



BIOSPOT[®] DX

workstation

Any volume, any substrate

Most flexible liquid handling automation platform for R&D and diagnostic manufacturing.

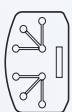
The BIOSPOT DX workstation is equipped with our innovative, non-contact dispensing technology to precisely dispense liquid samples on diagnostic substrates, such as diagnostic chips or microfluidic cartridges.

The benchtop device comes as flexible platform with 1 - 8 dispense channels and a variety of optional features tailored to your current needs and future demands. A built-in droplet analysis solution, the SmartDrop System, allows for an automated droplet volume calibration and verification directly on the device. Easily dispense different liquid classes and volumes in one dispense protocol and maximize dispense performance for more reliable results.

The TopView is a substrate camera for *Point-and-Click* commands, quality control and automated fiducial alignment applications.

Precise nanoliter dispensing

The BioFluidix' PipeJet Nanodispenser is based on a piezo actuated non-contact, drop-on-demand technology enabling the generation of uniform nanoliter droplets. The piezo driven piston of the dispenser pushes an elastic polymer tip (dispensing pipe) to precisely control droplet volume and frequency.



Diagnostic chips

Pre-storage of reagents in small cavities of diagnostic chips or microfluidic cartridges.



Lateral flow assay

Non-contact spot and line printing for LFA development or multiplexed LFA.



Biosensors

Generation of homogeneous coating films on sensor surfaces.



MS sample preparation

Reproducible deposition of reference standards in nanoliter scale on tissue or other substrates for qMSI.

Advanced substrate processing



Non-contact dispensing

Drop-on-demand dispensing of 2 to 70 nanoliter per droplet.



Easy method transfer

Run protocols on different devices without extra set-up time.



Independent of liquid classes

Dispensing of a wide range of liquids and suspensions.



Flexible deck configuration

Substrate tray to be configured and re-configured on current needs.



High accuracy and repeatability

Minimal droplet volume variation by robust dispense technology and optical imaging of volumes.



Zero dead volumes

Minimal working volumes and full recovery of remaining reagents.



No cross contamination

Dispensing pipe separated from actuation mechanism.



Disposable tips

Dispensing pipes can be replaced quickly erasing time-consuming cleaning steps.

SmartDrop System

Built-in optical system for automated droplet volume calibration and verification.

Accurate and precise dispensing of small liquid volumes is critical for many applications in diagnostics, pharma, life science and precision medicine.

Truly dispensed volumes depend on parameter settings of the dispenser but also liquid class, composition and environmental factors impact desired target volumes.

The SmartDrop System is the droplet analysis solution considering these variables to measure droplet volumes for an automated volume calibration and verification.

Product comparison

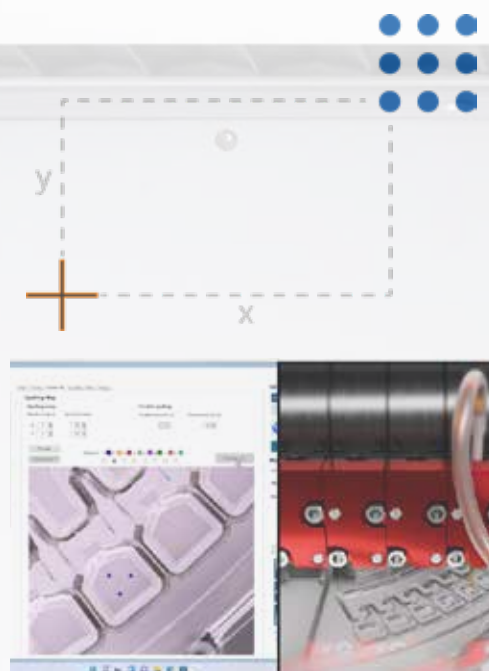
BioFluidix provides liquid handling solutions for every stage of your research or product development. The BioSpot series includes devices for the development of automated workflows up to high scale batch production devices fully customized to your needs.

Product	BioSpot Arc	BioSpot DX	BioSpot Custom
Use	Entry level device for the development of automated workflows	Liquid handling device for diagnostic R&D and manufacturing	Liquid handling device with flexible configuration for custom applications
Compatible dispensing technology	Sijet: 50 - 250 pl per droplet Pipejet: 2 - 70 nl per droplet	Pipejet: 2 - 70 nl per droplet	Sijet: 50 - 250 pl per droplet Pipejet: 2 - 70 nl per droplet Valvejet: > 1 µl per jet
No. of channels	1 or 2 channels	1 to 8 channels	8 (Sijet/ Pipejet) + 4 (ValveJet) channels
Precision/ step width	20 µm	10 µm	10 µm
Positioning accuracy	200 µm	50 µm	50 µm
Addressable area	180 x 125 mm (x / y) Custom workdeck on request	260 x 370 mm (x / y) Custom workdeck on request	260 x 370 mm (x / y) Custom workdeck on request
Axis	X/Y belt drive Z spindle drive	X / Y / Z spindle drive	X / Y / Z spindle drive
TopView camera	Integrated	Integrated	Optional
SmartDrop System	Optional	Integrated	Optional
Aspiration	No	Optional	Optional
Wash unit	No	Optional	Optional
Ionizer	No	Optional	Optional
Safety Enclosure	No	Safety Enclosure, Open Enclosure	Safety Enclosure, Open Enclosure
Computer	External PC required	Integrated	Integrated
Footprint	418 x 550 x 233 (l x w x h in mm)	657 x 580 x 500 (l x w x h in mm)	657 x 580 x 500 (l x w x h in mm)
Weight	14 kg (including external control box)	From 49 kg (depending on configuration)	From 49 kg (depending on configuration)

All specifications are subject to change without notice. Contact BioFluidix or refer to www.biofluidix.com for more information.

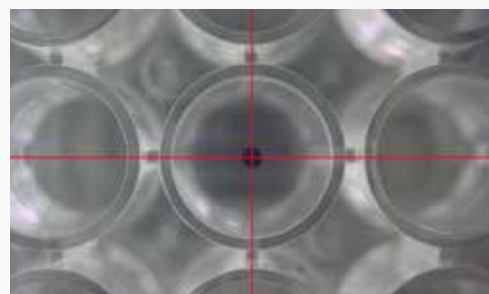
Substrate camera

TopView keeps an eye on target substrate and enhances process control



Fiducial alignment - automated detection of fiducial marks on substrates via TopView camera for flexible zeroing to implement highest print position accuracy

Spotting Map - software assisted target selection and precise definition of any printing pattern on substrates. Selecting target spot positions by a simple *Point-and-Click* on the live preview speeds up process development and production on any kind of substrate.



Verification of droplet deposition (QC)
Assurance of valid droplet positioning on substrate by automated substrate imaging after printing increases product quality and enables tracing of manufacturing steps.

Optional hardware features

- PipeJet Nanodispenser modules (1 - 8 channels) for nanoliter dispensing
- Aspiration for the uptake of liquid from a source plate.
- Wash station for a cleaning of dispensing pipes in an automated workflow.
- Smart Reservoir (1-channel) with embedded closed loop pressure control.
- Ionizer to eliminate electrostatic charge from plastic or other non-conductive substrate.
- Substrate tray customized to specific substrate dimension (e. g. diagnostic chip).
- Safety enclosure in different versions (e. g. doors with safety lock or open front with light grid protection).



BioFluidix provides ultra-low volume dispensing solutions for the automation of liquid handling workflows in life science, diagnostic, medical and the pharmaceutical market. Our flexible liquid handling automation platforms, printheads, OEM components and consulting services match standard and highly customized applications.

Learn more on
www.biofluidix.com



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