myra+

Automated qPCR System

Sample | Setup | Analysis | Result

bms
bio molecular systems

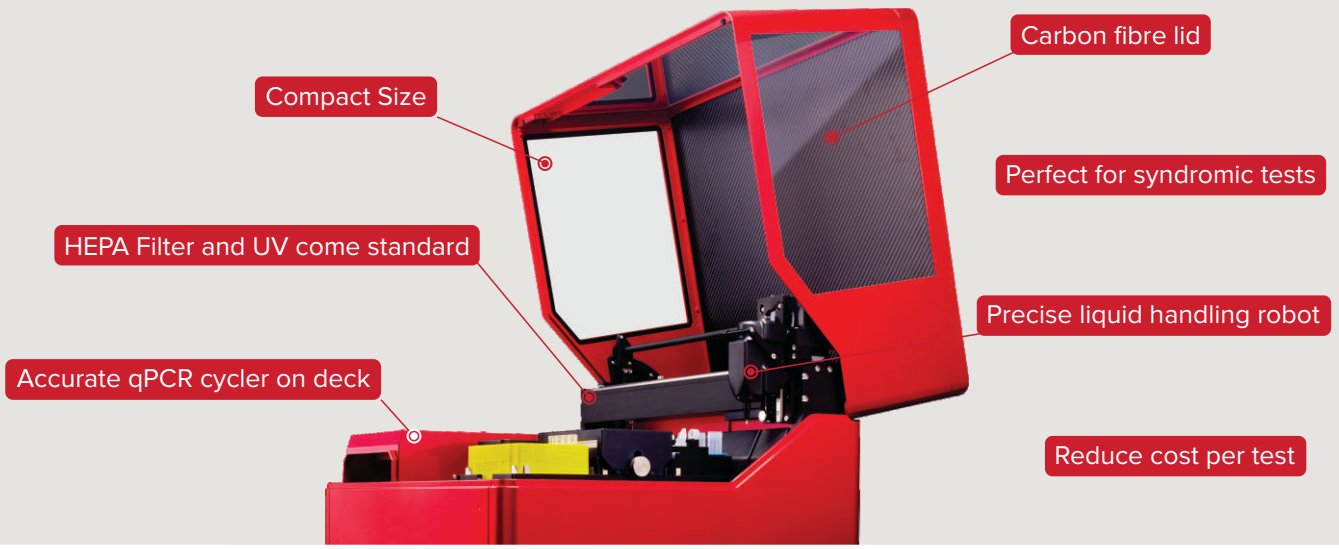
Made for extraordinary life

myra+

Automated qPCR System

Combining next generation qPCR technology with state of the art liquid handling hardware. The Myra+ is an automated molecular instrument ideal for any lab or researcher.

Sample to Answer



Sample Prep

Myra+ is equipped to handle your sample preparation needs, whether you're using standard magnetic-based extraction methods or going directly to PCR.

The device is versatile enough to process various sample formats. For samples that include swabs, Myra+ is uniquely designed to prevent collisions by automatically pushing the swab aside, ensuring smooth operation.

V-caps

Our proprietary V-cap tubes simplify the process of loading qPCR reactions directly into the on-deck Mic cycler. The design uses centrifugal force to push the liquid through an aperture in the cap and into the tube, beneath the pre-filled oil, ensuring efficient and accurate sample processing.

Open Platform

There's no need to be confined to costly micro-fluidic cartridges. Experience flexibility with your assays and protocols with Myra+.

