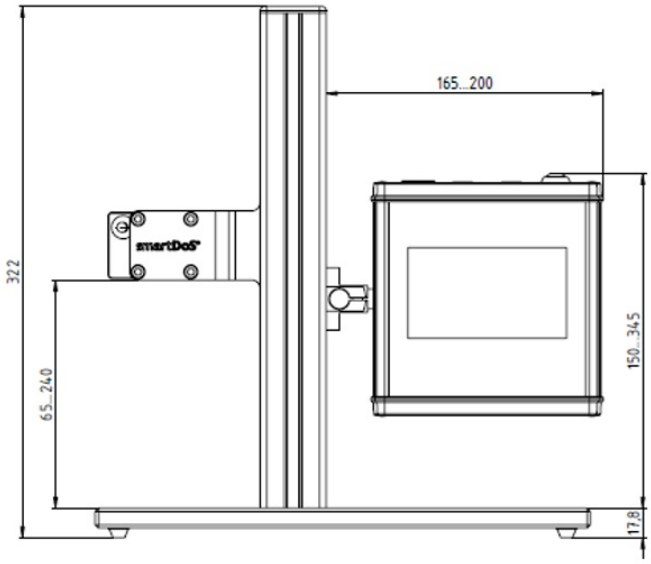
Typical liquids

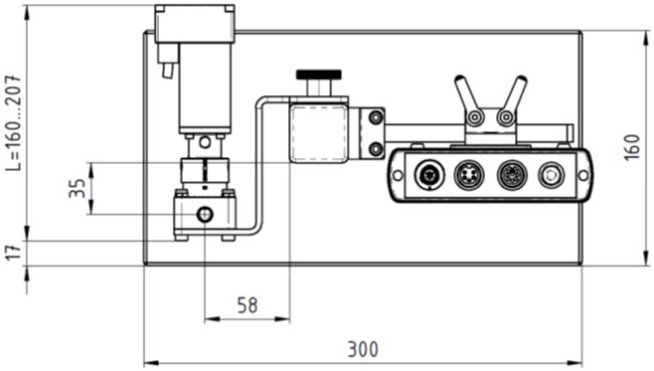
- Oils, greases, silicones, waxes
- Adhesives, coatings
- Colorants, flavors
- Gels, pastes, emulsions
- Additives in Food and Pharma

Components

- Micro annular gear pump
- Filter
- Reservoir
- mzr-Touch Control
- Hand or foot switch
- Shut-off element
- Dosing needle







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.
HNPM®, mzr®, MoDoS®, µ-Clamp®, µDispense®, LiquiDoS®, smartDoS®, colorDoS®, MSM®, are registered German trademarks of HNP Mikrosysteme GmbH.

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