

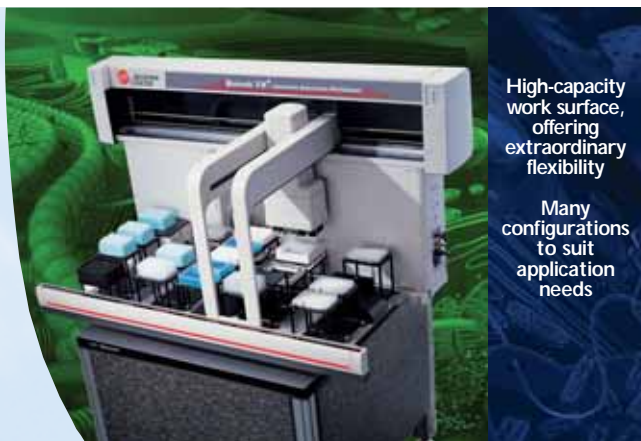


*Flexible solutions for confidence in results.*

**BIOMEK® FX<sup>P</sup>**

LABORATORY AUTOMATION WORKSTATION





High-capacity  
work surface,  
offering  
extraordinary  
flexibility

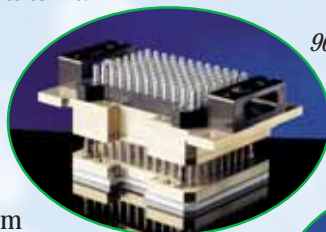
Many  
configurations  
to suit  
application  
needs

## Biomek® FX<sup>P</sup> workstation

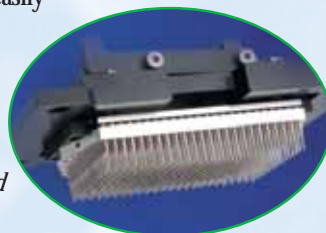
The Biomek FX<sup>P</sup> is the latest entry in the Biomek line. With an up-to-date hardware design for greater positional accuracy and increased robustness, it can meet the needs of just about any application. It can be configured with either one or two pipetting pods. With its large deck capacity, the Biomek FX<sup>P</sup> sets the standard for flexible laboratory solutions to meet your changing needs. 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. Combined with the proven Biomek Software and our ongoing applications development, Biomek FX<sup>P</sup> is bringing new possibilities to life.

The Biomek FX<sup>P</sup> continuum starts with a single-pod system. Equip the high-capacity deck with Automated Labware Positioners (ALPs) suited to your application to create a dedicated workhorse system.

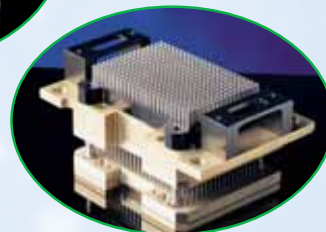
Choose a 96- or 384-multichannel pipetting head, or opt for a pin-tool system for high-density replication tasks. The multichannel pod heads are easily swapped out for maximum flexibility and system reconfiguration as your needs change. A Span-8 configuration featuring independent well access also is available for tube-based operations and where flexible access to wells in a plate is needed.



96-well head



Pin-tool head



384-well head



## *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.

With the Biomek FX<sup>P</sup>, the Biomek is just the beginning. Its open architecture allows for integrations of readers, plate washers, labware storage devices and robotic transport systems. The gripper built into the multichannel pod provides fast and reliable labware movement around the deck, as well as the capability to de-lid and re-lid plates, create vacuum manifold assemblies and access integrated devices.

Interchangeable  
pipetting  
heads with  
Biomek NX<sup>P</sup>

Multiple  
syringe and  
probe options







### *Two heads are better than one*

A dual-pod system is the smart choice for busy labs. Choose a hybrid system (multichannel pod and Span-8) for maximum process flexibility. Perform hit-picking operations quickly. Replicate plates with a 96- or 384-well head, then add reagents unique to each well with the Span-8 pod, using tubes, plates or reservoirs as sources.



### *Efficient plate replication*

A dual-multichannel pod instrument makes plate replication tasks fast and efficient. A system with both 96 and 384 heads can rapidly condense and replicate 96-well library plates into 384-well dilution plates. Or, use the HDR Tool (pin-tool head) on one pod, and a pipetting head on the other. A dual-multichannel system also is an excellent choice for filtration applications.

