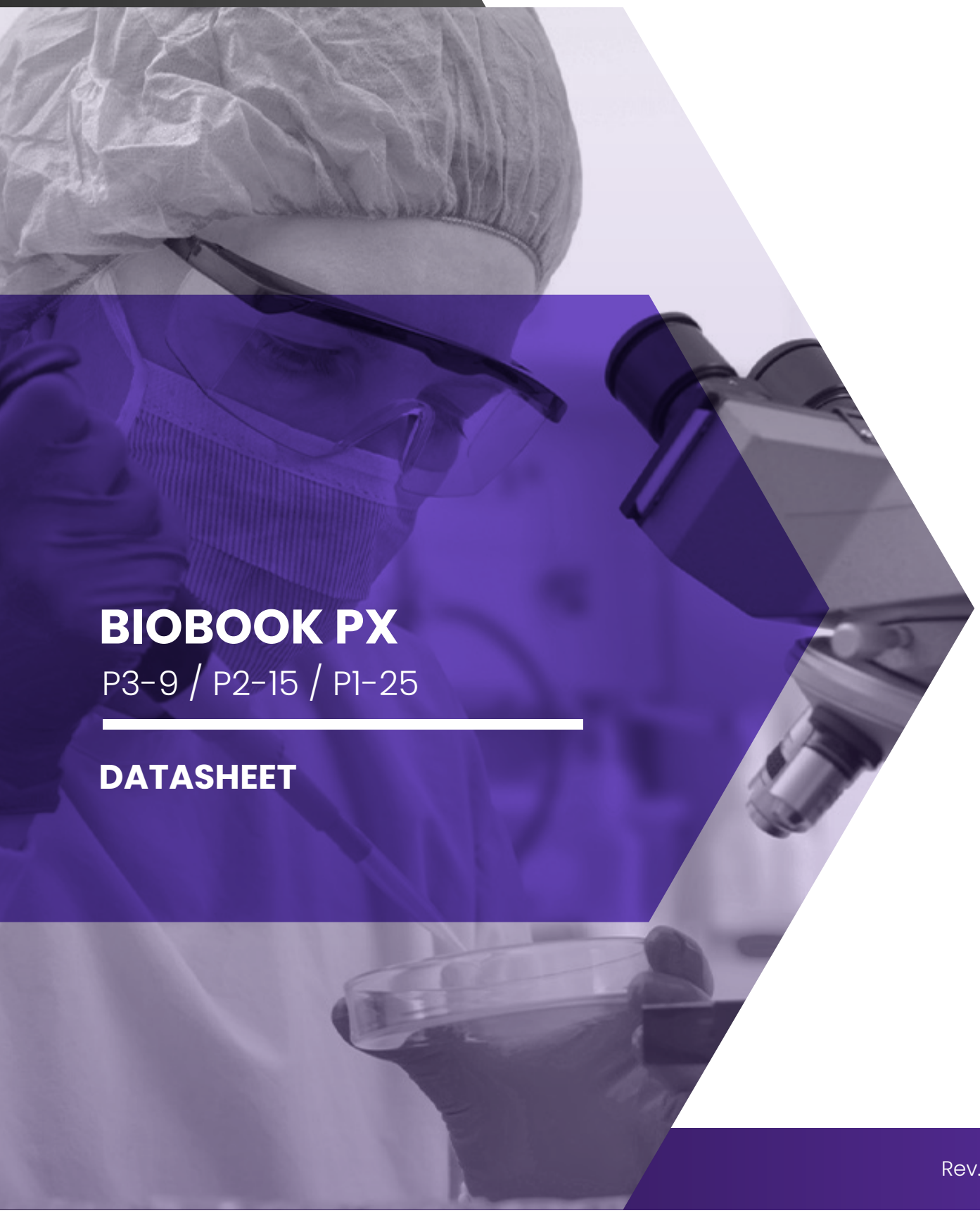
VINCI BIOTECHNOLOGIES



BIOBOOK PX

P3-9 / P2-15 / P1-25

DATASHEET

Rev. 0526

GENERAL OVERVIEW

The **BIOBOOK PX** Series pump module is a compact, high-performance unit designed for seamless integration with bioreactor systems and advanced process platforms. It supports liquid handling operations such as feeding, dosing, and transfer, ensuring precision, reliability, and flexibility in research and process development.

Based on peristaltic technology, it provides accurate and reproducible flow control over a wide range, with variable speed and compatibility with different tubing sizes and materials. Flow rates can reach up to 1500 mL/min depending on configuration.

The AISI 316 stainless steel housing ensures durability, chemical resistance, and suitability for GMP environments.

