

## GENERAL DESCRIPTION

Compact benchtop pumps for accurate low-flow fluid delivery with intuitive touchscreen interface. The Cassette Heads offer space for two or four cartridges for multichannel pumping. Each cartridge accepts 3-STOP tubing for easy loading and secure retention. The 6, 8, or 12 rollers are low friction and long wearing for smooth operation and low pulsation.

## MARKETS & APPLICATIONS

The **Reglo Digital Multichannel Pumps** offer compact size and operational flexibility – ideal for enhancing efficiency in busy labs. Ideal for applications requiring low flow rates and high accuracy in a multichannel format. Use for feed, transfer, and perfusion applications and as a replacement for manual methods such as pipettors and bottle top dispensers. Programmability also makes these pumps a time-saving option for repetitive dispensing and dosing applications in cell culture and microbiology labs.

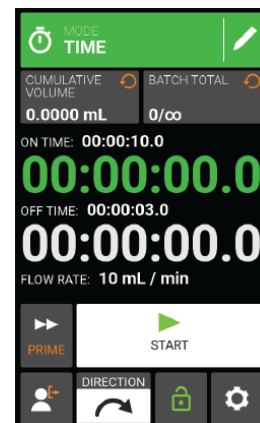
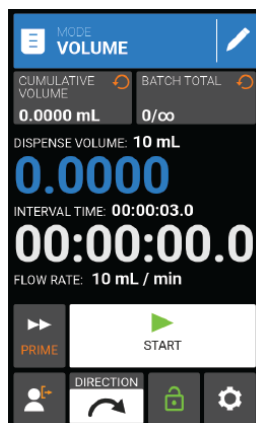
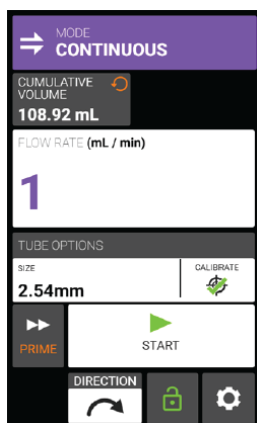
## FEATURES & BENEFITS

- 5" (12.7 cm) capacitive TFT/RGB touch screen for crisp resolution and a wide viewing angle
- Save and recall up to 50 commonly used dispense programs for rapid set up
- Three-level user access provides the option of controlling who can operate the pump and at what level
- Flexible operational control via touchscreen, EtherNet/IP, serial control, or analog remote signal
- Over-the-Air Firmware updates keep your pump up to date and allow you to take full advantage of future enhancements in features and functionality
- Graphical indicator lets you know when loaded tubing is optimally calibrated
- Tubing cassettes (included) accept 3-STOP tubing and are easily snapped in/out for quick tubing changes.



## OPERATION MODES

Select between Continuous run, Volume dispense, and Time dispense modes. Batch control and interval/off time are available in Volume dispense and Time dispense modes. Optimize dispensing applications in Volume mode with Anti-Drip and Speed ramping. Remote control options include analog control, Serial and EtherNet/IP.



