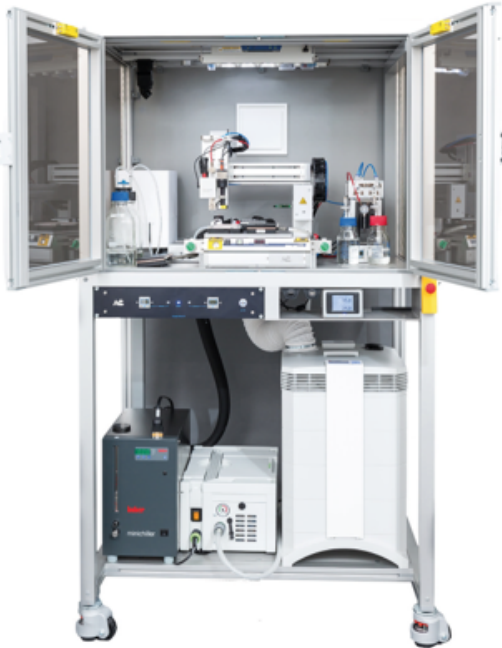


instrumentTWO series

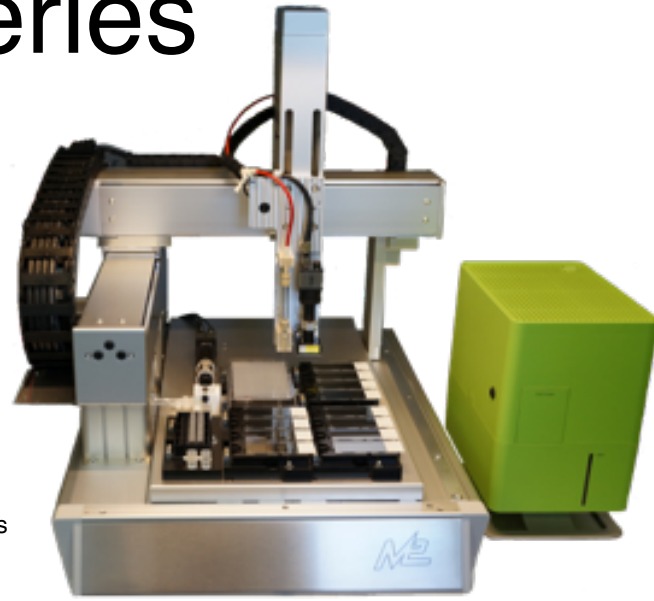
Micro-dispensing instrument



instrumentTWO high end or XL

The highest accuracy & great flexibility

- Automated target and microarray imaging
- 2D- or 3D-imaging system for droplet determination
- Volume range from pL to mL
- User exchangeable dispense heads
- Inline QC for the highest microarray quality
- Flexible deck configuration
- Different instrument sizes



instrumentTWO-300P

instrumentTWO - equipped with a source MTP or vial holder, wash station, droplet volume detection system, head camera for QC, flexible deck configuration, where MTPs, glass-slides and vial can be placed next to each other.

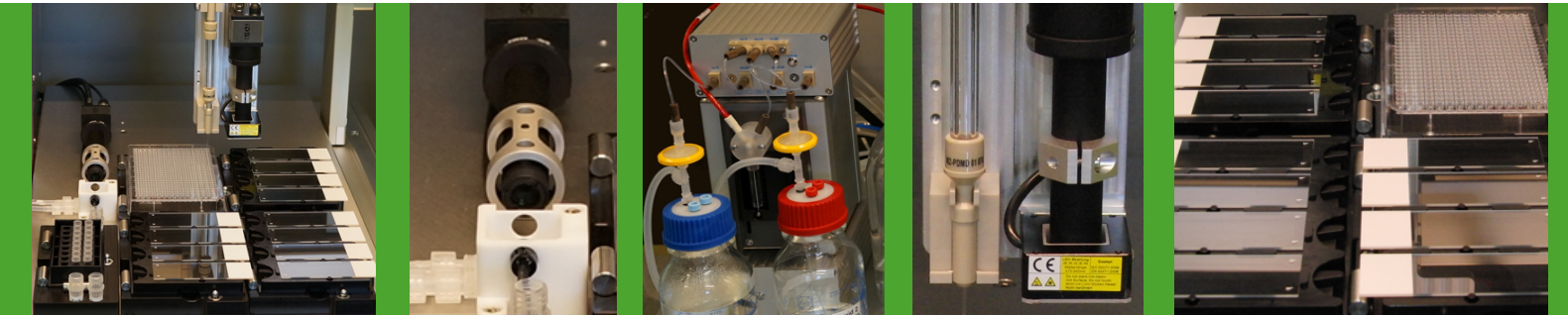
Novel Quattro-Jet Technology

This technology combines four different micro-dispensers in one single instrument:

