MICROLIT

PERISTALTIC PUMP

Company Profile

Microlit, **a globally renowned leader in laboratory equipment** and precision liquid handling solutions, has long been at the forefront of innovation. With a **rich history of pioneering advancements** in micropipettes, bottle top dispensers and other laboratory instruments, Microlit has consistently pushed the boundaries of scientific excellence with **8000+ customers in 95+ countries**. Drawing upon decades of expertise and a deep understanding of the needs and challenges faced by researchers and technicians, we identified a critical gap in the market – the **need for high-quality, reliable and cost-effective laboratory consumables**. With a commitment to excellence and a passion for advancement, Microlit has proudly introduced **Plasticus – an extensive range of laboratory consumables**, engineered with accuracy, designed to elevate scientific experimentation and discovery to new heights.

ISO 9001 Certificate

ISO 13485 Certificate

CE Certificate Micropipette & Bottle Top Dispensers

ISO 17025 (NABL) Certificate

ISO 14001 Certificate for Environmental Management Systems

CE Certificate E-Burette

Scope of Applications

- Chemical Dosing and Reagent Addition
- Liquid Chromatography
- Sample Preparation
- Cell Culture Media Transfer
- Sample Filtration
- Centrifuge Fluid Transfer
- pH Adjustment
- Protein Purification
- PCR (Polymerase Chain Reaction)
- Reagent Mixing

- Nutrient Solution Delivery
- Gas Flow Control
- Solvent Delivery for Extraction
- Pharmaceutical Formulation
- Hydrolysis Reactions
- Electroplating Processes
- Dilution of Concentrates
- Water or Solvent Transport
- Biological Sample Handling
- Liquid Waste Removal

Speed Variable Peristaltic Pump

MP110B | MP310B | MP610B (ABS Engineering Plastic Housing)

MP110B

Flow Rate	:	0.00011-750 ml/min
Speed Rate	:	0.1~150RPM
Driver Weight	:	3.6kg
Power Consumption	:	<30W

MP310B

Flow Rate	:	0.005-1750 ml/min
Speed Rate	:	0.1~350RPM
Driver Weight	:	3.9kg
Power Consumption	:	<40W

MP610B

Flow Rate	:	0.005-3000 ml/min
Speed Rate	:	0.1~600RPM
Driver Weight	:	3.9kg
Power Consumption	:	<50W

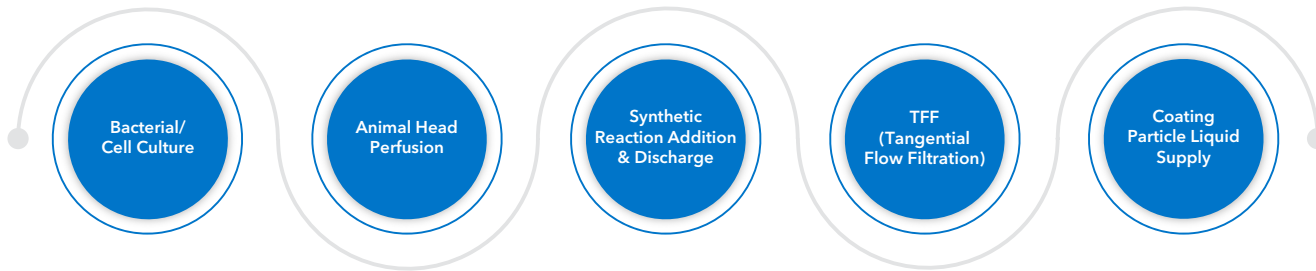Quick Tube Change   Stainless Steel Rotors   Moderate Pulsation

Functions & Features:

- **LCD display** with simple parameter settings and **intuitive status display**.

- Remote control capabilities through built-in software, **enabling start/stop functions, speed regulation**, timed operation, and monitoring features such as shutdown alarms and pump tube replacement reminders (optional).

- Delay start and delay stop functions.

- Control options include **start/stop, reversible direction, full speed, speed adjustment, and state memory** (power-down memory).

- External analog speed regulation, along with external control signals for start/stop, forward/reverse operation, and physical isolation of the external control signal.

- Supports wide voltage input rate (5-24V) for external control signals.

- The external speed control signal type (voltage or current) can be switched via the control panel.

- **RS485 communication** interface with MODBUS protocol support, allowing for easy integration with other equipment and communication parameter settings.

- The circuit board is coated with conformal material, providing dust and moisture protection.

- Super anti-interference features and a wide input voltage rate make it suitable for complex power environments.

- **ABS engineering plastic housing** with a creative streamlined design that is both aesthetically pleasing and functional.

- **Time dispensing function**, enabling repeated, timed, and quantitative dispensing.

- Provides high cost-performance by meeting basic transmission requirements with speed adjustment and timed dispensing capabilities.

*Note: The appearance of actual peristaltic pump and its pump head may vary from the displayed picture.

Technical Specifications:

Speed Resolution	0.1RPM (speed ≤ 100 RPM) / 1RPM (speed>100RPM)
Speed Accuracy	0.5%
Duration	0.1~999 S/Min/H/D
Dispensing Interval Time	0.1~999 S/Min/H/D
Dispensing Time	1~999, "0" Infinite loops
External Control	External control input level 5V, 12V (Standard), 24V (Optional), External control analog 0-5V (Standard), 0-10V, 4-20mA (Optional)
Working Environment	Temperature 0~40°C, relative humidity<80%
IP Grade	IP31
Dimension (L×W×H)	284mm × 180mm × 197mm

Application Areas:

Bacterial/Cell Culture   Animal Head Perfusion   Synthetic Reaction Addition & Discharge   TFF (Tangential Flow Filtration)   Coating Particle Liquid Supply

Ordering Information:

Model No.	Pump Head	Channel	Tubing Size	Flow rate per channel (ml/min)
MP110B	PH10-28 (8 Rollers)	1,2	13#14#, Wall 0.8~1mm ID≤3.17mm	0.00023~64
	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~641
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~750
MP310B	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~1495
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~1750
MP610B	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~2562
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~3000

Speed Variable Peristaltic Pump

MP100B | MP300B | MP600B (304 Stainless Steel Housing)