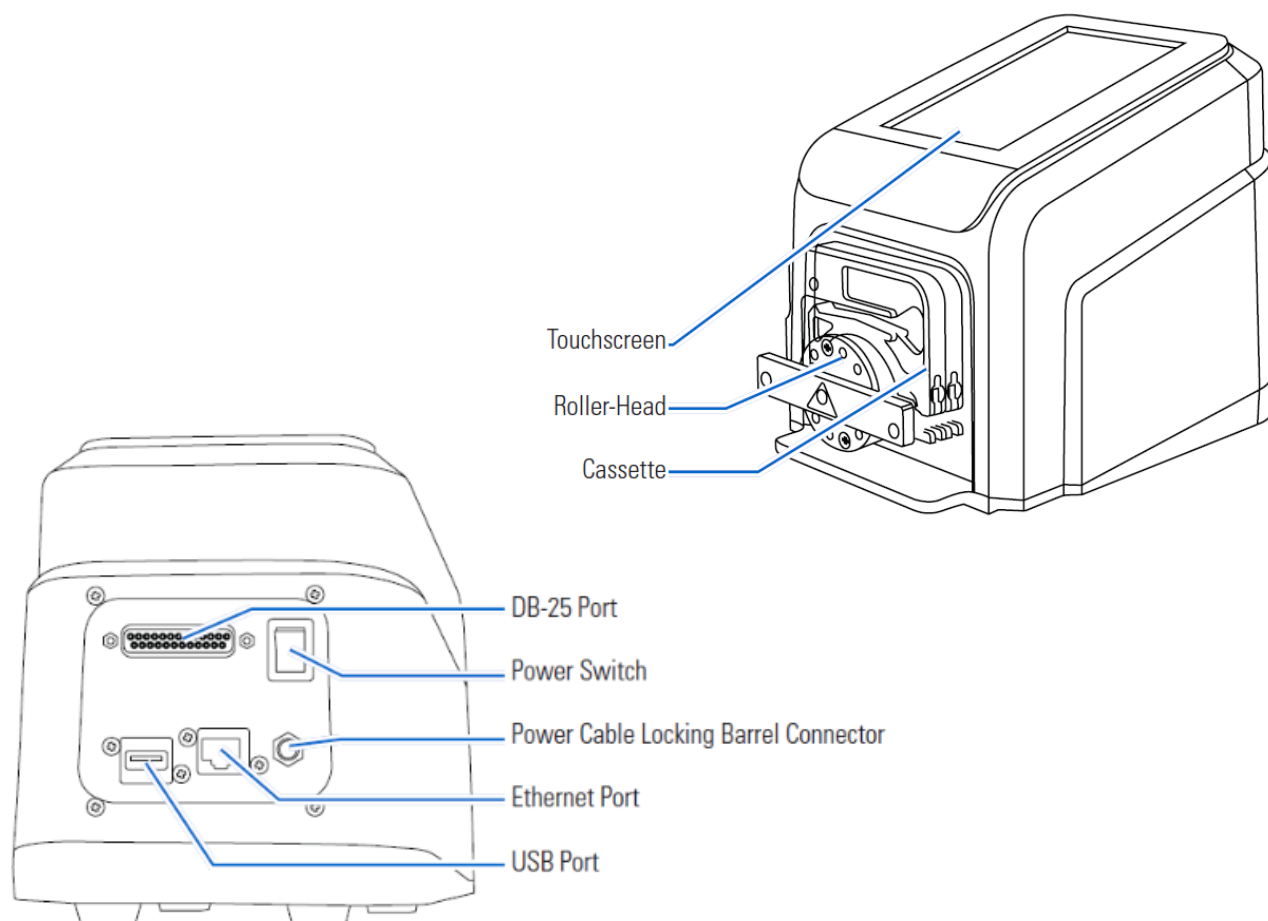
## ORDERING INFORMATION

Model Number	Description	Speed Range	Flow Range per Channel
MFLX78018-10	2-Channel, 6-Roller	0.15 to 160 rpm	0.0003 to 68 mL/min
MFLX78018-12	2-Channel, 8-Roller		0.0002 to 56 mL/min
MFLX78018-14	2-Channel, 12-Roller		0.0002 to 38 mL/min
MFLX78018-20	4-Channel, 6-Roller		0.0003 to 68 mL/min
MFLX78018-22	4-Channel, 8-Roller		0.0002 to 56 mL/min
MFLX78018-24	4-Channel, 12-Roller		0.0002 to 38 mL/min

