



# iONE™ series

Contact & Non-Contact Liquid Microdispensing Instrument

M2-Micro-Dispensers present a new highly flexible technology in microdispensing which supports for example, dispensing out of low-cost, disposable pipette tips.

All dispensers can be equipped with temperature control for maximum reproducibility and high volume accuracy.

M2-Micro-Dispensers can be used for bulk dispensing, include online degassing and are also available as cartridges, with dispensing liquid, stored in their vessels.

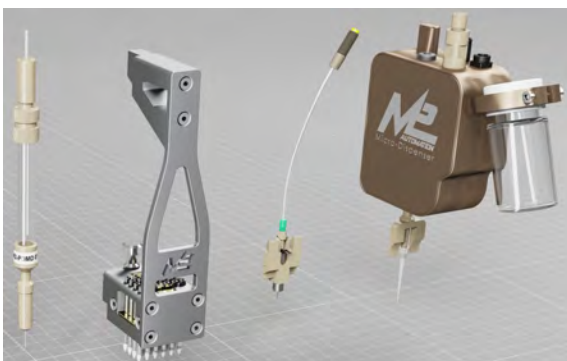


- High-throughput applications
- High production capacity
- Spot-on-the-fly
- Automated target and microarray imaging
- 2D- or 3D- imaging for droplet determination
- Volume range from 30 pL to mL
- User exchangeable dispense heads
- Inline QC for the highest microarray quality
- Flexible deck configuration
- Different instrument deck sizes

Featuring magnetic drives for all 3 axes



*In-line system liquid degassing and filtering for unparalleled operating robustness*



## Interchangeable dispensing nozzles:

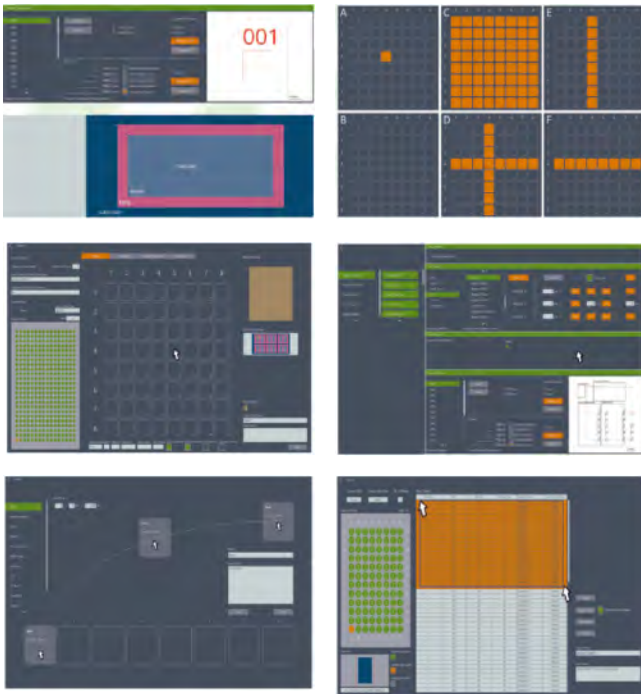
- **PDMD:** the most advanced piezo-dispensing nozzle on the market (30-200 pL per drop, 0.5-10 mPas, 2% cv)
- **PINDMD:** for highly viscous or otherwise difficult to dispense liquids, as well as for high-throughput spotting (blunt, split and capillary pins available)
- **SDMD:** a solenoid nozzle with aspirate/dispense or bulk dispense capabilities (10 nL and up, 0.5-10m pPas, 5% cv)
- **M2MD:** Proprietary cartridge offering both aspirate/dispense mode, and bulk dispensing options. Droplets (10-50, 50-250, or 100-500 nL, 20Hz) or jets for larger volumes. 5-20 mPas.



## Intuitive User Interface

The InDot software running under Windows 10 is the result of more than ten years experience in micro-dispensing and arraying; guiding the user easily through all features such as target layouts, array formatting, reagent and volume settings.

- Main screen reflects the current instrument status and run configuration
- Substrate designer assists with designing dispensing patterns via simple mouse click
- Target access provides single click access to all target positions for dispensing and imaging
- Wash designer offers effortless drag and drop programming of wash sequences
- Real time imaging and drop observation within run
- Individual dispense parameters for every sample in a run
- Full control of the environmental parameters: humidity, cooling temperature, dew point



## Technical Data

### Capacity:

- iONE™-600 92 slides / 12 MTPs
- iONE™-1200 190 slides / 35 MTP

### Source formats:

- 96-, 384-, 1536-MTPs or
- 16 plastic vials of 0.5-2 ml or
- 1 mini-MTP: 24 wells of 100 µl or 65 wells of 25 µl or
- cartridge dispensing from 2-20 ml vial

### Microdispensers:

- Piezo Driven Micro-Dispenser: 30 pl to 300 pl per droplet; c.v. < 2 %; max. frequency 1000 Hz
- Solenoid Driven Micro-Dispenser: 30 nl to ml per ejection; c. v. < 10 %; max. frequency 250 Hz
- M2-Micro-Dispenser: 10 nl to ml; c. v. < 2 %; max. frequency 10-250 Hz, depending on version.
- Pin Driven Micro-Dispenser: 75 pl+; cv < 5%

### Dispense modes:

- aspirate (air-gap possible)
- dispense out of large volume source vials
- re-suspend samples

**Resolution** <= 1.0 µm

**Positioning accuracy** in XY directions: <= 3 µm

**Maximum positioning velocity:**

up to 20 sample depositions per second

**Maximum drive range:** (spottable area)

X=600 or 1200 mm,

Y=320 mm,

Z=25 mm

### Dimensions:

W from 60 cm (24 in)

D 60 cm (24 in)

H 160 cm (63 in)

Weight from 95 kg (209 lbs)

HEPA filter system:

W 38 cm (15 in), D 41 cm (16 in), H 61 cm (24 in),

Weight 12 kg (26 lbs)

Ergonomic user stand USTA for keyboard, mouse and monitor:

W 44 cm (17 in), D 58 cm, (23 in) H 175 cm (69 in),

Weight 36 kg (80 lbs)

### Power:

iONE 100-230 V, 590 W

Safety housing 75 W

HEPA filter 20-160 W