MP100B

Flow Rate	:	0.00011-750 ml/min
Speed Rate	:	0.1~150 RPM
Driver Weight	:	3.5kg
Power Consumption	:	<40W

MP300B

Flow Rate	:	0.005-1750 ml/min
Speed Rate	:	0.1~350 RPM
Driver Weight	:	4.3kg
Power Consumption	:	<50W

MP600B

Flow Rate	:	0.005-3000 ml/min
Speed Rate	:	0.1-600 RPM
Driver Weight	:	4.3kg
Power Consumption	:	<60W
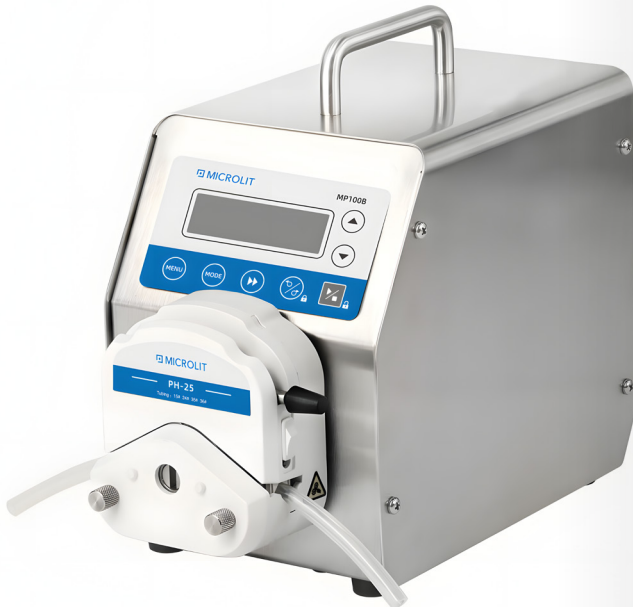
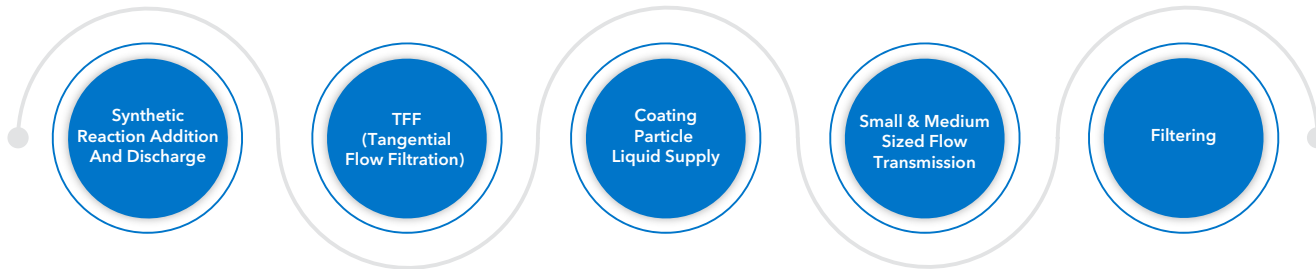Quick Tube Change   Stainless Steel Rotors   Moderate Pulsation

Functions & Features:

- **LCD display** with simple parameter settings and **intuitive status display**.

- Equipped with a **high-quality, high-torque stepper motor drive** for precise speed control, a wide operational rate, stable performance, and high-accuracy flow transmission.

- Features include **start/stop functions, speed adjustment, reversible direction, full speed, and state memory** (power-down memory).

- The running time, interval time, and cycle times can be set to meet requirements for timing, quantitative liquid dispensing, and flow testing.

- Slow stop and suction feature effectively prevents liquid dripping when the machine stops.

- **Keyboard lock function** helps prevent accidental operation.

- Internal **double-layer isolation design** and specially protected circuitry offer enhanced dust, moisture, corrosion and oxidation resistance.

- Exceptional anti-interference capability and wide voltage design make it suitable for complex power supply environments.

- The **RS485 communication** interface with MODBUS protocol ensures easy connectivity with a variety of control devices.

- It can be equipped with optional accessories such as a foot switch, hand dispenser among others.

- The **304 Stainless Steel shell** is easy to clean and effectively prevents corrosion from various organic solvents.

- High-precision speed control meets essential transmission requirements with broad applicability.

*Note: The appearance of actual peristaltic pump and its pump head may vary from the displayed picture.

Technical Specifications:

Speed Resolution	0.1RPM (speed ≤ 100 RPM) / 1RPM (speed>100RPM)
Speed Accuracy	<±0.5%
Duration	Running time 0.1~999 S/Min/H/D, Interval time 0.1~999 S/Min/H/D
Dispensing Interval Time	0.1~999.9 S/Min/H
Dispensing Time	1~999, "0" Infinite cycle
External Control Signal Input	(1) Start/Stop: passive contact, external control input level (5~24V) (2) Forward/Reverse: passive contact, external control input level (5~24V) (3) Speed Regulation: analog 0~5V, 0~10V, 4~20mA can be set
External Control signal output	(1) Start/Stop: Level Signal (following input voltage) (2) Forward/Reverse: Level Signal (following input voltage)
Working Environment	Temperature 0 ~ 40°C, relative humidity<80%
IP Grade	IP31
Dimension (L×W×H)	261mm x 150mm x 237mm

Application Areas:

Synthetic Reaction Addition And Discharge   TFF (Tangential Flow Filtration)   Coating Particle Liquid Supply   Small & Medium Sized Flow Transmission   Filtering

Ordering Information:

Model No.	Pump Head	Channel	Tubing Size	Flow rate per channel (ml/min)
MP100B	PH6-4	4	Wall 0.8 ~ 1 mm, ID ≤ 3.17 mm	0.00016 ~ 49
	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~641
	PH25	1,2	114# 116# 15# 24# 35# 36#	0.024~750
MP300B	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~1495
	PH15-24 (4 Rollers)	2	19# 16# 25# 17#	0.67~1307
	PH15-44 (4 Rollers)	4	19# 16# 25#	0.67~770
	PH25	1,2	114# 116# 15# 24# 35# 36#	0.024~1750
MP600B	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~2562
	PH15-24 (4 Rollers)	2	19# 16# 25# 17#	0.0067~2240
	PH25	1,2	114# 116# 15# 24# 35# 36#	0.024~3000