Features include:

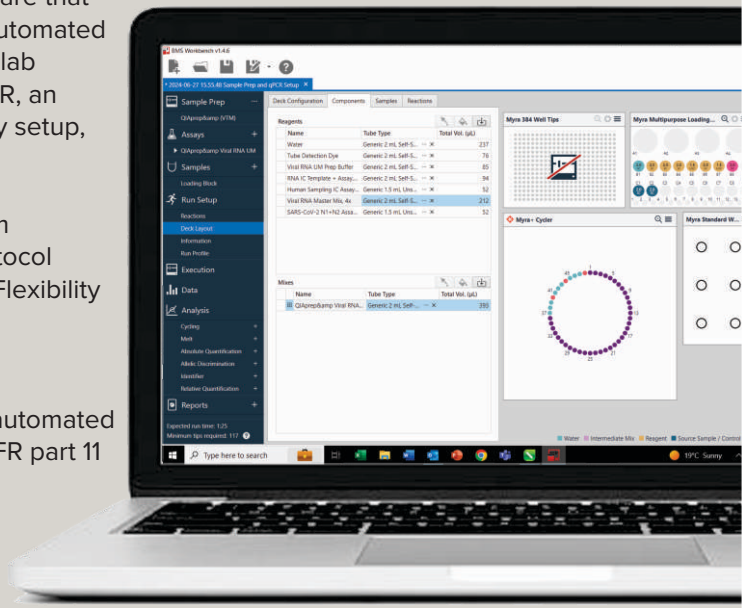
- Vortex mixing
- Multi-tube aspiration
- Film piercing
- Extensive consumable library
- Lyophilized reagent compatible

Intuitive Software

The Myra+ boasts software that stands out from other automated platforms. For standard lab operations such as qPCR, an intuitive UI enables easy setup, running, and analysis.

Create your own custom protocols using our protocol development function. Flexibility without the complexity.

LIMS compatibility, user permission levels, and automated analysis functions. 21 CFR part 11 compliant.



qPCR Runs

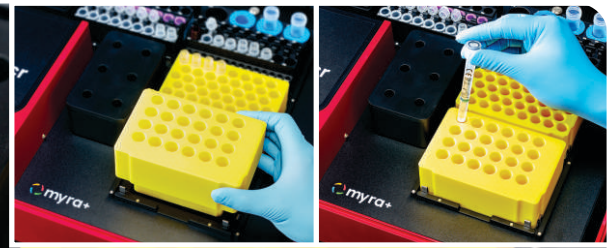
Samples and reactions are loaded directly into the V-cap tubes within the on-deck Mic qPCR cycler. The system is designed to monitor for the presence of tubes and prevent the loading of tubes that might contain the previous run reactions, thereby avoiding contamination issues.

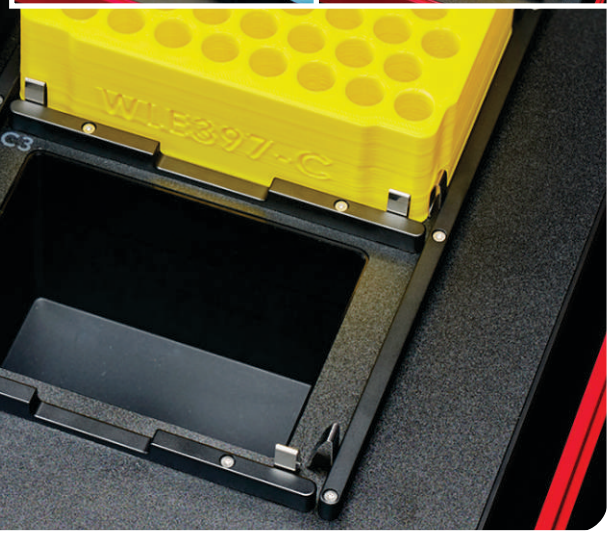
Accessories

Most of the SBS positions feature deep sockets, accommodating deeper wells and longer tubes.

We offer a variety of adaptors to fit numerous tube and plate types.

Our in-house 3D printing capabilities allow us to custom-design new block types to fit unique tubes or plates.