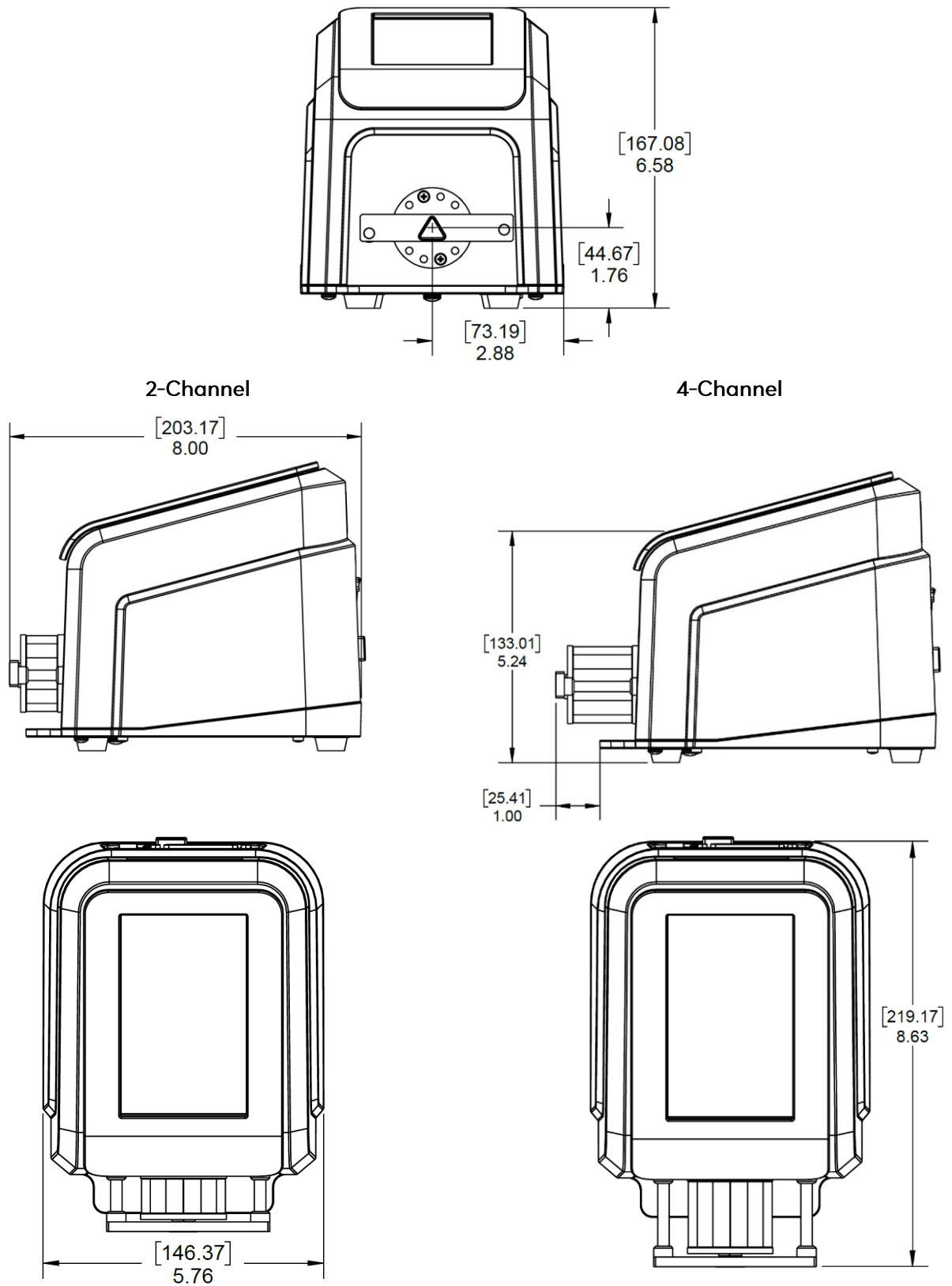
## Pump Accessories:

Model Number	Description
MFLX07523-92	Foot switch, momentary start/stop; 1.8-m (6-ft) cable
MFLX07523-95	Cable assembly; DB25 male connector and 7.9-m (25-ft) cable with stripped wire ends
MFLX07523-94	DB25 male connector; use to create your own cable.
MFLX78006-90	Serial Coms cable; USB-A to USB-A, 2.4 m (8 ft)
MFLX78006-91	Serial Coms Cable; USB-A to PLC (3 wire), 2.4 m (8 ft)
MFLX78016-98	Replacement MS/CA Click 'n' go cassette, POM-C
MFLX07624-64	MS/CA cassette with pressure lever, POM-C
MFLX78016-96	MS/CA Click 'n' go cassette, PVDF
MFLX07624-96	MS/CA cassette with pressure lever, PVDF