Clever Flow Peristaltic Pump

MP110C | MP310C | MP610C (ABS Engineering Plastic Housing)

MP110C

Flow Rate	:	0.00011-750 ml/min
Speed Rate	:	0.1~150 RPM
Driver Weight	:	3.6 kg
Power Consumption	:	<30W

MP310C

Flow Rate	:	0.005-1750 ml/min
Speed Rate	:	0.1~350 RPM
Driver Weight	:	3.9kg
Power Consumption	:	<40W

MP610C

Flow Rate	:	0.005- 3000 ml/min
Speed Rate	:	0.1~600 RPM
Driver Weight	:	3.9kg
Power Consumption	:	<50W

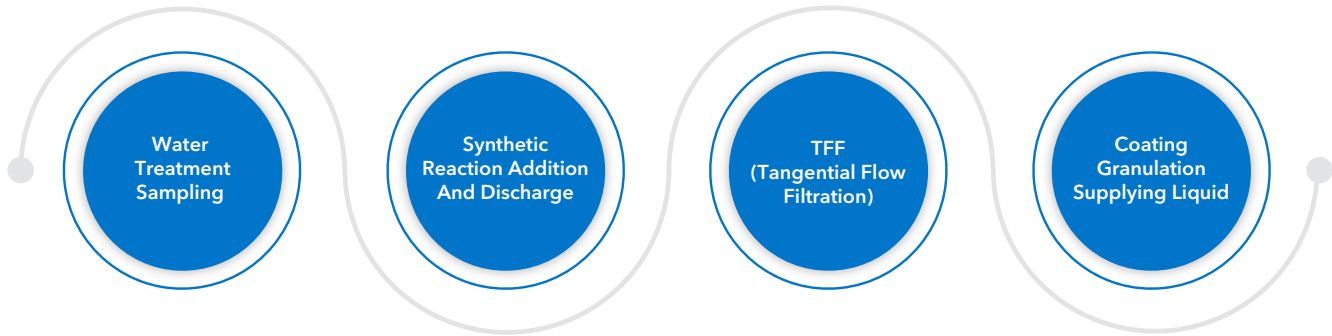Quick Tube Change   Stainless Steel Rotors   Moderate Pulsation

Functions & Features:

- Color LCD display with both **touch screen** and keypad for user-friendly operation.

- **LF-Touch-OS software system** delivers efficiency, stability, and an intuitive human-machine interface, allowing for easy customization and upgrades.

- Offers functions such as **start/stop, reversible direction, full speed, adjustable speed, and state memory** (power-down memory).

- Precise speed resolution of 0.1RPM.

- **Flow calibration function** ensures operational accuracy.

- Easy dispensing function enables **repeatable, timed quantitative dispensing** without an external timer.

- **RS485 interface** with MODBUS protocol allows seamless integration with other equipment.

- **ABS engineering plastic housing** with a sleek, streamlined design.

- Double-deck isolation design and conformal-coated circuit board provide resistance to dust and moisture.

- High anti-interference capability and broad input voltage range make it adaptable to complex power environments.

- Capable of driving multiple channels and compatible with various pump heads.

- **Intelligent temperature control** reduces noise, achieving a super-quiet operation at 45 decibels.

*Note: The appearance of actual peristaltic pump and its pump head may vary from the displayed picture.

Technical Specifications:

Speed Resolution	0.1RPM
Speed Accuracy	<±0.2%
Power Supply	AC 100~240V, 50Hz/60Hz
Power Consumption	<30W
External Control Interface	External control input level 5V, 12V (standard), 24V (optional), External control analog 0-5V (standard), 0-10V, 4-20mA (optional)
Communication Interface	RS485 communication interface, MODBUS protocol is available
Working Environment	Temperature 0 ~ 40°C, relative humidity<80%
IP Grade	IP31
Dimension (L×W×H)	258mm × 180mm × 197mm

Application Areas:

Water Treatment Sampling

Synthetic Reaction Addition And Discharge

TFF (Tangential Flow Filtration)

Coating Granulation Supplying Liquid

Ordering Information:

Model No.	Pump Head	Channel	Tubing Size	Flow rate per channel (ml/min)
MP110C	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~641
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~750
MP310C	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~1495
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~1750
MP610C	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~2562
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~3000

Clever Flow Peristaltic Pump

MP100C | MP300C | MP600C (304 Stainless Steel Housing)

MP100C
Flow Rate	:	0.00011-750 ml/min
Speed Rate	:	0.1~150 RPM
Driver Weight	:	4.5 kg
Power Consumption	:	<40W

MP300C
Flow Rate	:	0.005-1750 ml/min
Speed Rate	:	0.1~350 RPM
Driver Weight	:	4.5 kg
Power Consumption	:	<50W

MP600C
Flow Rate	:	0.005- 3000 ml/min
Speed Rate	:	0.1~600 RPM
Driver Weight	:	4.5 kg
Power Consumption	:	<60W

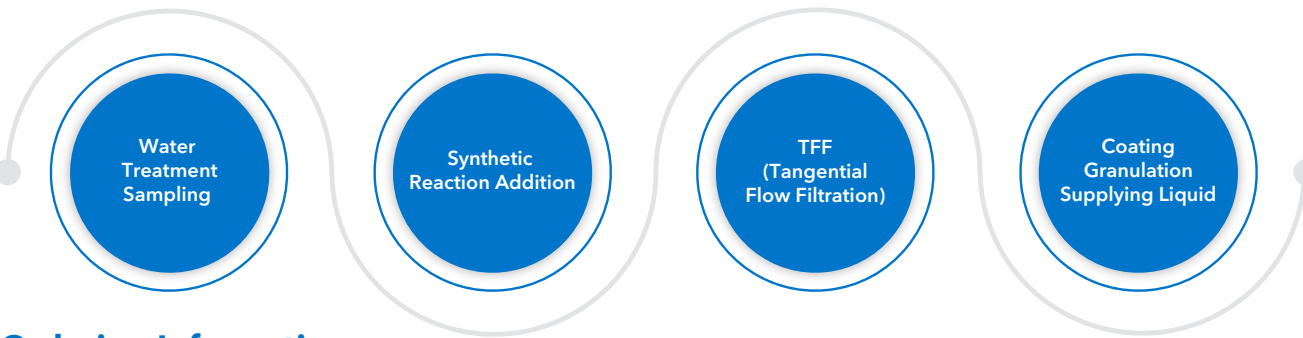Quick Tube Change   Stainless Steel Rotors   Moderate Pulsation

Functions & Features:

- **4.3-inch color LCD display** with a wide viewing angle for clear visuals.