Specifications

468 mm

18 kg

520 mm

		Closed loop, 100 µm resolution
		Pressure sensing
		High precision camera
		Single or multi-dispense

Communication	Connection type	USB 2.0
	Min. PC requirements	Intel Core i5 or equivalent 8 GB RAM, 1 GB disk space 1366 x 768 display

Environment	Temperature range	18 - 30°C
	Humidity range	20 - 80%

Pipette	Volume	1 - 50 µL
	Tips per rack	384
	Precision	1 µL 5% CV 5 - 50 µL 1% CV
	Accuracy	1 µL < 10% 5 - 50 µL 1%

Contamination control	Tip disposal	Internal enclosed waste tub
	UV decontamination	High intensity 70 mW 280 nm UV LED
	HEPA air filtration	99.98% at 0.3 µm

Thermal Performance	Temp. accuracy	± 0.25°C
	Temp. uniformity	± 0.10°C
	Sample ramp rates	Heating: 4°C/s Cooling: 3°C/s
	Temperature range	35 - 99°C (40°C min when cycling)

Optical	Detectors	4x Photodiode
	Excitation sources	4x High energy LED
	Acquisition time	1 s

Reaction Vessels	Samples per instrument	48
	Reaction volume	5 - 25 µL

Designed and manufactured in Australia by

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myra

Liquid Handling System

Performance | Size | Simplicity

bms
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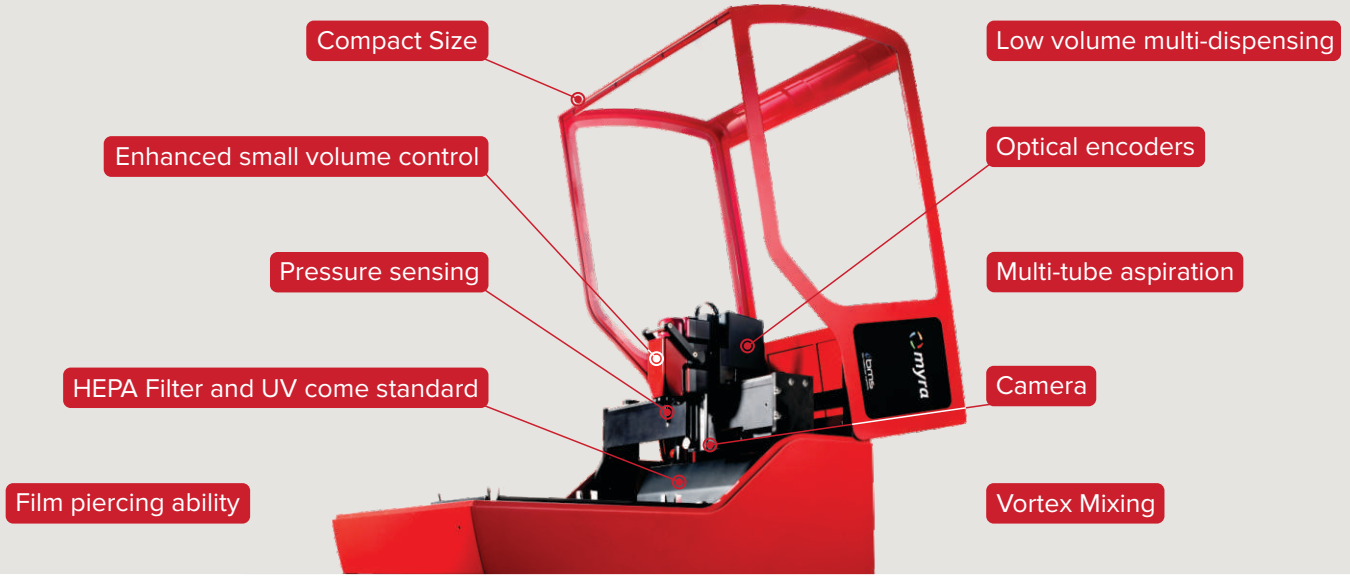
Made for extraordinary life