### *Scale up to a Biomek Assay Workstation*

The Biomek FX<sup>®</sup> can serve as the central component in an assay workstation – a complete assay automation system including labware storage, incubation, plate washing, plate reading and other components. Powered by SAMI<sup>®</sup> Workstation EX software, the Biomek Assay Workstation is the system of choice for ELISAs, cell-based assays or any other process containing time-critical incubations. Assay Workstations are tightly integrated to maximize capacity and throughput in a small footprint.



### *Use intelligent software*

Simplify your assay development with SAMI Workstation EX, a powerful scheduling environment with an intuitive user interface.





Confirmatory  
barcode reads

No deck  
space needed  
for barcode  
reader

Error  
handling  
gives users  
recovery  
options

### *Built-in barcode reader delivers on-the-fly plate 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.

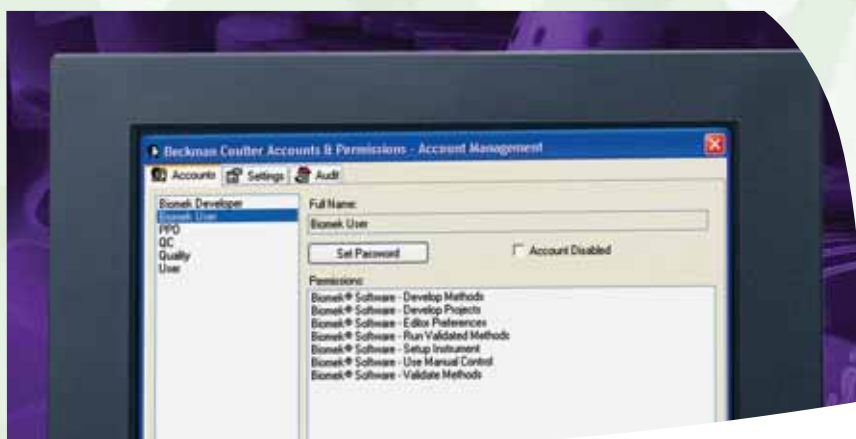


### *Software for your needs*

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 is 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 FX<sup>p</sup> has to offer.

### *21 CFR Part 11 compliance*

To help achieve regulatory compliance with 21CFR Part11 - 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.







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.



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 “if-then” statements can be used to vary runs without reprogramming. All of which makes a wide variety of applications – from plasmid purification to hit-picking – extraordinarily efficient and streamlined.



## Screening Solutions

The Biomek<sup>®</sup> FX<sup>®</sup> is the right instrument for screening – both primary and secondary – as well as all your replication and reformatting tasks in between. Choose a preconfigured Biomek FX<sup>®</sup> solution with validated or verified methods, or outfit a system tailored exactly for your unique needs. With an array of Beckman Coulter peripherals and ALPs from which to choose, plus a library of third-party integrations available, the Biomek FX<sup>®</sup> will deliver solid performance in your assay.



## Validated Solutions for ADMETox

The ADMETox Workstation provides the automation for high-throughput ADMETox screening assays for qualifying leads and profiling potential drug candidates. The workstation supports *in vitro* assays to measure absorption, metabolism and toxicology. The supported absorption assays include pION's PAMPA and  $\mu$ SOL technologies and cell-based assays using Caco-2 cells. The supported metabolism assays include Cytochrome P450 inhibition studies and microsomal stability assays. Toxicology assays include Promega's cell proliferation assay, CellTiter<sup>®</sup>; cytotoxicity measurements, CytoTox-ONE<sup>®</sup>; and apoptosis assays, Caspase-Glo<sup>®</sup>.

The ADMETox Workstation comes with an analysis package that enables the user to speed the decision-making process for further drug development.