- Touchscreen paired with keypad operation provides an **intuitive user experience**.

- **LF-Touch-OS software system** ensures efficiency and stability, offering an intuitive human-machine interaction mode that supports easy product customization and upgrades.

- Standard functions include **start/stop, reversible direction, full speed, back suction, and state memory**, with direct input for flow or speed parameters.

- Precise flow control and display, utilizing a micro-step algorithm for accurate dispensing across various settings.

- **Wizard-style flow calibration** feature for easy and accurate setup.

- Unique back suction function effectively prevents liquid dripping.

- **Intelligent temperature control function** adjusts heat dissipation according to the environment, optimizing equipment performance.

- **WiFi control** allows remote operation via the app, with monitoring features such as shutdown alarm and pump tube replacement reminders.

- Supports external analog speed control and external signals for start-stop, reversible direction, and dispensing, with physical isolation for external controls.

- **RS485 communication** with MODBUS protocol, supporting up to 80 programming instructions for easy integration with other control devices.

- Exceptional anti-interference capabilities and wide voltage design make it suitable for complex power environments.

- **Timed dosing** with options for scheduled start and stop.

*Note: The appearance of actual peristaltic pump and its pump head may vary from the displayed picture.

Technical Specifications:

Speed Resolution	0.1RPM
Speed Accuracy	<±0.2%
Duration	Start time: 0.1~999.9 S/Min/H Stop time: 0.1~999.9 S/Min/H
Dispensing Time	0.1~99.99 S/Min/H, time unit adjustable
Dispensing Number	1~999, 0 Infinite cycle
Dispensing Interval	0.1~999 S/Min/H
External control Signal Input	(1) Start/Stop: passive contact, external control input level (5~24V) (2) Forward/Reverse: passive contact, external control input level (5~24V) (3) Speed Regulation: analog 0~5V, 0~10V, 4~20mA can be set
External control Signal Output	(1) Start/Stop: Level Signal (following input voltage) (2) Forward/Reverse: Level Signal (following input voltage) (3) Speed Status: Analogue 0~5V
Working Environment	Temperature 0 ~ 40°C, relative humidity<80%
Communication Interface	RS485 communication interface, MODBUS protocol is available
IP Grade	IP31
Dimension (L×W×H)	292mm x 160mm x 183mm

Application Areas:

Water Treatment Sampling   Synthetic Reaction Addition   TFF (Tangential Flow Filtration)   Coating Granulation Supplying Liquid

Ordering Information:

Model No.	Pump Head	Channel	Tubing Size	Flow rate per channel (ml/min)
MP100C	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~641
	PH25	1,2	114# 116# 15# 24# 35# 36#	0.024~750
MP300C	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~1495
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~1750
	PH15-24 (4 Rollers)	2	19# 16# 25# 17#	0.67~1307
	PH15-44 (4 Rollers)	4	19# 16# 25#	0.67~770
MP600C	PH15T	1.2	13# 14# 19# 16# 25# 17# 18#	0.005~2562
	PH25	1.2	114# 116# 15# 24# 35# 36#	0.024~3000

Intelligent Dispensing Peristaltic Pump

MP110I | MP310I | MP610I (ABS Engineering Plastic Housing)

MP110I
Flow Rate	:	0.00011-750 ml/min
Speed Rate	:	0.1~150 RPM
Driver Weight	:	3.6kg
Power Consumption	:	<30W

MP310I
Flow Rate	:	0.005-1750 ml/min
Speed Rate	:	0.1~350 RPM
Driver Weight	:	3.9 kg
Power Consumption	:	<40W

MP610I
Flow Rate	:	0.005- 3000 ml/min
Speed Rate	:	0.1~600 RPM
Driver Weight	:	3.9 kg
Power Consumption	:	<50W

Quick Tube Change   Stainless Steel Rotors   Moderate Pulsation
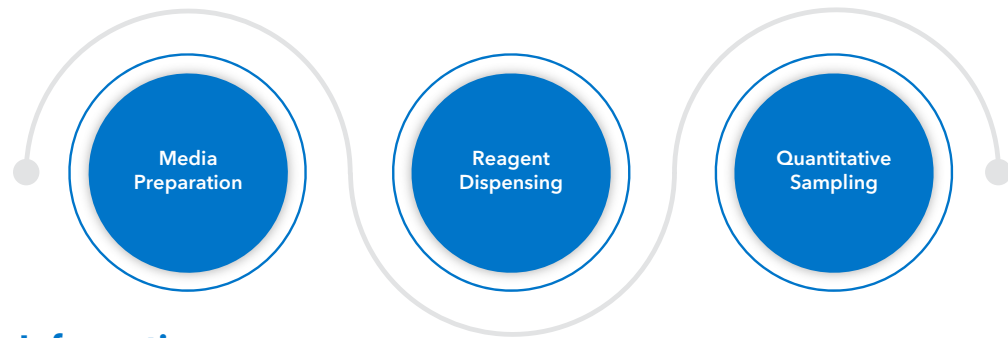
Functions & Features:

- **Color LCD display** with touch screen and keypad for easy operation.
- **LF-Touch-OS software system** is efficient and stable, providing a user-friendly interface for convenient product customization and upgrades.
- Offers **four working modes:** flow rate dispensing mode, volume dispensing mode, time dispensing mode, and program (transfer) dispensing mode.
- Automatically stores up to five sets of working parameters.
- **Advanced control technology for motor rotation** angle enhances dispensing accuracy, compared to traditional time dispensing methods affected by factors like motor start delay.
- Supports start/stop, reversible direction, full speed, speed adjustment, and state memory (power-down memory).
- Speed resolution of 0.1 RPM.
- **Calibration function** for precise dispensing.
- Expert operating system guides users in setting parameters correctly.