## DRAWING



## DIMENSIONS/DRAWING



## SPECIFICATIONS

Model Number	MFLX78018-10	MFLX78018-12	MFLX78018-14	MFLX78018-20	MFLX78018-22	MFLX78018-24
Performance specifications						
Flow capacity	0.0003 to 68 mL/min	0.0002 to 56 mL/min	0.0002 to 38 mL/min	0.0003 to 68 mL/min	0.0002 to 56 mL/min	0.0002 to 38 mL/min
Speed range	0.15 to 160 rpm					
Number of channels	2			4		
Number of rollers	6	8	12	6	8	12
Accepted Tubing	Ismatec® Microbore 3-STOP tubing					
Maximum pressure	1.5 bar (22 PSI)					
Maximum torque continuous	6.48 kg-cm (90 oz-in)					
Reversible	Yes					
Remote digital connection	EtherNet/IP (RJ-45); Serial (USB); RS-232					
Analog Remote signal - Inputs	0 to 20 mA, 20 to 0 mA, 4 to 20 mA, 20 to 4 mA; 0 to 10V, 10 to 0 V, 0 to 5 V, 5 to 0 V; Start/Stop, Direction (CW/CCW), Prime via contact closure					
Analog Remote signal - Outputs	0 to 20 mA, 20 to 0 mA, 4 to 20 mA, 20 to 4 mA; 0 to 10V, 10 to 0 V, 0 to 5 V, 5 to 0 V; Tach output (2 – 1600 Hz, 50% Duty Cycle, 10 Hz per RPM), Drive running					
Electrical specifications						
Voltage VAC (50/60 Hz)	90 to 260 VAC Uses a power adapter with 24VDC output					
Current	1.3 A @ 115 VAC; 0.6 A @ 230 VAC					
Fuse rating	3.15 A / 250 V					
Display	5" (12.7 cm) capacitive TFT/RGB touch screen with in-plane switching (wide angle view); 800 x 480 pixels with LCD backlight					
Motor type	No maintenance BLDC with encoder					
Motor/Turndown	1000:1					
Speed control resolution/ accuracy	0.1 rpm / 0.1%					
Physical specifications						
Housing materials	Drive	ABS Plastic housing with an aluminum chassis and aluminum bezel				
	Head	Rotor: Stainless Steel and Aluminium Rollers: Thermoplastic Polyester				
IP rating (enclosure)	IP31 per IEC 60529					
Agency listings	CE, RoHS 2, Power supply is UL, cUL					
Operating temperature	0 to 40°C (32 to 104°F)					
Humidity	10 to 90% non-condensing					
Storage temperature	-25 to 65°C (-13 to 149°F)					
Dimensions (L x W x H)	2-Channel: 20.3 x 14.6 x 16.7 cm (8.0" x 5.76" x 6.58") 4-Channel: 21.9 x 14.6 x 16.7 cm (8.63" x 5.76" x 6.58")					
Shipping weight	4 kg					
Noise rating	<70 dBA @ 1m					

## TUBING OPTIONS (required)

Using the table below, determine the prefix by locating your desired Tubing Type and its corresponding Catalog Number (for example, Tygon E-LFL MFLX96450). Combine the prefix and suffix for the desired tubing Inner Diameter for complete Tubing Part Number (for example, ID 0.25 = -12 becomes MFLX96450-12). Multiple tubing sizes can be used in the same pump at once to create ratio of different flowrates.

- A length of Three-Stop Tubing is 40.6 cm (16") — for use within the pump head and cartridge.
- A length of Tubing Extension is 15.2 m (50 ft) — for connecting pump tubing to process.

