

## Microdispensing Instruments

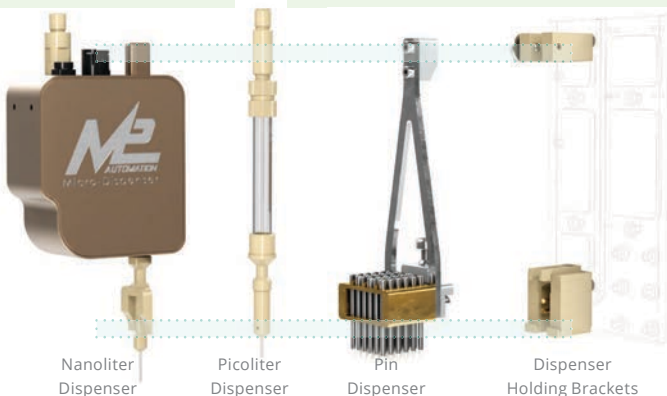
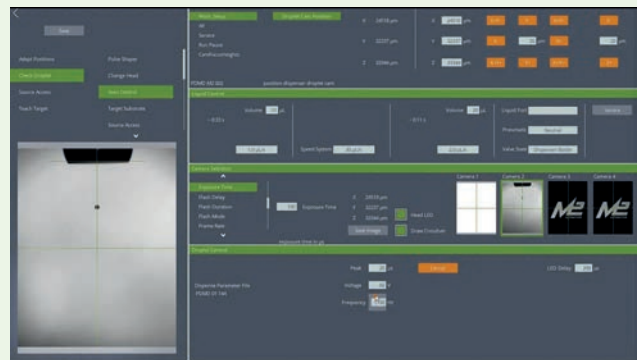
### Grow with your application

From compact entry level R&D applications to high-speed manufacturing



### Same software for all spotters

Easily control your instruments with the intuitive and user-friendly InDot software. No programming language - just drag and drop tiles to form a sequence and loops.

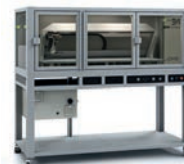


### Interchange dispensers on the same system

- Non-contact picoliter to nanoliter to microliter
  - » 10 - 500 pL per drop
  - » 500 pL - 8 nL per drop
  - » 8 nL to 5 uL per dispense - single & multichannel
- Contact pin dispensing

### Common applications – supported by vision guidance

- Filling of microcavities, microwells
- Patterning lateral flow strips
- Coating biochip sensor pads
- Loading reagents in microfluidics devices
- Dispensing cells
- Spotting for multiplex immunoassays
- Printing protein, aptamer and DNA microarrays
- And so much more...



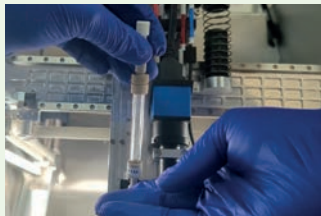
MODEL	iFOUR	iTWO	iONE - 600 / 1200	iZERO
Level	Compact Entry Level	R&D and Academic	Batch Production	In-Line Automated
Dimensions (W/D/H) & Weight	50 x 50 x 50 cm appr. 50 kg	110 x 75 x 110 cm appr. 150 kg	150/200 x 80 x 180 cm appr. 250 kg	85 x 151 x 248 cm appr. 500 kg
Built-in Windows PC	The built-in Windows PC with InDot Software is integrated as standard in all devices.			
Head-Camera	The Head Camera for in-line QC is integrated as standard in all devices.			
Washing Station	The Washing Station is integrated as standard in all devices.			
Travel Range	X 205 mm Y 200 mm Z 40 mm	X 250 mm Y 300 mm Z 100 mm	X 600 or 1200 mm Y 320 mm Z 44 mm	X 370 mm Y 398 mm Z 80 mm
Spottable Area	X 115 to 165 mm Y 195 mm	X 155 to 185 mm Y 300 mm	X 500 or 1100 mm Y 320 mm	X 370 mm Y 310 mm
Axis Resolution	< 0,5 $\mu\text{m}$	1 $\mu\text{m}$	1 $\mu\text{m}$	1 $\mu\text{m}$
Axis type	Belt-drives (XYZ)	Spindle drives (XYZ)	Linear Drives (XYZ)	Linear Drives (XYZ)
Position Repeatability	< +/-10 $\mu\text{m}$	+/-5 $\mu\text{m}$	+/-3 $\mu\text{m}$	+/-3 $\mu\text{m}$
Droplet Imaging	2D	2D	2D / 3D	2D / 3D
Humidity Control	✓	✓	✓	✓
Vacuum Table	✓	✓	✓	
Drying Station	✓	✓	✓	✓
HEPA Filter System with Flow Control		✓	✓	✓
De-Ionizer		✓	✓	✓
Cooling / Heating of source and target		✓	✓	✓
Orbital Shaker for source plates		✓	✓	✓
Ultrasonic Wash Station			✓	✓
On-the-fly dispensing			✓	✓
Analytical Balance for volume control			✓	✓
Conveyor / reel-to-reel				✓
Source Options 96, 384, 1536- MTP	1	2	Up to 10	Up to 4
3x8 postions for PCR tubes (100 or 200 $\mu\text{L}$ )	1	2	Up to 10	Up to 4
Reagent vials of 0.5 to 1.5 mL	Up to 4	Up to 6	Up to 30	Up to 12
Custom holders	✓	✓	✓	✓
Target Options MTP Holder	2 plates	4 plates	10 or 22 plates	9 plate trays
Glass slide adapter for MTP holder (4 slides per MTP)	✓	✓	✓	✓
Planar Target Holder / Vacuum Table	Up to 10 slides (Depending on costumized target size)	Up to 28 slides (Depending on costumized target size)	Up to 176 slides (Depending on costumized target size)	Up to 65 slides (Depending on costumized target size)