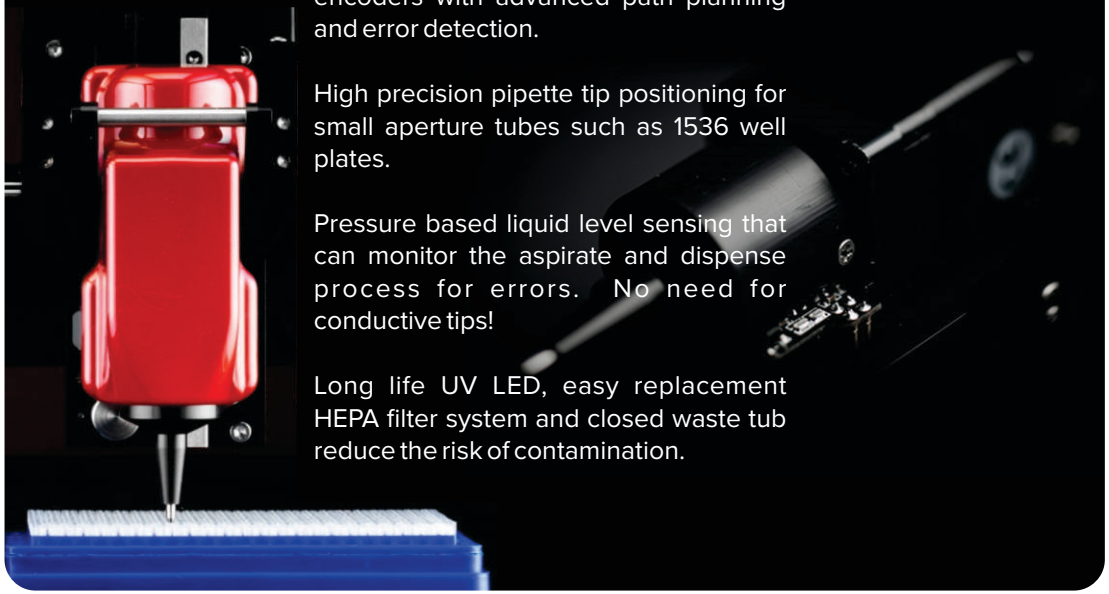
Liquid Handling System

Your solution for precision and efficiency in pipetting work flows. Designed to deliver unmatched accuracy and reliability for your most demanding applications.

Open your eyes to new possibilities



State of the Art Hardware



Closed loop axis control using optical encoders with advanced path planning and error detection.

High precision pipette tip positioning for small aperture tubes such as 1536 well plates.

Pressure based liquid level sensing that can monitor the aspirate and dispense process for errors. No need for conductive tips!

Long life UV LED, easy replacement HEPA filter system and closed waste tub reduce the risk of contamination.

Compact Design

Each Interchangeable pipette head contains its own calibration data and controller. Swap and go.

Zero downtime for calibration.

Dispense 1 – 50 µL with exceptional accuracy and precision. Especially for volumes < 5 µL.

Using 384 well pipette tips means you swap out tip racks less often.

Integrated ejection and closed waste container.

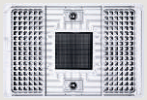
At only 10 kg and with a footprint of less than 1700 cm^2 Myra is half the size of other in class liquid handling systems.

Applications

qPCR ● Mic ▪ 96 ▪ 384 ▪ RG
dPCR ● Bio Rad® ▪ Stilla® ▪ Qiagen®

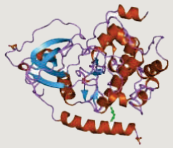
NGS ● Library prep ▪ mag cleanup ▪ size selection ▪ normalisation ▪ pooling

Kits for Illumina® ▪ Oxford Nanopore Technologies® ▪ NEB® ▪ Zymo Research® and more.

