

# BioRobot® Universal System — Pure Flexibility



Sample & Assay Technologies



## Your complete front-end automation solution

The [BioRobot Universal System](#) integrates all the instrumentation, software, purification technologies, and enzyme technologies that are required for medium- to high-throughput applications in 96-well format. Standardized, highly reproducible nucleic acid purification and reaction setup at the front-end of your molecular biology applications ensure consistent, reliable results that can be compared across experiments and projects.



The BioRobot Universal System enables multiple applications on one instrument.



Automated vacuum processing provides reproducibly high nucleic acid yields.

### Optimized protocols enable automation of:

- RNA purification from cells, tissues, and blood
- DNA purification from buccal swabs, blood, and forensic samples
- Plasmid DNA purification from bacteria
- DNA cleanup from amplification reactions
- RT-PCR, PCR, sequencing reaction, and forensic assay setup

### ► Benefits of the BioRobot Universal System:

- Reproducible, standardized results between experiments and labs
- Fast startup and immediate results with optimized, ready-to-run protocols
- Comprehensive service agreements tailored to your needs
- Widest range of applications in 96-well format
- Multiple applications with no hardware changes needed

## Expertise in automation and sample technologies

QIAGEN's R&D teams are experts in automated systems and the use of well-established QIAGEN sample and assay technologies, as well as the development of new chemistries and applications. Automated systems are developed and optimized using QIAGEN consumables. Each optimized, ready-to-run protocol is established after intensive testing. This eliminates the need to combine products from different sources and to set up and optimize protocols, saving significant time and effort.

**Table 1. Hardware technologies of the BioRobot Universal System**

Feature	Description	Benefit
High-precision pipetting	<ul style="list-style-type: none"> <li>■ Wide pipetting range covers all needs</li> <li>■ Aerosol-free pipetting</li> <li>■ Choice of 10 µl, 50 µl, 300 µl, or 1100 µl tips</li> </ul>	Accurate, reproducible pipetting with no need to change hardware
Patent-pending dispensing technology	<ul style="list-style-type: none"> <li>■ Rapid, accurate dispensing of buffer volumes over 200 µl</li> <li>■ Connection to buffer tracking system</li> </ul>	Improved runtimes, cost saving as less tips used per prep
Innovative reagent carousel and tracking system	<ul style="list-style-type: none"> <li>■ Integrated liquid-level sensing</li> <li>■ Buffer bottle bar code reader</li> </ul>	Uninterrupted processing, no open bottles left standing around
Efficient high-speed shaking	<ul style="list-style-type: none"> <li>■ 1100 rpm speed</li> </ul>	Efficient sample mixing and resuspension
Accurate cooling and heating	<ul style="list-style-type: none"> <li>■ Heating up to 80°C</li> <li>■ Cooling down to 4°C</li> </ul>	Efficient sample lysis and cooling of heat-sensitive reagents
Advanced vacuum system	<ul style="list-style-type: none"> <li>■ Cutting-edge filtration technology</li> <li>■ Fully automated vacuum process</li> <li>■ Removal of all residual ethanol</li> </ul>	Reproducible elution volumes and higher yields without risk of PCR inhibition



**Efficient heating and cooling system ensures accurate results.**

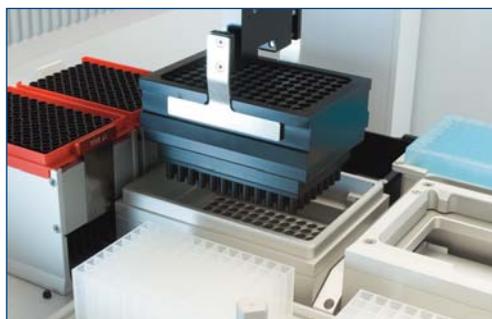
## Unrivaled instrument support provides peace of mind

QIAGEN Instrument Service provides comprehensive [support services](#) for your [BioRobot Universal System](#) to ensure the continued success of your automated applications. A wide range of flexible [Service Support](#) products gives you peace of mind and lets you enjoy complete coverage and cost control. With ISO 9001/ISO 13485 certification and an international team of highly qualified and experienced specialists, we deliver the high-quality service that you deserve and that your applications demand. Flexible options include consultative services for creating and optimizing applications and warranty extensions.