# iFOUR

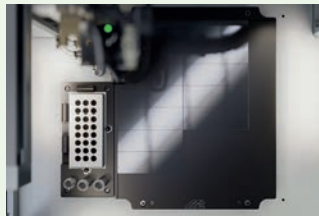
The compact benchtop  
Microdispenser



The entry level instrument for R&D applications



Easy-to-swap Dispenser  
Options



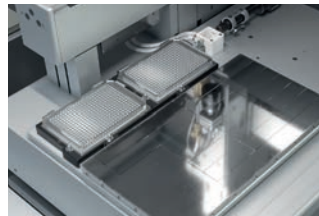
Multiple source and target  
options

# iTWO

Designed for R&D and small  
batch production



Optional high-duty mobile bench



Cooling / Heating of source  
and target



Various flat substrate  
Vacuum Tables

# iONE

The instrument for  
high-production capacities



Available in two different sizes (iONE 600 or 1200)



High speed XYZ axes,  
top speed: 1000 mm/s



Optional tray system for  
ease-of-use

# iZERO

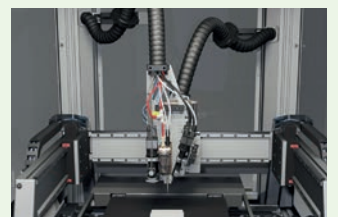
The in-line-production  
microarray-spotter system



Expandable modular production line to meet all needs

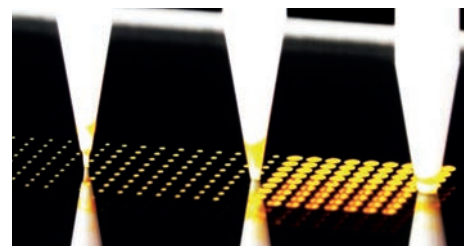
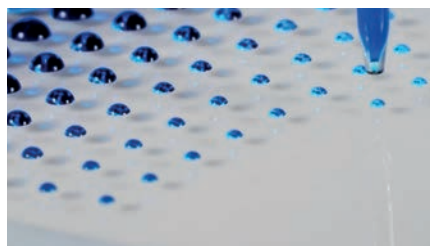
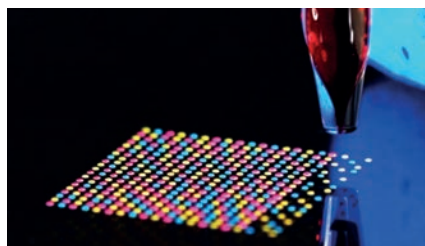


Integrated via Reel-to-Reel or  
conveyor belts



Each module performs  
partial spotting

# Dispensers interchangeable on all Instruments



## PDMD

PIEZO-DRIVEN

10 to 500 pL **NEW: 0.5 to 8 nL**



Standard



Large

- ◆ 1 - 1000 Hz dispensing
- ◆ Volume CV < 2 %
- ◆ Bulk or Aspirate / Dispense
- ◆ Different orifice diameters
- ◆ Glass (coatings available)
- ◆ Pulse shaper available for expanded viscosity range
- ◆ **NEW:** Up to 40 mg/mL protein dispensing capability

## M2MD

VALVE-BASED

8 nL to 5 µL

**NEW: 2-4 ch**



Bulk dispenser



Aspirate/Dispense dispenser



3ch dispenser

- ◆ Up to 50 Hz dispensing
- ◆ Volume CV 1 % to 5 %
- ◆ Bulk or Aspirate / Dispense
- ◆ Interchangeable tips:
  - » Glass (coatings available)
  - » Low volume plastic tips
  - » EP10 tips
- ◆ **NEW:** Multichannel custom print heads for *your* target

## Pin-DMD

PIN-DRIVEN

350 pL to 35 nL **NEW: 1x1**



- ◆ Multiple configurations:
  - » 6x6, 2x8, 4x12, 1x1 ...
- ◆ Capillary or Solid (blunt)
- ◆ 80 µm to 500 µm tips
- ◆ Chemical inert ceramic tips
- ◆ Low cost metal pins available
- ◆ Matching wash stations
- ◆ **NEW:** single pin for quick tests, holders for Auchon pins



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