- **Intelligent temperature-control technology** reduces operating noise.
- External high-low electrical signals control start/stop, reversible direction, and dispensing functions, with an optically coupled isolator and external analog input for speed adjustment.
- **RS485 communication** interface with MODBUS protocol, allowing easy connection to other devices.
- Internal double-layer isolation design and conformal-coated circuit board provide dust and moisture resistance.
- High anti-interference capability and wide input voltage range, suitable for complex power environments.
- **ABS engineering plastic housing** with a streamlined, attractive appearance.
- Connectable to foot switch for start-stop control of dispensing volume.
- **Multiple dispensing modes** with precise dispensing.

*Note: The appearance of actual peristaltic pump and its pump head may vary from the displayed picture.

Technical Specifications:

Speed Resolution	0.1RPM
Speed Accuracy	<±0.2%
Dispensing Volume	0.001μL~9999L (The recommended minimum filling volume is 50 μL)
Dispensing Time	1~999,"0" Infinite loops
Dispensing Interval Time	0.1~999.9 S/Min/H, time unit adjustable
External Control	External control input level 5V, 12V (Standard), 24V (Optional), External control analog 0-5V (Standard), 0-10V, 4-20mA (Optional)
Working Environment	Temperature 0 ~ 40°C, relative humidity < 80%
Communication Interface	RS485 communication interface, MODBUS protocol is available
IP Grade	IP31
Dimension (L×W×H)	258mm ×180mm ×197mm

Application Areas:

Media Preparation   Reagent Dispensing   Quantitative Sampling

Ordering Information:

Model No.	Pump Head	Channel	Tubing Size	Flow rate per channel (ml/min)
MP110I	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~641
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~750
MP310I	PH15T	1	13# 14# 19# 16# 25# 17# 18#	0.005~1495
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~1750
MP610I	PH15T	1	13# 14# 19# 16# 25# 17# 18#	0.005~2562
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~3000

Intelligent Dispensing Peristaltic Pump

MP100I | MP300I | MP600I (304 Stainless Steel Housing)

MP100I
Flow Rate	:	0.00016-750 ml/min
Speed Rate	:	0.1~150 RPM
Driver Weight	:	4.5 kg
Power Consumption	:	<40W

MP300I
Flow Rate	:	0.005-1750 ml/min
Speed Rate	:	0.1~350 RPM
Driver Weight	:	4.5 kg
Power Consumption	:	<50W

MP600I
Flow Rate	:	0.005- 3000 ml/min
Speed Rate	:	0.1~600 RPM
Driver Weight	:	4.5 kg
Power Consumption	:	<60W

Quick Tube Change   Stainless Steel Rotors   Moderate Pulsation

Functions & Features:

- **4.3-inch color LCD display** with an intuitive interface.
- **Touch screen** and key operation for convenient and quick access.
- **LF-Touch-OS software system**, efficient and stable, featuring a user-friendly interface for seamless product customization and upgrades.
- **Four working modes:** flow rate dispensing, time dispensing, volume dispensing, and programming dispensing (cycle mode).
- **Pre-stored settings** for five sets of dispensing parameters for volume and time dispensing.
- Start/stop, reversible direction, full speed, suction functionality, and timed start/stop options.
- Accurate flow control and display, with **a microstep algorithm** to ensure dispensing accuracy across various settings.
- **Wizard flow calibration** function for easy use.
- Unique anti-drip back suction feature. Support for serial print of parameters and data.

- **Intelligent temperature control** adjusts automatically to maintain optimal device performance based on environmental conditions.
- **WiFi control** capability allows remote operation via the app, with monitoring features such as shutdown alerts and reminders to replace pump tubes.
- External analog speed adjustment, start/stop control, reversible direction, dispensing, and external signal isolation.
- **RS485 communication** interface with MODBUS protocol, allowing communication parameter configuration for easy connection to various control devices.
- Enhanced anti-interference capability and wide input voltage range to suit complex power environments.
- The **304 Stainless Steel** housing, easy to clean, effectively resistant to various organic solvents.
- Programming mode supports up to **30 unique parameter settings** for complex liquid dispensing applications.

*Note: The appearance of actual peristaltic pump and its pump head may vary from the displayed picture.

Technical Specifications:

Speed Resolution	0.1RPM
Speed Accuracy	<±0.2%
Dispensing Volume	0.001µL~9999L (The recommended minimum filling volume is 50 µL)
Dispensing Time	1~999,"0" Infinite loops
Dispensing Interval Time	Control start/stop, direction, adaptable to 5-24V;
External control Signal Input	Analog signals 0-5V/0-10V/4-20mA can be configured
External control Signal Output	Start/stop, direction status output
Working Environment	Temperature 0 ~ 40°C, relative humidity<80%
Power Supply	AC100~240V, 50Hz/60Hz
IP Grade	IP31
Dimension (L×W×H)	292mm x 160mm x 183mm
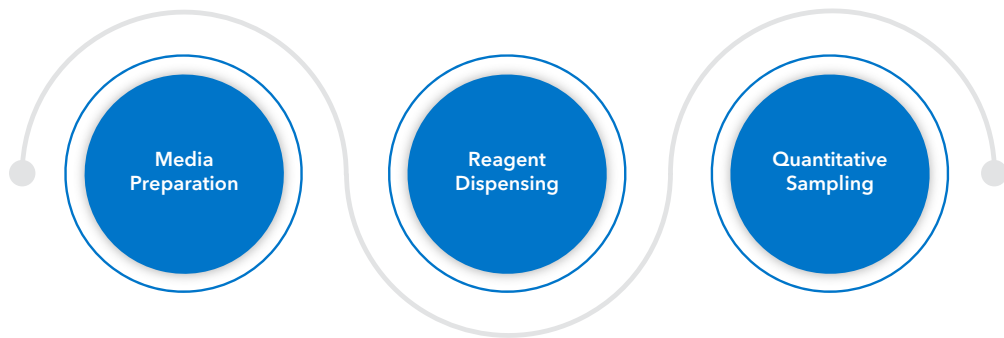
Application Areas:

Media Preparation   Reagent Dispensing   Quantitative Sampling

Ordering Information:

