BECKMAN COULTER

Bringing power and flexibility down to size.

BIOMEK® NXP

LABORATORY AUTOMATION WORKSTATION

Small footprint

Easy fit on standard lab benches

Many configurations to suit application needs

Biomek® NX^P workstation

By incorporating a wide range of next-generation features into a small-footprint design, Biomek NX^P sets the standard for flexible laboratory solutions. It puts every aspect of liquid handling – including pipetting, dilution, dispensing and integration – into a single, automated system that is as powerful and flexible as it is efficient and economical. All while offering unprecedented flexibility for changing needs. Combined with robust Biomek Software and our ongoing applications development, Biomek NX^P is bringing new possibilities to life.

The right features – right where you need them

Knowing that the ability to adapt to changing situations is critical for today's labs, our systems are designed with the flexibility to accommodate whatever your needs may be. Build your Biomek system to handle today's requirements, make modifications as necessary, add accessories whenever and wherever extra capability is important, and use our wide variety of modules to manage tomorrow's needs with specifically targeted solutions. From standalone to industrial robotics solutions, it is no wonder our flexible liquid handling systems are the foundation of discovery solutions worldwide.

Eight-probe, 96- or 384-channel pipetting

The NX^P workstation offers multiple configurations, including multichannel, Span-8 and Span-8 with an optional gripper. The multichannel model is available with 96- and 384-channel pipetting heads for rapid plate-to-plate applications and assay miniaturization.

Interchangeable pipetting heads with Biomek FX^P

Optional gripper mechanism on Span-8

Multiple syringe and probe options

360° rotating gripper for maximum flexibility

With the ability to rotate a full 360°, the optional gripper handle provides access from the left, right or from integrated devices on the back of the instrument. It turns to pick up plates in different orientations, enhances on-the-fly barcode reading and saves deck space by moving titer lids while the Span-8 is pipetting.

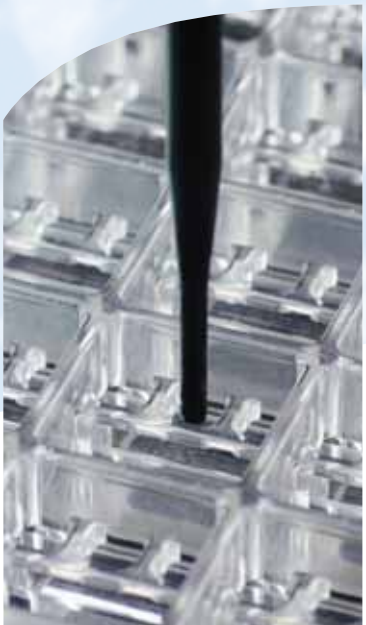
Open frame design allows future integration of additional devices

The flexible, open architecture of Biomek NX^{P} simplifies integration, as plate readers, washers and storage devices can be located on the left, right or back of the instrument. The open frame design allows future vertical workspace integration, for applications where limited lab space is an issue.

Open base for vertical integration

Gripper allows device integration for Span-8 configuration

Open platform for flexible integration



Pipetting performance

Biomek NX^{P} offers proven pipetting performance for low-volume reaction setup and assay miniaturization, as well as accurate and repeatable results extending into the submicroliter range. Different techniques can be used for various volume ranges, to enhance liquid handling capabilities. Improved X, Y and Z stability delivers reliable results for small volumes and, to ensure optimum pipetting performance, an integrated pump purges air from the lines.

Built-in bar code reader delivers on-the-fly tracking

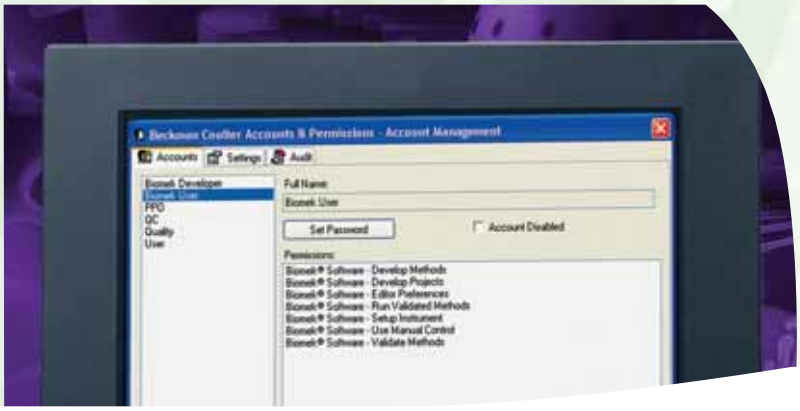
With the ability to scan plates being held by the gripper, sample integrity is ensured. Sample IDs can be imported based on the plate barcode and tracked throughout the run. If barcode inconsistencies are detected, Biomek Software allows a wide range of user-controlled corrective actions, logging and error handling instructions.

