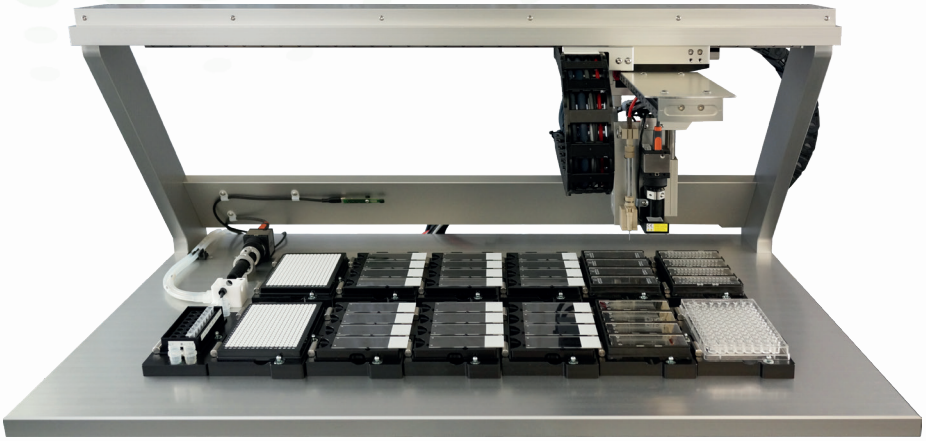
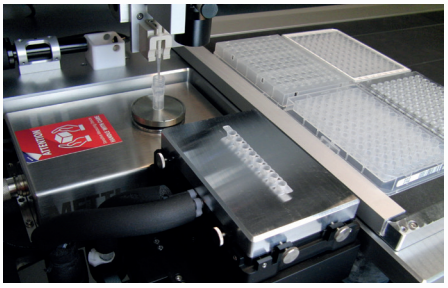
Non-contact & contact
Liquid Handling Solution

instrumentONE series

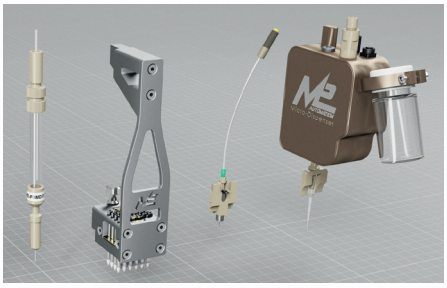
High Performance Microarray Spotter



The instrumentONE is an ultra-fast, high-precision, non-contact liquid handling system which is able to grow with your needs.
It is designed to maximize the work-space, equipped with a revolutionary light instrument head and a linear stage dive with utmost precision - resulting in a superior spotting performance.
The iONE™ is available in four different sizes, a variety of target holders and with a selection of essential components, like the analytical balance, the heat-/coolable shaker and many more ...



Analytical Balance, Heat- / Coolable Shaker and Flexible Deck Configuration



Quattro-Dispensing Technology PDMD, PinDMD, SDMD, M2MD

High accuracy & resolution

- High throughput applications
- Large production capacity
- Automated target and microarray imaging
- 2D or 3D droplet determination
- Inline QC for the highest quality
- Flexible deck configuration
- Different instrument sizes

Flexible deck configuration, to meet your needs ...

... from off-the-shelf products, to custom tailored solutions:

1. integration of a laser distance sensor, used for height detection and fill-level determination.

2. analytical balance, to precisely evaluate the sample consumption and drop volume.

3. heat- / and coolable shaker, to keep beads in suspension, or mix samples before spotting.

4. vacuum tables, or custom build holders to fixate targets in any format imaginable.

5. many more solutions upon request, custom tailored constructions available ...

Novel Quattro-Dispensing Technology ...

... combines four different micro-dispensers in one instrument:

1. Piezo Driven Micro-Dispenser (PDMD) for pico- to low nanolitre applications.

2. Solenoid Driven Micro-Dispenser (SDMD) for nano- to low mililitre applications.

3. M2 Micro-Dispenser (M2MD) for low nano- to low millilitre applications.

4. Pin Driven Micro-Dispenser (PinDMD) for pico- to low nanolitre applications with inline QC for optimal microarray results.