Model No.	Pump Head	Channel	Tubing Size	Flow rate per channel (ml/min)
MP100I	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~641
	PH25	1,2	114# 116# 15# 24# 35# 36#	0.024~750
MP300I	PH15T	1,2	13# 14# 19# 16# 25# 17# 18#	0.005~1495
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~1750
	PH15-24 (4 Rollers)	2	19# 16# 25# 17#	0.67~1307
	PH15-44 (4 Rollers)	4	19# 16# 25#	0.67~770
MP600I	PH15T	1.2	13# 14# 19# 16# 25# 17# 18#	0.005~2562
	PH25	1	114# 116# 15# 24# 35# 36#	0.024~3000

	Feature Comparative Chart of Peristaltic Pumps			
S.No.	Features	Speed Variable Model (B)	Clever Flow Model (C)	Intelligent Dispensing Model (I)
1	Adjust Flow Speed	✓	✓	✓
2	Time Dispensing	✓	✓	✓
3	Volume Dispensing	✗	✗	✓
4	Foot Switch Compatibility	✓	✓	✓
5	Hand Dispenser Compatibility	✓	✓	✓
6	Calibration	✗	✓	✓
7	Program Mode	✗	✗	✓
8	Available in ABS Engineering Plastic Housing	✓	✓	✓
9	Available in 304 Stainless Steel Housing	✓	✓	✓
10	Tube Change Setting	✓	✓	✓
11	Possibility of Head Pump Change	✓	✓	✓
12	RS485 Connectivity (MODBUS Protocol)	✓	✓	✓
13	Wifi Remote Control	✗	✓	✓
14	Touch Screen Operations	✗	✓	✓
15	Direction Control (Forward and Reverse Rotation)	✓	✓	✓
16	IP 31 Protection	✓	✓	✓
17	IP 66 Protection	✓	✓	✓
18	Anti Drip Setting	✗	✓	✓

Accessories

Hand Dispenser

MP - HD

The hand dispenser is equipped with Microlit MP-HD series filling needles, **making it ideal for manual and semi-automatic dispensing** with a peristaltic pump. It features a comfortable grip, compact size, and lightweight design.

Dimensions:
ID≤8mm, wall thickness≤2.4mm

Footswitch

MP - FS

Designed to work with Microlit's full range of products, the footswitch controls the start and stop of the pump. It features a **light-touch front-step design** for clear feedback and anti-fatigue use.

Dimensions:
103×72×25mm

IP grade:
IP54

Silicone Tubing

Silicone Tubing is made of silicone rubber material and processed by platinum vulcanization process, high cleanliness, excellent elasticity and abrasion resistance, it is a high-quality peristaltic pump tube and transmission tube. It is widely used in pharmaceutical, bioengineering, fine chemical, food, medical and other fields.

Functions & Features:

- Has excellent biocompatibility
- Odorless, non-toxic, no plasticizer, very little precipitation
- The inner wall is very smooth and has good antibacterial performance
- Good elasticity, can quickly restore shape after radial compression (shore hardness:50~55)
- Weatherproof, ozone-resistant, anti-radiation, excellent anti-aging performance

- Suitable for neutral liquids, weak acids, weak bases and some low-concentration solvents
- Temperature resistance range -50~230°C under static state, -40~100°C temperature resistance under working condition
- Can use hot water, distilled water for cleaning; high temperature and high pressure, ethylene oxide, gamma ray sterilization
- The color is transparent, translucent to milky white, etc.

Silicone Tubing Specifications:

Tubing No.		0.5x0	1x0.92	2x0.92	2.4x0	3x0.92	13#	14#	19#	16#	25#	17#	18#
Tubing Section (1:1)													
Wall thickness (mm)		0.92					1.6						
ID (mm)		0.5	1.0	2.0	2.4	3.0	0.8	1.6	2.4	3.1	4.8	6.4	7.9
Tubing Pressure (Mpa)	Continuous	0.1					0.17				0.14	0.1	0.07
	Interval	0.1					0.27				0.24	0.14	0.1

Tubing No.:

Tubing No.		73#	82#	193#	191#	88#	92#
Tubing Section (1:1)							
Wall thickness (mm)		3.3		4.8			
ID (mm)		9.6	12.7	9.5	19	12.7	25.4
Tubing Pressure (Mpa)	Continuous	0.17	0.1	0.14			
	Interval	0.27	0.1	0.14			

1. The tubing picture in the table is a 1:1 cross-sectional view of the actual product.
2. The tubing specifications are marked with a tubing no. or "ID ×wall thickness", such as:25# or 4.8×1.6mm.
3. The wall thickness of 1.6mm or more can adapt to the higher speed of the peristaltic pump, generally up to 600RPM.
4. High speed cannot be used below 1.0mm wall thickness, generally not more than 100RPM.
5. The default tube size is approx. 2 meters in length.

Pump Head

PH15-24 | PH15-44 | PH 10-28

Quick Tube Change

Stainless Steel Rotors

Moderate Pulsation

Functions & Features:

- The PH series pump head is designed for **small to medium flow, multi-channel fluid transmission,** and is available in two versions, the PH10 and PH15, based on tubing size.

- PH10 pump head: **Offers a single-channel flow** range of 0.00023 to 64 ml/min, compatible with tubing sizes 13# and 14#, with an inner diameter of 0.13 to 3.2 mm and a wall thickness of 0.8 to 1 mm.

- PH15 pump head: Provides a single-channel flow range of 0.067 to 2240 ml/min, suitable for tubing sizes 19#, 16#, 25#, and 17#.

- Features a plug-card structure for quick and independent installation and removal, making tubing replacement easy and efficient.

- **Multi-roller design** effectively reduces pulsation.

- Rollers are made of **high-strength stainless steel,** while the housing and card are constructed from PPS, offering high-temperature and chemical resistance.

- **Bearing roller design** with adjustable gaps enhances flow consistency.

- Compatible with stepper motors, servo motors, AC gear motors, and DC gear motors.

Technical Specifications of PH15 Series:

Channel	1,2,4
Roller	4
Speed Range	0.1~600 RPM/min
Flow Range	0.067 ~2240 ml/min
Pressure Tube Clearance	Adjustable
Working Environment	Less than 200°C
Corrosion Resistance	PPS is resistant to most acid, alkali, salt liquids and organic solvents.
Motor	Stepper motor, servo motor , AC gear motor, DC gear motor etc.

