

Low pressure series

Console drive module mzr[®]-S06

Laboratory and industrial production



- **Compact chassis**
small diecast aluminum chassis, powder coated
- **Easy handling**
local/remote operation with top control panel or with rear external connectors
- **Dosing software**
Windows[®]-based software for all operating parameters
- **Precision of flow**
CV < 1 % at low volumes
- **User-friendly interfaces**
serial RS-232, analog 0-10 V
- **Integrated mzr-pump**
low pressure series mzr-2521, mzr-2921 or mzr-4622

The console drive module mzr-S06 can be used for versatile dispensing tasks in the low flow rate range in combination with low pressure mzr-pumps. The microcontroller-based drive enables precise local pump control with a 10-turn potentiometer.

Speed and operating time can be shown on the digital display. As an alternative the pump can be controlled with an external analog 0–10 V signal or with RS-232 interface. An adapted PC software is included for setting all operating parameters including calibration,

ramp, step, speed, dispense/pause times and flow directions. The high-quality stable diecast aluminum chassis is powder coated and offers a reliable protection of the control elements. A power supply 115/230 V AC is included.

Applications

- Laboratory
- Assembly

Technical data

Chassis	diecast aluminum chassis, powder coated
Speed adjusting	10-turn potentiometer
Drive speed range	100 – 6000 rpm (min. 1 rpm *)
Display	rpm or running time
Pump integration	pump mounted directly into the chassis
Drive	DC-motor with graphite brushes
Control	16-bit microcontroller
Voltage	24 V DC, DIN 45323 socket
Analog interface	0–10 V, DIN 45321 5-pole socket
Serial interface	RS-232, SUB-D plug, 9-pole
Memory	7936 bytes
Power supply	external power supply 100 – 240 V AC
Protective class	IP 41
Measurements (L x B x H)	154 x 110 x 45 mm
Weight	approx. 630 g

Customized solutions on request.

* with optional high resolution encoder, gear box

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Operation

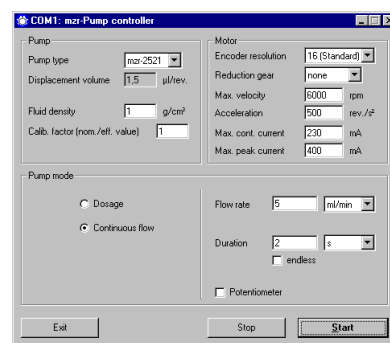
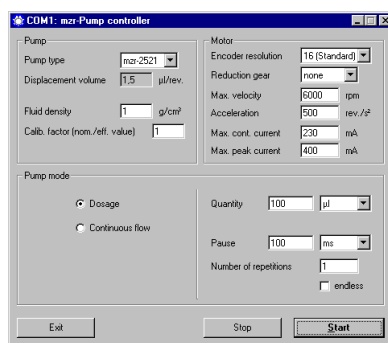


The top panel includes an on/off switch and a fine tuning potentiometer for manual flow control. A low pressure series pump is mounted inside the chassis.



A switch enables local or remote control via the top-mounted potentiometer or the rear 0–10 V external signal or RS-232 for a PC.

Software



The included PC software »mzz-Pump controller« allows calibration, programming of volumes, flow rates, pause times, cycle numbers and dosage times and setting of drive parameters. Displacement volume and flow rate values can be selected for standard mzz-pumps. Simple dispensing tasks can be programmed.

Item number

67 05 01 00	console drive module mzz-506 (<i>without pump</i>) for pumps mzz-2521, mzz-2921 or mzz-4622, null-modem cable, external power supply, software, »mzz-pump controller«
11 01 01 02	low pressure series pump mzz-2521, smallest dosage volume 0.25 µl, flow rate max. 9 ml/min, 0–1.5 bar, slip fittings
11 02 01 03	low pressure series pump mzz-2921, smallest dosage volume 0.5 µl, flow rate max. 18 ml/min, 0–3 bar, slip fittings
11 04 01 02	low pressure series pump mzz-4622, smallest dosage volume 2 µl, flow rate max. 72 ml/min, 0–5 bar, slip fittings

Accessories

<i>Liquid supply accessories</i>	tubes, filters etc.
<i>Reduction gear</i>	reduces speed for the dispensing of small volumes and the metering of high viscosity liquids
<i>Alternative drives</i>	motor with digital encoder with 256 impulses/turn for higher uniformity and precision at low speeds

Micro annular gear pumps (and housings) are protected by assigned patents: DE 198 43 161 C2, 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: EP 1807546, DE 10 2009 020 942.5-24, DE 10 2011 001 041.6. In the US, Europe and Japan additional patents are pending. mzz®, MoDoS®, µ-Clamp® are registered German trademarks of HNP Mikrosysteme GmbH. Microsoft®, Windows® are registered trademarks of Microsoft Corporation in the USA and in the other countries..