Formulation		Qty	Sku Prefix	0.13	0.19	0.25	0.38	0.51	0.64	0.76	1.02	1.14	1.52	1.85	2.06	2.79	3.17
E-LFL	3-STOP	12	MFLX96450			-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	
	Extension	1	MFLX06449			-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	
PharMed BPT	3-STOP	12	MFLX95714		-10	-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	
	Extension	1	MFLX95809		-10	-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	
Chem-Durance Bio	3-STOP	6	MFLX96328				-14	-18		-24		-30	-36		-42	-48	
	Extension	1	MFLX96329				-14	-18		-24		-30	-36		-42	-48	
E-Lab	3-STOP	12	MFLX96461	-09	-10	-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	-49
	Extension	1	MFLX06460	-09	-10	-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	-49
Viton	3-STOP	12	MFLX97629					-18	-22	-24	-28	-30	-36	-40	-42	-48	
	Extension	1	MFLX97632					-18	-22	-24	-28	-30	-36	-40	-42	-48	
Puri-Sil	3-STOP	12	MFLX95422		-10	-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	
	Extension	1	MFLX95412		-10	-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	
Puri-Flex	3-STOP	12	MFLX96519				-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	
	Extension	1	MFLX96418		-10	-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	
Silicone - Platinum Cured	3-STOP	6	MFLX95603						-22	-24	-28	-30	-36	-40	-42	-48	
	Extension	1	MFLX95612						-22	-24	-28	-30	-36	-40			
Silicone - Peroxide Cured	3-STOP	6	MFLX07624					-18	-22	-24	-28	-30	-36	-40	-42	-48	
	Extension	1	MFLX07625					-18	-22	-24	-28	-30	-36	-40	-42	-48	
Puri-Clear LL	3-STOP	12	MFLX95625		-10	-12	-14	-18	-22	-24	-28	-30	-36	-40	-42	-48	
	Extension	1															
Versilon 2001	3-STOP	6	MFLX96466				-14		-22		-28		-36		-42	-48	
	Extension	1	MFLX96467				-14		-22		-28		-36		-42	-48	
Solva	3-STOP	12	MFLX95605				-14		-22	-24	-28		-36		-42	-48	
	Extension	1	MFLX95712				-14		-22	-24	-28		-36		-42	-48	

## NOMINAL FLOWRATES

Tubing		6-Roller mL/min		8-Roller mL/min		12-Roller mL/min	
ID mm	Color-Code	min	max	min	max	min	max
0.13	Orange-black	0.0003	0.22	0.0002	0.176	0.0002	0.1488
0.19	Orange-red	0.0006	0.45	0.0005	0.368	0.0004	0.336
0.25	Orange-blue	0.0009	0.76	0.0008	0.656	0.0008	0.608
0.38	Orange-green	0.0021	1.7	0.0019	1.5	0.0018	1.41
0.51	Orange-yellow	0.0039	3.1	0.0034	2.72	0.0032	2.56
0.64	Orange-white	0.006	4.8	0.0052	4.16	0.0048	3.84
0.76	Black-black	0.0084	6.7	0.0072	5.76	0.0066	5.28
1.02	White-white	0.015	12	0.0126	10.08	0.0112	8.96
1.14	Red-red	0.0175	14	0.0156	12.48	0.0134	10.72
1.52	Yellow-blue	0.03	24	0.026	20.8	0.02	16
1.85	Green-green	0.0425	34	0.034	27.2	0.026	20.8
2.06	Purple-purple	0.05	40	0.04	32	0.03	24
2.79	Purple-white	0.0738	59	0.062	49.6	0.042	33.6
3.17	Black-white	0.085	68	0.07	56	0.048	38

## TUBING CASSETTES

### Types

- **Click'n'go:** Spring-loaded cassette providing defined and reproducible occlusion. Independent of tubing diameter and material, the occlusion is automatically correct. Suitable for differential pressure up to max. 1.0 bar.  
→ For harder tubing like Versilon 2001 use of cassettes with pressure lever is recommended.
- **Pressure lever:** Cassette with pressure lever for adjustable occlusion. Suitable for elevated differential pressure conditions – up to 1.5 bar -- and harder tubing formulations like Versilon 2001.