Technical Specifications of PH10 Series:

Channel	1,2,4,8
Roller	8
Speed Range	0.1~100 RPM/min
Flow Rate	0.00023~ 64 ml/min
Pressure Tube Clearance	Adjustable
Working Environment	Less than 200°C
Corrosion Resistance	PPS is resistant to most acid, alkali, salt liquids and organic solvents.
Motor	Stepper motor, servo motor , AC gear motor, DC gear motor etc.

Installation Diagrams:
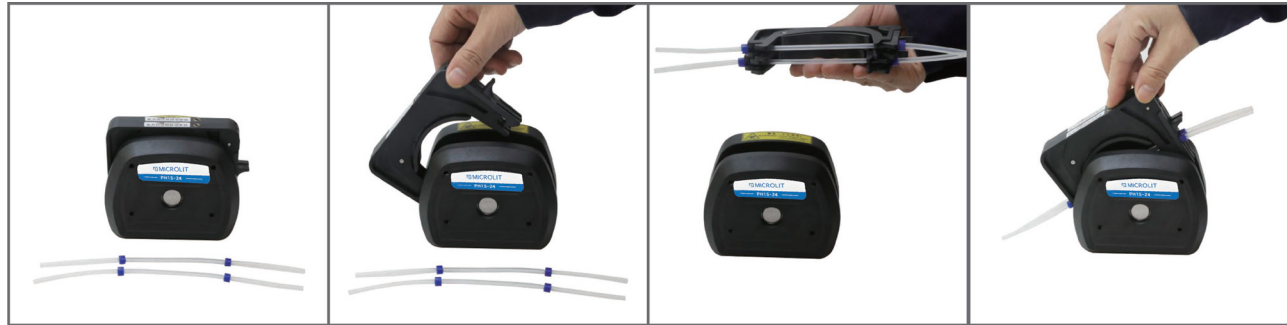
Ordering Information:

Pump Head	Roller Material	No. of Roller(s)	No. of Channel(s)
PH15-24	304 Stainless Steel	4	2
PH15-44	304 Stainless Steel	4	4
PH10-28	304 Stainless Steel	8	1,2,4,8

Pump Head

PH 6-4

Quick Tube Change | Stainless Steel Rotors | Moderate Pulsation
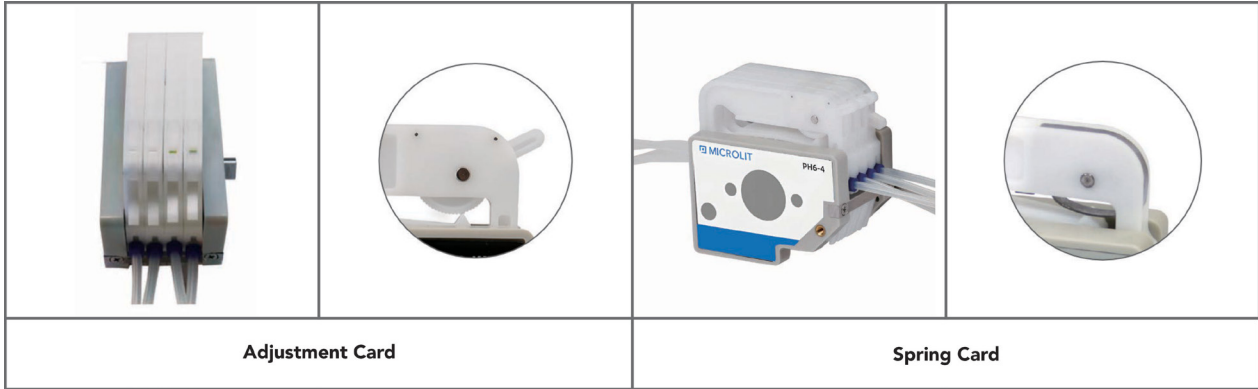
Functions & Features:

- The Microlit PH series pump head is designed for **small-flow, multi-channel fluid transmission** and can simultaneously handle 1 to 48 channels in a compact, user-friendly design.

- Its precision structured design ensures **very low pulsation**, even compared to traditional multi-roller pump heads.

- The **well-engineered mechanical structure** and high-precision manufacturing technology ensure consistent flow across all channels.

- Features a card-type structure for independent loading and unloading, making tube replacement and securing quick and easy.

- Two types of card pressure devices are available: **a ratchet adjustment device and an adaptive spring device.** The adjustment card includes a shift display, allowing manual adjustment of tube clearance to fit various wall thicknesses and transmission pressures. The adaptive spring design automatically adjusts clearance based on tube thickness.

- Pump head rollers are made from **high-strength stainless steel,** with POM and PVDF high-performance plastics used in the card material to meet various operational requirements.

- Suitable for tubing with a wall thickness of 0.8 to 1 mm and an inner diameter of 0.13 to 3.17 mm, compatible with materials like silicone, Pharmed, PVC, Viton, and others. The single-channel flow range is 0.0001 to 49 ml/min.

- The pump head offers 6 rollers; the 6-roller head provides a broader flow range and extended tube life.

- Compatible with motors such as stepper motors, servo motors, AC gear motors, DC gear motors, and others operating at speeds below 100 RPM.

Technical Specifications:

Channel	4
Rollers	6
Speed Range	≤100 RPM/min
Flow Range	≤50 ml/min
Tube Wall Thickness	0.8mm~1mm, ID:0.13mm~3.17mm
Pressure Tube Clearance	Automatic / Manual adjustment
Working Environment	Temperature 0 ~ 40°C, relative humidity < 80%
Motor	Stepper motor, Servo motor, AC gear motor, DC gear motor etc.

Note: After cascading the pump head, it can be expanded to 48 or more channels.

Installation Diagrams:

Adjustment Card | Spring Card

Ordering Information:

Pump Head	Roller Material	No. of Roller(s)	No. of Channel(s)
PH 6-4	304 Stainless Steel	6	4

Pump Head

PH 15T

Quick Tube Change   Stainless Steel Rotors   Moderate Pulsation

Functions & Features:

- **Enhanced Exterior Design**
  The PH15T pump head now features a rear cover design to improve product integrity. It has a sleek, elegant appearance, with more dynamic curved lines. An independent small faceplate has also been added to the rear cover for a more standardized product design.