Software for your needs

First-time user of automated liquid handling technology? Experienced specialist? Either way, you'll find that Biomek® Software is packed with easy-to-use features to meet any need. And with a single, consolidated user interface driving all Biomek liquid handlers, it's simple to move between platforms. Since many functions are combined into a single step, setup is fast and effortless. And specialized algorithms speed programming even more by suggesting the best settings for the job at hand. All of which lets any user make the most of everything that Biomek NX^{P} has to offer.

21 CFR Part 11 compliance

To help achieve regulatory compliance with 21 CFR Part 11 – and perform validation assays in a regulated environment – Biomek Software delivers the ability to set different user accounts and permissions, track revision control and enable electronic signatures. It also requires users to register any change to methods and stores all versions.



Unified software platform across all Biomek instruments

With a single, consolidated user interface for all Biomek platforms, operator learning time is drastically reduced. Biomek Software also allows methods to be moved from one instrument platform to another, quickly and easily.

Intuitive interface

The flexibility built into Biomek's user interface puts the full range of its power into the hands of any user. It provides the ability to customize the interface, import and export methods, use icon-driven Step Palettes to create and configure methods with drag-and-drop ease, define new deck layouts and labware to make changing configurations fast and easy, and much more. As a result, switching between applications such as MALDI spotting and gDNA purification is particularly easy. And new users get up-and-running faster than ever before.

Point-and-click methods development

The mouse-driven simplicity of our unique point-and-click programming avoids the long learning curve so common to other approaches. Alternatives such as pipetting techniques, liquid types and deck layouts can be chosen from drop-down lists. Method validation features will check your method and find any logical errors. The Estimated Time to Completion (ETC) feature will provide you with an accurate run time, enabling you to speed up methods development and efficiently plan your instrument use. Variables, worklists and logicals can be used to vary runs without reprogramming. All of which makes a wide variety of applications – from nucleic acid purification to cell-based assays – extraordinarily efficient and streamlined.

Septum piercing and clot detection

To maintain the sample integrity so important to any application, Biomek NX^{P} offers advanced septum piercing abilities. Clot detection circuitry ensures that samples are consistently and reliably dispensed to their proper location in a non-contaminated form – ideal for applications such as gDNA purification from whole blood.

The right applications – the right way

The demands of the life science world are changing daily. So at Beckman Coulter, we're continuously delivering new ways to accelerate your valuable research. Our dedicated applications group, for instance, is focused exclusively on creating automated solutions for a variety of commercially available kits. eLabNotebook gives you quick access to a wide variety of in-house and customer-developed applications. And our renowned Biomek® Software makes it easy to develop methods to meet your individual needs. Put it all together with our robust new Biomek NX^{P} Laboratory Automation Workstation and it is easy to see we are giving you the tools to do your best science, your way.

Detection assays

Cytokines have been shown to regulate immunologic responses and cell-to-cell communication, as well as dose responses to infectious agents. Their presence at elevated levels can indicate disease progress. Combined with our Biomek NX^{P} workstation, the Immunotech Cytokine kits deliver fast and efficient methods to measure the different types of Cytokines present in a cell, while adding to the proteomics and cellular analysis solutions available from Beckman Coulter.

Use Span-8 device to add reagents individually, precisely when needed

Optional integrated storage devices accommodate long incubation times

96 samples in less than one hour

DNA yield 8-10 µg

Expandable system for higher throughput

Sample preparation

The need for increased throughput for molecular techniques – particularly DNA/RNA purification methods – has led to a number of purification protocols on automated platforms. These automated methods, however, must generate high-quality results in order to be used by downstream applications such as sequencing, PCR* and transfection. The Biomek® NXᵖ provides a complete portfolio of nucleic acid sample preparation solutions for DNA and RNA with the magnetic bead-based Agencourt® SPRI® technology.

Automated PCR and sequencing reaction setup

Biomek NXᵖ's reliable, repeatable pipetting, tube-to-plate capability and efficient automation combine to provide the ideal automation solution for this routine process, while fitting seamlessly into any lab's workflow. And its low-volume capability helps miniaturize reaction setups and save on costly reagents.

