Multi MDS Series for low to medium viscosity

INDEPENDENT & SIMULTANIOUS FOUR-VALVE MULTI DISPENSING
SIMPLIFYING & REDUCING DISPENSE VALVE SETUP AND OPERATION TIME

MicroDispensing Systems with Piezo Technology
OPTIMAL SOLUTION FOR LOW & MEDIUM VISCOSITY APPLICATIONS

- Designed for flexible use with substances of low and medium viscosity
- Perfect for high parallel installations of low viscosity media in pharmaceutical, medical, biological applications, SMT (Surface-mount technology), electronics, semiconductors, photovoltaic modules and automobiles production

INDEPENDENT MULTI VALVES CONTROL & LOW RACK SPACE

- Each Multi Micro Dispensing System is based on the control unit Multi MDC 3090+ that can be combined with up to four valves such as MDV 3010A, MDV 3020A, MDV 3010+ and MDV 3020+.
- The multi valve controller operates the dispense valves independently and simultaneously simplifying and reducing valve setup and operation time.
- Extensive rack space savings are achieved with this four valve control unit.

EASY ADAPTATION TO NEW CHALLENGES

- Flexible parameter setting and comprehensive choice of accessories are available, e.g. nozzle inserts, tappet shapes and supply units; the system can therefore be adapted to new challenges very easily and at any time without major investment.

REDUCED COSTS

- One controller serves four valves and interface plug-ins for the computer control unit are reduced.

REPRODUCIBLE DISPENSING RESULTS

- The system allows for extremely high reproducible proportioning of identical single dots (min. 5 nl) or beads.
- Coefficient of Variation (CV) is as low as 1%.

ULTRA-PRECISE CONTACTLESS DISPENSING

- The system has been designed for ultra-precise contactless dispensing of fluids in a large range of viscosity (up to 8.000 mPas).

SPEED

- The system allows extremely fast opening and closing of valve with more than 3000 Hz.

FLEXIBILITY

- Parameter settings are freely adjustable and enable customizing the jet progress to the requirements of the fluid properties.
- Electronic control unit allows the change of dispensing parameters without delay.

COPY MODE

- The Copy Mode is a special feature of a Multi MDC 3090+; the user can easily copy dispensing parameters and heater information from one channel to the others or to all at once.

SELECT PIN / SCENARIO MODE

- Select pin or scenario mode, both allow an immediate change of drop size and speed at any time while dispensing.

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**Recommended media**
- Alcohol like media, watery chemical and pharmaceutical solutions

**Type of tappets**
- Monolithic ceramics, carbide metal, different shapes

**Dispensing quantity**
- Min. 5 nl per pulse (depending on medium)

**Dispensing viscosity**
- Multi MDS 3010+ up to 300 mPas
- Multi MDS 3020+ up to 8.000 mPas

**Supply pressure**
- Supply pressure 0.1 – 8 bar (rel.), max. 30 bar

**Dispensing pressure**
- 1 – 300 bar (adjustable)

**Maximal frequency**
- > 3000 Hz

**Average dispensing frequency**
- 450 Hz

**Additional functionality**
- Several pattern scenarios can be saved from real-time experience

**Valve operating modes**
- Burst Mode: predefined burst after trigger signal
- Single Shot Mode: path length dependent triggering
- Infinite Mode: number of shots controlled by external trigger
- External Mode: application controlled definable drop volume setting

**Optional heating system**
- Regulated nozzle heating: 120° C, (higher upon request)
- Internally: 40; extern: unlimited

**Memory for parameter sets**
- Internally: 40; externally: unlimited

**Standard interface**
- RS-232C; 24V/5 V PLC, AUX

**Dimensions**
- Valves: 103 mm H x 39,5 mm W x 10 mm D
- Control unit: 128 mm H x 214 mm W x 173 mm D (without cable) 3 RU x 42 HP for installation into 19” racks

**Power connection**
- 110/240 V AC, 50/60 Hz power socket (back side)

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**MULTI VALVE FUNCTIONALITY**

**MDV 1**

**MDV 2**

**MDV 3**

**MDV 4**

**Process**

**Control**

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