- **Adjustable Pressure Tube Gap for Improved Versatility**
  The pump head is equipped with an adjustable pressure tube gap, which can be modified by turning the screws on top of the pump head. This allows the pump head to be compatible with tubes of various specifications, enhancing pressure application, improving versatility, and extending the tube's service life.

- **Innovative Tube Clamp Linkage Mechanism for Easier Installation**
  A new tube clamp linkage mechanism retracts the tube clamp inward when the pressure block is opened, allowing for simultaneous opening of both the pressure block and the tube clamp. This feature simplifies tube installation, reduces operational difficulty, and increases work efficiency. This patented design is registered.

- **Adaptive Clamping Mechanism:**
  Automatically accommodates tubes of different inner diameters without manual adjustments,

making the product easier to use.

- **Classic Pump Head Opening Method:**
  Allows quick tube replacement within seconds, significantly enhancing product efficiency and user convenience.

- **PPS Material Casing:**
  The casing is made from PPS material, known for its resistance to organic solvents and other corrosive liquids, greatly boosting the product's durability and corrosion resistance.

- **Stainless Steel Rollers:**
  These rollers are designed for high-strength usage at high speeds and for extended periods, ensuring long service life for the pump head.

- **Multi-Channel Support:**
  The pump head supports the cascading of multiple heads and can be expanded to handle up to 10 channels.

  Note: When connecting two pump heads in series, the rollers are staggered at a 60° angle to effectively reduce fluid pulsation and enhance transmission speed.

Technical Specifications:

Flow Rate	≤2400ml/min
Channel	1
Roller	3/6 rollers
Speed Range	0.1~100 RPM/min
Tubing Method	Fixation of pump head tube clamp
Pressure Tube Clearance	Automatic/ manual adjustment
Dimension	95.7 x 108.7 × 63.1 mm
Working Environment	Temperature 0 ~ 40°C, relative humidity <80%
Bear Liquid Temperature	Within 200°C
Corrosion Resistance	Resistant to most acid, alkali, salt liquids and organic solvents.

Installation Diagrams:

Open	Install Tube	Close

Ordering Information:

Pump Head	Roller Material	No. of Roller(s)	No. of Channel(s)
PH15T	304 Stainless Steel	3,6	1

Pump Head

PH - 25

MICROLIT

PH-25
Tubing : 15# 24# 35# 36#

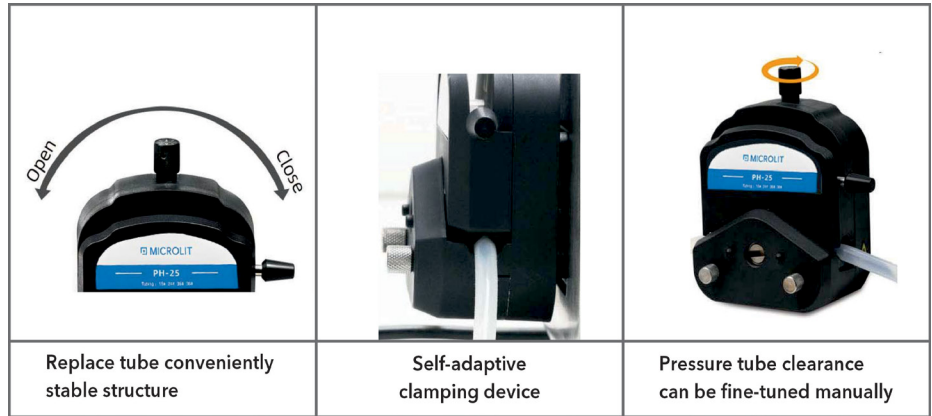Quick Tube Change   Stainless Steel Rotors   Moderate Pulsation

Functions & Features:

- The PH25 pump head offers a flow range of 0.024 to 3000 ml/min and is compatible with tube sizes 114#, 116#, 15#, 24#, 35#, and 36#.

- It's **ideal for transporting more viscous liquids** and meets the demands of a larger suction range, head, and outlet pressure.

- **Equipped with a self-adjusting clamping device**, it easily accommodates tubes of varying thickness without manual adjustment.

- Features **a classic pump tube locking mechanism,** allowing tube replacement in seconds and making it easy to handle frequent tube changes.

- Special tube pressure design reduces pump tube wear and minimizes the risk of accidental rupture from misuse.

- Tube clearance can be fine-tuned manually, allowing greater pressure capacity by reducing tube clearance, or extending tube life by increasing it. It also adapts to slight variations in tube processing accuracy.

- The **shell is made of PPS high-performance plastic,** with four stainless steel rollers to support high-speed, long-duration operations while minimizing transmission pulsation.

- Multiple pump heads can be stacked, with a maximum expansion of up to 4 channels.

- **When two pump heads are connected in series, the rollers are offset by 45 degrees**, significantly reducing fluid pulsation and increasing transmission speed.

- The PH25 pump heads is compatible with various motors, including Stepper, Servo, AC, DC, and others.

Technical Specifications:

Flow Rate	0.024~3000ml/min
Channel	1
Roller	4
Tubing Method	Whole tube
Shell Material	PPS
Pressure Tube Clearance	Adjustable
Working Environment	Less than 200°C
Weight	620g
Corrosion Resistance	PPS is resistant to most acid, alkali, salt liquids and organic solvents.

Installation Diagrams:

Replace tube conveniently stable structure	Self-adaptive clamping device	Pressure tube clearance can be fine-tuned manually

Ordering Information:

Pump Head	Roller Material	No. of Roller(s)	No. of Channel(s)
PH-25	304 Stainless Steel	4	1

Our Presence

YOUR SATISFACTION IS OUR PRIORITY

Established in 1991, Microlit is one of the world's leading manufacturers & exporters of laboratory liquid handling instruments. Our product range includes micropipettes, bottle top dispensers, electronic burette, electronic pipette filling device and other micropipette accessories. With our patented products, innovative technologies & unfaltering trust of 8000+ consumers in 95+ countries, we are recognized as a respected & dependable brand in Healthcare and Lifesciences industry. Our offices are located in India (HQ), USA & Brazil. With a research-oriented & customer-centric team of product design engineers, our product design blends the best of functional performance & user experience. Our innovative products have helped us carve a niche in R&D industry while providing our users high level of precision & accuracy in their research work.

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