PCR & sequencing applications

Submicroliter transfers

Reaction setup in less than 30 minutes

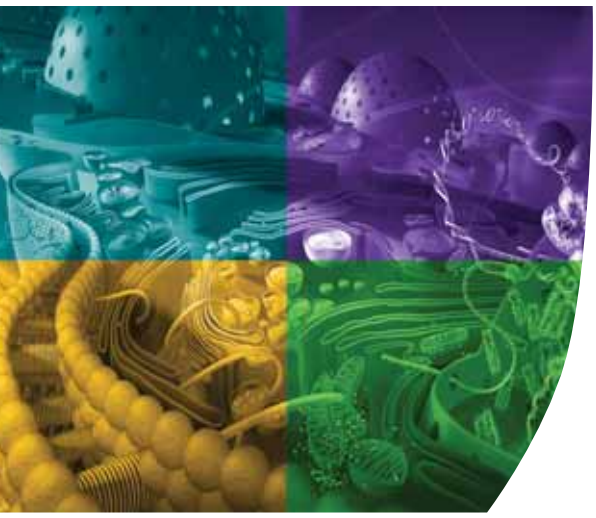
PCR and sequencing reaction cleanup

Reaction cleanup is a simple process, to remove unwanted nucleotides and primers before running samples on a DNA analyzer, such as the CEQ™ Series from Beckman Coulter or other sequencing platforms from Applied Biosciences or GE Healthcare. To accommodate a wide variety of cleanup protocols, the Biomek FXᵖ has been optimized for automation of paramagnetic technology. Configure a Biomek FXᵖ with the Agencourt CleanSEQ® Dye Terminator Removal kit to process up to 17 plates per hour for your high-throughput sequencing needs.

Magbead technology

Validated methods for SPRI protocols

Up to 17 plates per hour



The Biomek NX^P and all our Systems Biology offerings are an important part of a broad continuum of Beckman Coulter products, including automated liquid handling, capillary electrophoresis, centrifugation, ultracentrifugation, DNA sequencing, electrochemistry, flow cytometry, fragment analysis, HPLC, integrated core systems, microarrays, particle characterization, scintillation counting, and spectrophotometry.

For information about our comprehensive line of Laboratory Automation Workstations, please contact your local Beckman Coulter representative or visit our web site at

www.beckmancoulter.com/labautomation

Biomek® NX^P Laboratory Automation Workstation Specifications

Workstation

Weight	86.18 kg (190 lb.)
Height	111.76 cm (44 in.)
Width	91.44cm (36 in.)
Depth	81.28 cm (32 in.)
Power Requirements	50/60 Hz, 100-240 VAC

Pipetting Options

96-Channel Disposable Tip Pipetting Head
384-Channel Disposable Tip Pipetting Head
Span-8 Fixed 100 Probes
Span-8 Fixed 60 Probes
Span-8 P250 Disposable Tips
Span-8 P250 Liquid Level Sensing Tips
Span-8 P20 Disposable Tips
Span-8 P20 Liquid Level Sensing Tips
Septum Piercing Probes

Gripper Tool

Used to move labware and devices around the Biomek worksurface to automate fully filtration-based processes such as nucleic acid purification and provide access to integrated plate readers.

Minimal Table Requirements

64 cm (25 in.) Width × 61 cm (24 in.) Depth
Sufficient to support 136.2 kg (300 lb.)

BIOMEK NX^P PIPETTING PERFORMANCE SPECIFICATIONS

SPAN-8 SYSTEMS

Transfer Volume	Span-8 Syringe Volume	Tip Types	Accuracy ± %	Precision < %
0.5 µL	250 µL	P20, Fixed 60 mm	5	10
1 µL	250, 500, 1000 µL	P20, P50, Fixed 60 mm	3	7
5 µL	250, 500, 1000 µL	P20, Fixed 60 mm	3	5
10 µL	500 µL	P50, P250	3	5
50 µL	500 µL	P250	3	5
100 µL	500 µL	P250, P1000	3	5
250 µL	500 µL	P1000	2	2
950 µL	1000 µL	P1000	1	1

MULTICHANNEL SYSTEMS

Transfer Volume	Multichannel Configuration	Tip Types	Accuracy ± %	Precision < %
0.5 µL	384	P30	3	7
1 µL	96 & 384	P20, P50, P30	3	5
5 µL	96 & 384	P20 & P30	3	5

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