- 1) Piezo Driven Micro-Dispenser (PDMD) for pico- to low nanolitre applications
- 2) Solenoid Driven Micro-Dispenser (SDMD) for nano- to low millilitre applications
- 3) M2-Micro-Dispenser (M2MD) with a disposable tip for low nano- to low millilitre applications
- 4) Pin Driven Micro-Dispenser (PinDMD) for picolitre to low nanolitre contact dispensing applications

M2-Automation Dispensing Technology systems for protein and DNA microarray spotting in 20+ μ L, 10+nL to mL. volume ranges for printing on different coolable targets under controlled conditions (Climate Control system for controlling temperature, humidity and DEW point).

The iTWO systems allow 2D drop volume logging and JATS software control for variable individual sample parameter control. The combination of the head camera and inline QC software allow recovery run on missing spots for producing perfect microarrays with the lowest scrap-rate.



instrumentTWO-300P with a head camera, piezo dispenser, vial or MTP source and target glass slides or MTPs and MTPs

Drop volume camera and wash

Dual inline degasser

PiezoDMD and head camera

Flexible deck configuration

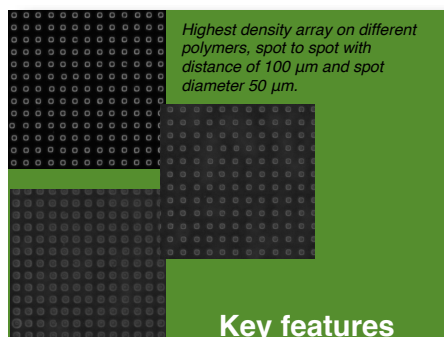
Contact:

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Phone +49 (0) 30. 856 11 939-0 · info@m24you.com · www.m24you.com

Intuitive User Interface

Instrument software iNDOT is the result of more than fifteen 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 and DEW point



Key features

- Integration of custom-specific components
- Temperature controlled unit (cooling and heating units)
- Humidity control
- Clean room conditions, HEPA filter
- Environmental enclosure
- Mobile instrument set-up
- Piercer for sealed MTPs
- Liquid path air free for the best performing dispensing technology

Instrument Applications

Our instruments are designed for a broad spectrum of applications

- DNA / protein / cell microarrays
- Multiplex ELISAs
- Lateral Flow applications
- Cell transfection arrays
- Diagnostic biochips, Lab-on-a-Chip
- Diagnostic biomarker and microbiology assays on multiple substrate (slide, MTP, NC membrane)
- Drug discovery: small volume GPCR assays, immunoassays
- Compound library screening
- Biological screening
- Spotting to custom-specific substrates and formats
- Semiconductors
- Biosensors

Technical Data:

Capacity:

iTWO-200 - 16 slides / 2 MTPs / 16 vials
iTWO-300P - 30 slides/4 MTPs/ 16 vials, high precision drives with 1.0 μm resolution and repeated positioning < 5 μm)
iTWO-400 - 60 slides / 8 MTPs / 16 vials
iTWO-XL >= 100 slides / >= 20 MTPs / 16 vials

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 (PDMD): 30 pL to 300 pL per droplet; c.v. < 2 %; max. frequency 1000 Hz

Solenoid Driven Micro-Dispenser (SDMD): 30 nL to mL per ejection; c.v. < 10 %; max. frequency 250 Hz

M2-Micro-Dispenser (M2MD): 10 nL to mL; c.v. < 2 %; max. frequency 10-250 Hz, depending on version.

Pin Driven Micro-Dispenser (PinDMD): 100 pL up to nL per dispensing; c.v. < 10%; frequency > 5000 samples/ day

Dispense modes:

aspirate (air-gap possible); dispense; dispense out of large volume source vials; re-suspend samples, pin dispensing mode

Resolution <= 1 μm or 10 μm

Positioning accuracy in XY directions <= 5 μm or 10-20 μm , XL <= 10 μm

Maximum positioning velocity: up to 20 spot depositions per second

Maximum drive range:

iTWO-200: X = 200mm, Y = 200mm, Z = 25mm
iTWO-300P: X = 300mm, Y = 250mm, Z = 100mm

iTWO-400: X = 400mm, Y=400 mm, Z = 25mm
iTWO-XL: X >= 600mm, Y >= 300mm, Z = 25mm

Dimensions:

iTWO-200 W 34 cm, D 37 cm, H 40 cm
iTWO-300P W 110 cm, D 70 cm, H 110 cm (bench top model)

iTWO-400 W 65 cm, D 65 cm, H 45 cm
iTWO-XL W from 60cm D 60cm 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

Power:

iTWO 590 W, 100-230 V; Safety housing 75 W
HEPA filter 20-160 W