## 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 FX<sup>®</sup> 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 FX<sup>®</sup> 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





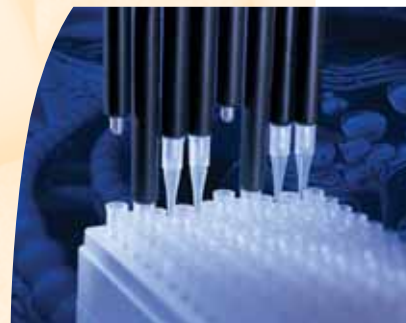


## *Sample preparation*

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 FX<sup>P</sup> has standard solutions for both magnetic bead and filter-plate-based technologies, with validated methods available for kits developed by Agencourt® and Promega.

## *Automated PCR and sequencing reaction setup*

Biomek FX<sup>P</sup>'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 < 30 minutes

## *PCR and sequencing reaction cleanup*

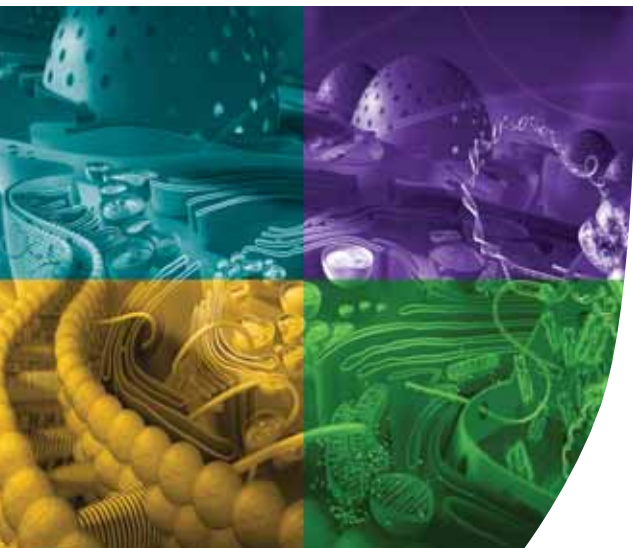
Reaction cleanup is a simple process, to remove unwanted nucleotides and primers before running samples on a DNA analyzer, such as the CEQ™ 8000. To accommodate a wide variety of cleanup protocols, the Biomek FX<sup>P</sup> is capable of automating methods that utilize filtration or paramagnetic technology. Configure a Biomek FX<sup>P</sup> with the Agencourt CleanSEQ Dye Terminator Removal kit to process up to 17 plates per hour for your high-throughput sequencing needs. Or use the Promega SV 96 PCR cleanup kit to get efficient purification of PCR fragments with yields often greater than 90% recovery.

Magnetic  
bead  
technology

Validated  
methods  
for SPRI  
protocols

Up to  
12 plates  
per hour





*The Biomek FX<sup>®</sup> 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](http://www.beckmancoulter.com)***

\*The PCR process is covered by patents owned by Roche Molecular Systems and E. Hoffman-La Roche, Ltd. All other trademarks are the property of their respective owners.

For laboratory use only. Not for use in diagnostic procedures.



Beckman Coulter, Inc. • 4300 N. Harbor Boulevard, Box 3100 • Fullerton, California 92834-3100  
Sales & Service: 1-800-742-2345 • Telex: 678413 • Fax: 1-800-643-4366 • [www.beckmancoulter.com](http://www.beckmancoulter.com)

#### Worldwide Biomedical Research Division Offices:

**Australia** (61) 2 9844-6000 **Canada** (905) 819-1234 **China** (86) 10 6515 6028 **Eastern Europe, Middle East, North Africa** (41) 22 994 07 07  
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## Biomek<sup>®</sup> FX<sup>®</sup> Laboratory Automation Workstation

### Specifications

#### Workstation

Weight	125 kg (275 lb) one bridge, one pod and canopy
Height	109.2 cm (43 in)
Height with canopy	139.7 cm (55 in)
Width	152.4 cm (60 in)
Width with canopy	162.5 cm (64 in)
Depth	81.3 cm (32 in)
Power Requirements	50/60 Hz, 100-240 VAC

### Pipetting Options

High-Density Replication Tool  
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

### 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

92 cm (36 in) Width x 77 cm (30 in) Depth.  
Sufficient to support 181.4 kg (400 lb)

#### BIOMEK FX<sup>®</sup> 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

*Developing innovative solutions in Systems Biology.*

**Innovate** **Automate**  
SIMPLY