## Comprehensive application portfolio enhances flexibility

A wide range of [Application Packs](#) is available for the [BioRobot Universal System](#), reflecting the variety of procedures that can be automated using this flexible system. Each [Application Pack](#) includes protocols that have been tested and optimized for a specific application. Combined with trusted [QIAGEN® Kits](#), the [Application Packs](#) enable rapid setup of your chosen application.



The unique channeling adapter guarantees cross-contamination-free processing.

### ► Application Pack, Investigator

This pack enables purification of high-quality DNA from up to 192 buccal swab samples or up to 96 blood samples or forensic casework samples (such as dried blood, surface swabs, stains on fabric, cigarette butts, tobacco, chewing gum, and envelopes). The robust purification procedure provides DNA that performs well in sensitive downstream analysis, such as mtDNA and autosomal DNA profiling. The pack also includes reaction setup protocols for the Quantifiler® Human DNA Quantification Kit, Quantifiler Y Human Male DNA Quantification Kit, and AmpFISTR® Identifiler® PCR Amplification Kit (Applied Biosystems).



See-saw plate movement facilitates processing of small volumes.

### ► Application Pack, Gene Expression

Highly pure RNA for gene expression analysis can be purified from blood, tissues, and cells using well-established QIAGEN Kits and the [Application Pack, Gene Expression](#). This pack also enables RT-PCR setup in 96 well format, completing the front-end automation of your gene expression experiments.

## ► Application Pack, Genotyping

Walkaway purification of DNA from up to 192 buccal swabs or up to 96 human whole blood samples, followed by reliable PCR setup in 96-well format, delivers the reliability you need in high-throughput genotyping applications. Automated PCR setup helps to eliminate cross-contamination and variation caused by handling-errors.

## ► Application Pack, Sequencing

The [Application Pack, Sequencing](#) and QIAGEN sample technologies provide everything you need for consistent sequencing reaction setup. Automated plasmid DNA purification from up to 4 x 96 bacterial cultures, PCR cleanup from up to 96 samples, and PCR and sequencing reaction setup in 96-well format ensures reproducible results.

## Dedicated options for specific fields and applications

In addition to the wide range of [Application Packs](#), specialized application protocols dedicated to specific fields such as veterinary are also available. Veterinary application protocols enable purification of high-quality DNA, total RNA, or viral RNA from a range of veterinary sample types including blood, tissues, and swabs.

QIAGEN's R&D and Application teams are available to create customized protocols at a researcher's request. This increases the flexibility of the [BioRobot Universal System](#), as it can be modified to suit specific or changing laboratory needs. Customized protocols for high-throughput viral RNA analysis have been successfully used by researchers in avian influenza and animal research applications. Additional customized protocols enable purification of viral nucleic acids from sputum, plasma, and respiratory samples and of bacterial DNA from transport media.

## Optimized protocols save time and effort

QIAGEN's R&D teams combine their expertise in automation and chemistry to develop the application protocols described, saving you time and resources. Instead of spending long periods of time in process optimization, you can generate rapid results and focus on your projects.



8-tip varispan technology allows access to a variety of tubes, vials, and microtiter plates.



The high-speed dispensing system ensures precise and accurate dispensing of liquids.

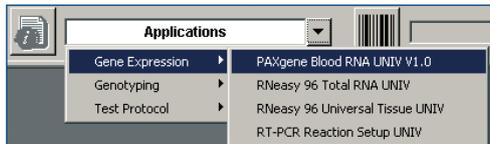


The high-speed shaker efficiently resuspends and lyses sample material.