M2 AUTOMATION

Intuitive User Interface

InDot Is M2-Automation's latest software development – unique, intuitive and innovative.

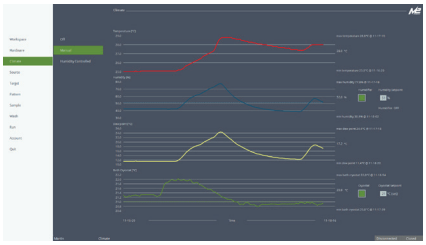
- Self explanatory user interfaces reflecting the current application and processing status
- All designers can be used via drag & drop to define a sequence
  -> flexibility in wash runs and runs
- Flexible parameters for every sample, possible in one run
- Direct access to all features:
  liquid supply and removal, shaking, tilting, illumination, processing times, cooling / heating, ...

Wizards and automation scripts for instrument preparation, rinsing and desinfection

Pattern Import / Export and smart sample transfer from source to target

Features

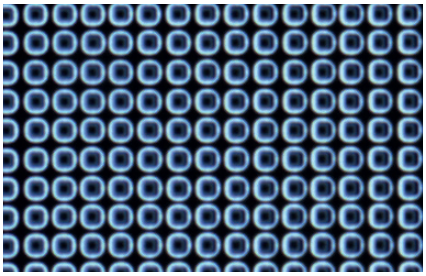
- Integration of custom-specific components
- Temperature controlled unit (cooling and heating)
- Humidity control
- Clean room conditions, HEPA filter
- Environmental enclosure
- Mobile instrument set-up
- Piercer for sealed MTPs
- Vacuum table



Climate Control: Humidity and Dew Point Control with a CV of 1%

Instrument Applications

- Processing of biochips: protein, DNA, cell and other microarrays
- Processing of versatile blot membranes, reel-to-reel applications
- Processing of glass, plastic slides or other formats
- Lab-on-a-Chip / dipsticks
- Compound library screening
- Bio-sensors
- Drug discovery / Immunoassays
- Cell transfection assays
- Lateral flow applications



DNA High density array
169 spots / mm^2; spot to spot distance: 80 µm, spot diameter: 65 µm

Technical Data

Capacity:
- iONE-400: 50 slides / 8 MTPs
- iONE-600: 92 slides / 12 MTPs
- iONE-1000: 156 slides / 22 MTPs

Source formats:
- 96-, 384-, 1536-MTPs or
- plastic vials of 0.5 - 2 mL
- wells of 100 µL or 25 µL
- cartridges from 2 - 20 mL vial

Micro-Dispensers:
- PDMD: 30 pL - 300 pL per droplet; CV < 2 %; max. frequency 1000 Hz
- SDMD: 30 nL - mL per ejection; CV <10 % max. frequency 250 Hz
- M2MD: 10 nL to mL; CV <2 %; max. frequency 10-250 Hz, depending on version.
- PinDMD: different tip diameters available

- Dispense modes: aspirate (with or without air-gap), dispense, "bulk dispensing", resuspend

- Resolution: 1 µm

- Position repeatability: < 5 µm

- Maximum positioning velocity: up to 10 sample depositions per second

- Maximum drive range: X = 320 to 1200 mm, Y = 320 mm, Z = 44 mm

- Power: iONE 590 W, 100 - 230 V; Safety housing 75 W HEPA filter 20 - 160 W

Dimensions:
- iONE Series W from 60 cm, D 60 cm, H 160 cm, Weight from 95 kg

- HEPA filter system W 38 cm, D 41 cm, H 61 cm, Weight 12 kg

- Ergonomic user stand USTA for keyboard, mouse and monitor W 44 cm, D 58 cm, H 175 cm, Weight 36 kg

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