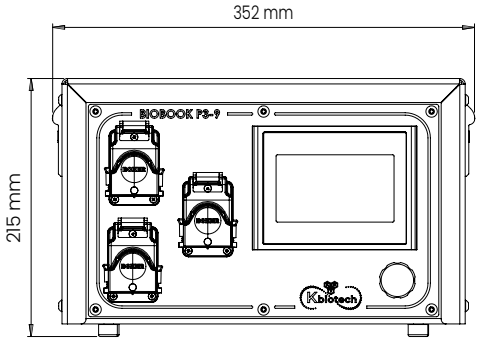
Advanced control features include setpoint definition, pumped volume monitoring, real-time flow regulation, and calibration routines, enabling both continuous and time-based operation and easy integration into automated processes.

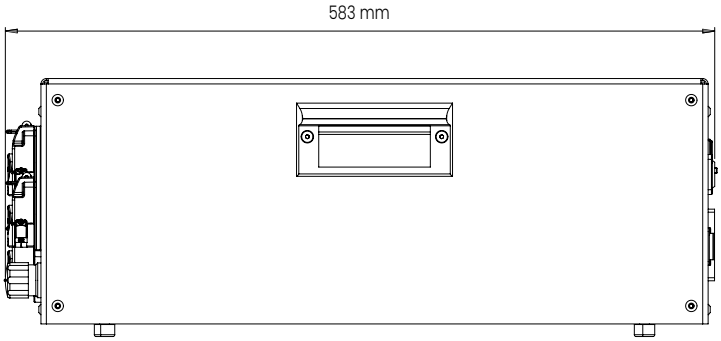
With broad tubing compatibility and a motor lifetime exceeding 10,000 hours, the module ensures safe, reliable, and low-maintenance operation within a modular and scalable bioprocessing platform.

KEY FEATURES

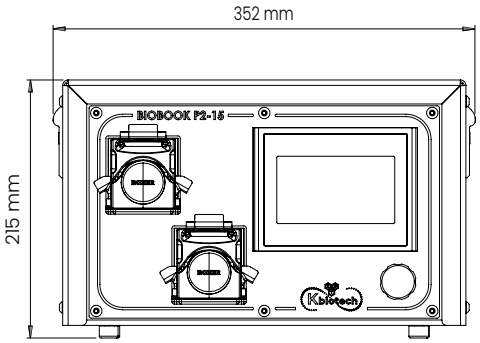
- AISI 316 stainless steel housing (GMP ready)
- High-precision peristaltic dosing
- Flow rates up to 1500 mL/min
- Advanced volume and flow control
- Multi-tubing compatibility
- Long-life motor (>10,000 h)
- Compact benchtop design

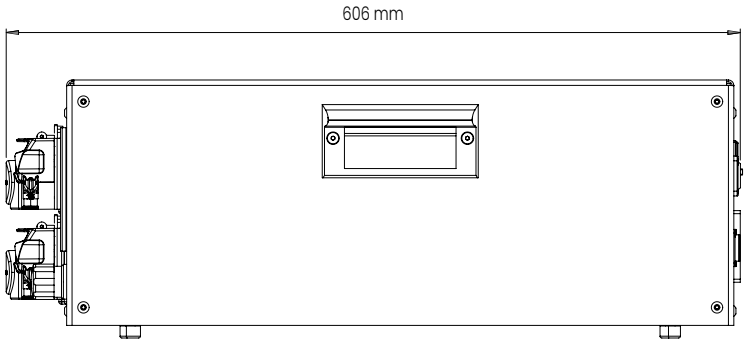
BIOBOOK P3-9	
Max Flow Rate	100 ml/min
Flow Data	
ID Ø 0.5 mm tube	16 / 15 / 13 µl per revolution (3 / 4 / 6 Roller)
D Ø 1.0 mm tube	55 / 50 / 42 µl per revolution (3 / 4 / 6 Roller)
ID Ø 2.0 mm tube	190 / 160 / 120 µl per revolution (3 / 4 / 6 Roller)
ID Ø 3.0 mm tube	340 / 290 / 200 µl per revolution (3 / 4 / 6 Roller)
ID Ø 3.5 mm tube	400 / 340 / 230 µl per revolution (3 / 4 / 6 Roller)
RPM	0 to 500 rpm (Higher speeds are possible depending upon tube material, tube ID, number of rollers and driving method)
Power Consumption	ca. 8.0 W (2 amp driver recommended, current limiter should be used for low speed operation)
Tube Materials	Pharm-a-line / Silicone / Lagoprene / ED-Plex
Max pressure	1.0 bar
Max vacuum	-950 mbar
Motor life	>10000 hour