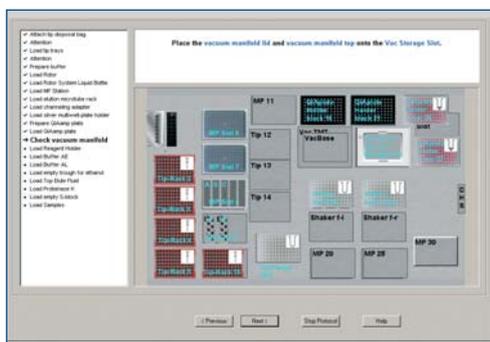


## Easy-to-use software

[QIAsoft 5](#), the controlling software for the [BioRobot Universal System](#), makes operation of the system easy. The software guides the user through worktable setup with clear on-screen messages. A detailed load check helps to ensure that samples, reagents, and labware are correctly loaded.



Easy protocol selection.



Error-free worktable setup.

User Name	Full Name	Password	Group	Created	Modified	Last Modified
Person 1	First general opera	*****	General Operator	18.01.2005 16:59:54	18.01.2005 16:59:54	superv
Person 2	General Operator	*****	General Operator	18.01.2005 16:59:54	18.01.2005 16:59:54	superv
GeneralOperator	General Operator	*****	General Operator	21.04.2001 22:51:26	24.10.2001 14:23:15	admin
Supervisor	Supervisor	*****	Supervisor	21.04.2001 22:51:26	05.06.2001 12:43:09	Admin

Simple user administration.

## Reliable sample processing

[QIAsoft 5](#) software further increases the reliability of sample processing by enabling detection of clots (e.g., when processing blood samples) and clogged membranes. [QIAsoft 5](#) software marks the position and does not continue processing the sample. Adjacent samples are safely processed without risk of cross-contamination.

## Valuable electronic documentation

Electronic documentation provides increased efficiency and productivity and easy exchange of information. [QIAsoft 5](#) allows users to comply with the technical requirements of 21 CFR Part 11. Files generated by [QIAsoft 5](#) are in CSV format, enabling easy data management and compatibility with laboratory information management systems (LIMS). Administration of users is straightforward. Report and result files are protected using a checksum to detect inappropriate modification.

## Convenience of scheduled maintenance

[QIAsoft 5](#) software ensures continued high performance of the system by describing the daily, weekly, monthly, and biannual maintenance procedures that need to be performed. Routine maintenance procedures are recorded with the names of the users who carried out the procedures.

## Ordering Information

Product	Contents	Cat. no.
▶ BioRobot Universal System	Robotic workstation, computer-controlled vacuum pump, computer, QIAsoft 5 Operating System, installation, 1-year warranty on parts and labor	9001094
▶ Application Pack, Veterinary	Application-specific accessories for veterinary applications plus 2 customized protocols	9241730
▶ Application Pack, Investigator	Protocols and application-specific accessories for purification of nucleic acids from forensic samples and downstream assay setup	9017720
▶ Application Pack, Gene Expression	Protocols and application-specific accessories for RNA purification and RT-PCR	9016754
▶ Application Pack, Genotyping	Protocols and application-specific accessories for genomic DNA purification and PCR setup	9016755
▶ Application Pack, Sequencing	Protocols and application-specific accessories for plasmid DNA purification, PCR cleanup, and sequencing reaction setup	9016757
▶ Warranty PLUS 2	3-year warranty, 1 preventive maintenance visit per year, 48-hour priority response, all labor, travel, and parts	9239573
▶ Mission Pack Application Agreement	Instrument Service Specialists help you develop or optimize an automated application; includes 6 working days, valid for 1 year	9238771
▶ Project Pack Application Agreement	Instrument Service Specialists help you develop or optimize an automated application; includes 12 working days, valid for 3 years	9238773
Laboratory Cabinet	Cabinet accommodating the BioRobot Universal System, accessory items, vacuum trap, waste and system liquid containers	9015274
Accessory Cabinet	Cabinet accommodating computer, monitor, keyboard, and additional BioRobot Universal System accessories	9015275

The BioRobot Universal System is intended for molecular biology applications. This product is neither intended for the diagnosis, prevention, or treatment of a disease, nor has it been validated for such use either alone or in combination with other products.

**Discover pure flexibility at [www.qiagen.com/goto/BioRobotUniversal!](http://www.qiagen.com/goto/BioRobotUniversal!)**

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[www.qiagen.com](http://www.qiagen.com)

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