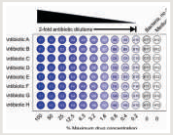


Microfluidic Prep ● BioMark™ IFC Dynamic Array

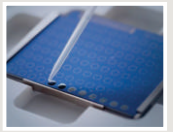
Cell culture media prep



Kinase Assay prep ● ATP-Glo™ ▪ TR-FRET



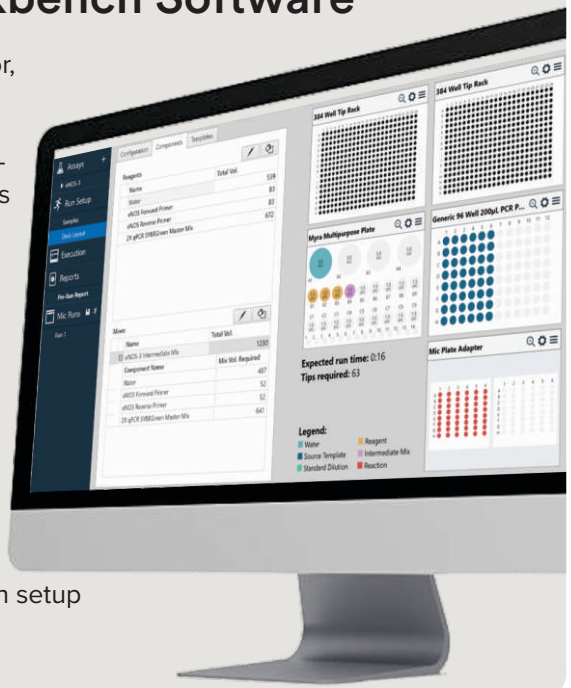
Microbiology ● Min. inhibitory concentration ▪ microscopy prep.



MALDI-TOF MS prep ● Bruker® ▪ Shimadzu®

Simplicity with Workbench Software

Effective software should be a facilitator, not a dictator, of your work. While streamlining operations, Workbench maintains flexibility by enabling Python-based scripting to tailor your work flows to Myra. Moreover, its full integration with the Mic qPCR cycler ensures seamlessness.



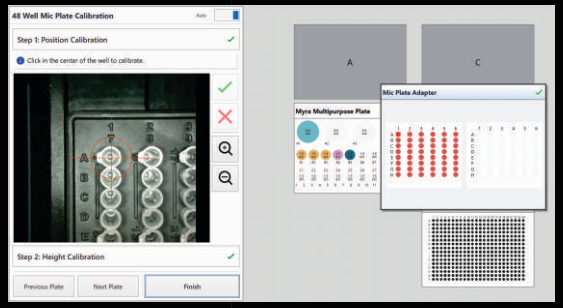
- Create protocols
- Replicates
- Normalization
- Pooling
- Cherry picking
- Complex dilutions
- CSV file import
- Combine sample preparation with run setup
- Multiple plate types per destination
- Expansive consumable library

Vision System with AI

The first pipetting robot that can see!

- Single click plate calibration.
- Tip, tube and plate identification.
- Missing tube and closed cap detection.

Future developments include:
- Automatic calibration verification.
- Barcode reading.
- Real-time pressure feedback for bubbly and viscous reagents.



Use the camera to precisely and easily calibrate plate and tube positions. Click and set.

Accessories

Magnetic Station accessory for NGS Library prep and nucleic acid extraction.

Myra Multipurpose block gives flexibility in setup without compromising space.

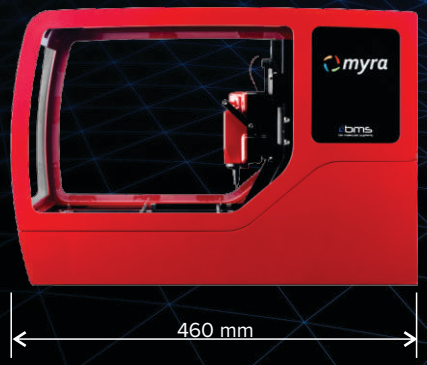
Cold blocks to keep plates cool for over 2 hours.

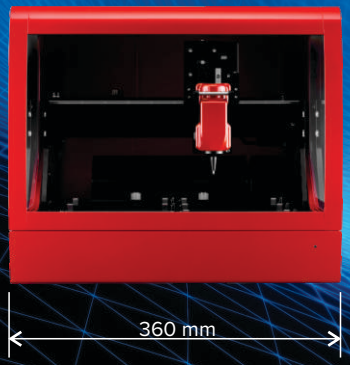
In house ability for BMS to 3D-print blocks to house exotic tubes or plate types.

Add your own plate or tube type to the library.

96 well magnetic station shown.

Specifications





Performance	Position control	Closed loop, 100 µm resolution
	Level detection type	Pressure sensing
	Calibration	High precision camera
	Strategy	Single or multi-dispense
Communication	Connection type	USB 2.0
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	Humidity range	20 - 80%

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