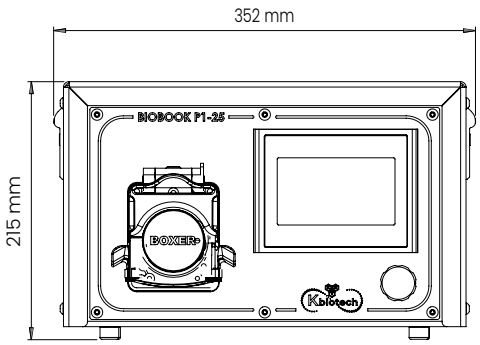


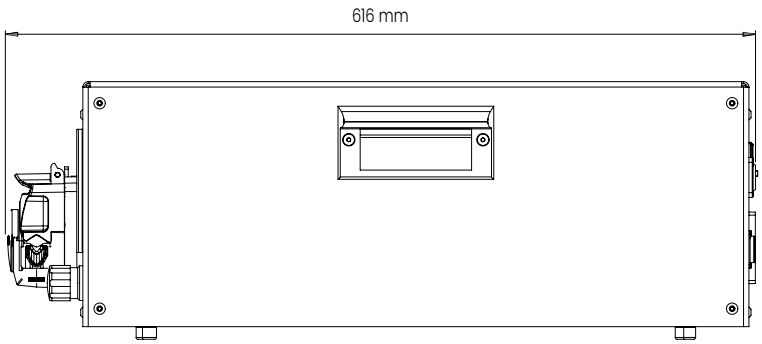
BIOBOOK P2-15	
Max Flow Rate	800 ml/min
Flow Data	
ID Ø 1.6 mm tube	210 / 190 / 170 µl per revolution (3 / 4 / 6 Roller)
ID Ø 2.4 mm tube	435 / 390 / 320 µl per revolution (3 / 4 / 6 Roller)
ID Ø 2.0 mm tube	190 / 160 / 120 µl per revolution (3 / 4 / 6 Roller)
ID Ø 3.2 mm tube	730 / 660 / 495 µl per revolution (3 / 4 / 6 Roller)
ID Ø 4.8 mm tube	1340 / 1250 / 830 µl per revolution (3 / 4 / 6 Roller)
RPM	0 to 500 rpm (Higher speeds are possible depending upon tube material, tube ID, number of rollers and driving method)
Power Consumption	7.0 to 12.0 W
Tube Materials	Pharm-a-line / Silicone / Norprene G / ED-Plex
Max pressure	2.0 bar
Motor life	>10000 hour





BIOBOOK P1-25	
Max Flow Rate	1500 ml/min
Flow at max speed	
ID Ø 2.4 mm (x 1.6 mm wall)	480 ml/min @ 800 rpm / 440 ml/min @ 800 rpm (3 / 4 Roller)
ID Ø 3.2 mm (x 1.6 mm wall)	660 ml/min @ 600 rpm / 600 ml/min @ 600 rpm (3 / 4 Roller)
ID Ø 4.8 mm (x 1.6 mm wall)	1250 ml/min @ 500 rpm / 1050 ml/min @ 500 rpm (3 / 4 Roller)
Power Consumption	15 to 24 W
Tube Materials	Pharm-a-line
Max pressure	2.0 bar
Motor life	>10000 hour





FEATURES

DIrect control	4.3” TFT LCDt Touchscreen
	Direction change
	Max (prime)
	Auto start
	Flow calibration
Remote control and feedback	Run/stop
	Delay start
	Flow calibration
	Dynamic set point
	Auto/man toggle
	Alarm
Security	User's parameter lock

CORE LABORATORY AND R&D APPLICATIONS

Biotechnology & Pharmaceuticals:

- Cell Culture & Bioreactors: Used for adding nutrients, culture media, or pH buffers. The gentle pumping action minimizes shear stress, protecting delicate cells and large molecules like proteins from damage.
- Aseptic Filling: Ideal for the sterile dispensing of reagents, vaccines, and IV fluids into vials or bags.
- Chromatography: Provides constant pressure and flow rates to feed columns without introducing impurities.

Chemical Synthesis & Research:

- Precision Dosing: Delivers reactants, catalysts, and solvents at highly accurate addition rates, which is critical for obtaining reliable reaction kinetic data.
- Corrosive Fluid Handling: By selecting chemical-resistant tubing (e.g., Viton or EPDM), these pumps can handle aggressive acids, alkalis, and organic solvents without damaging the pump body.

Environmental & Clinical Analysis:

- Field Sampling: These pumps are often self-priming and portable, making them perfect for retrieving water samples from boreholes or wells (up to ~8-9 meters deep).
- Analytical Equipment: Integrated into HPLC systems and automated analyzers for consistent sample preparation and reagent delivery.
- Tissue Perfusion: Continuously delivers oxygenated nutrient solutions to isolated organs or tissues to maintain physiological activity during experiments.

Key Technical Advantages

- Zero Contamination: Complete isolation of the fluid path ensures the sample remains pristine.
- Easy Maintenance: The tubing is the only wear part; it can be replaced in minutes without specialized tools.
- Self-Priming & Dry Running: Can draw fluid into a dry tube and run without liquid (dry-run) without causing damage to the mechanism.

Tubing materials, dimensions, and compatibility data are available upon request. Please contact us for detailed specifications.

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