### Materials

- **POM-C:** (Polyoxymethylene-Copolymer)  
Good chemical resistance to many organic solvents and strong alkaline chemicals. Is affected by strong acids and oxidizing substances. UV-stabilized and stable at (dry) temperatures up to 80°C (in continuous use) or 136°C (for a short time).
- **PVDF:** (Polyvinylidene fluoride)  
Very good chemical resistance to acids and most aliphatic, aromatic and chlorinated solvents. Not suitable for long contact with esters, ketones, amines and strong alkaline chemicals. Stable to UV and temperatures up to 110°C (in continuous use) or 142°C (for a short time).

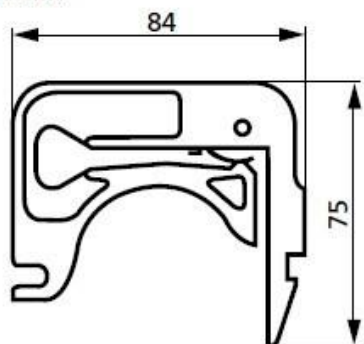
## Tubing Cassette Ordering Information

SKU	Description
MFLX78016-98	Replacement MS/CA Click 'n' go cassette, POM-C
MFLX07624-64	MS/CA cassette with pressure lever POM-C
MFLX78016-96	MS/CA Click 'n' go cassette PVDF
MFLX07624-96	MS/CA cassette with pressure lever PVDF

## Tubing Cassette Dimensions/Drawing

### MS/CA Click'n'go

Dimensions in mm

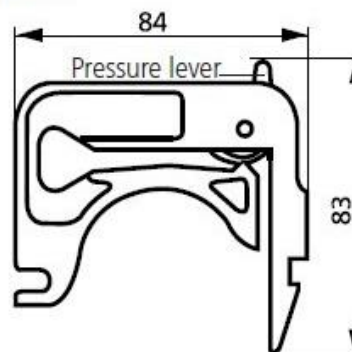


Tubing with 3 colour-coded collars



### MS/CA Pressure Lever

Dimensions in mm

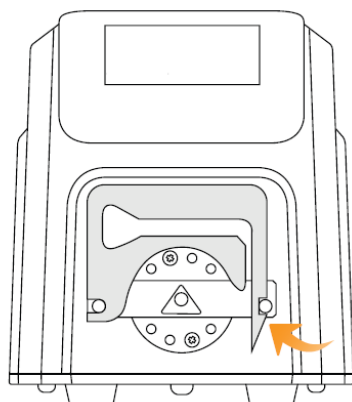


Tubing with 3 colour-coded collars



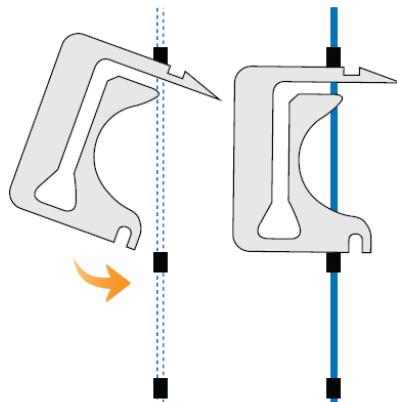
## TUBE LOADING

### STEP 1



Remove the cassette by lightly pressing the fixing-tongue while simultaneously lifting the cassette.

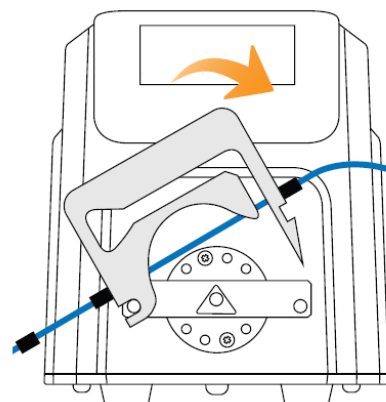
### STEP 2



Insert the tubing into the cassette:

- Insert the first stopper of the color-coded three-stop tubing into the cassette's front tube channel.
- Allow the tubing to hang freely to prevent twisting.
- Insert the second stopper of the tubing into the cassette's rear tube channel.

### STEP 3



Replace the cassette onto the roller-head.