

# 4U 4-channel Microfluidic Pump

Accurate and Pulse-Free Flow for Microfluidic Applications

## PRECISE

4U 4-channel microfluidic pump is a precision pressure pump for a variety of microfluidic applications, where accurate and stable flow rate delivery is required.

## EASY TO USE

Control all the features of the pump with the SmartFlo app running on iPad mini or PC.



## MAIN BENEFITS



**FAST**

Fast response time and settling time



**PROGRAMMABLE**

Program your own flow profile with any combination of constant, ramp, sine and step.



**PULSE FREE**

Achieve precise and pulse-less flow.



**EASY INTEGRATION**

Integrate the pump control on your own software using LabVIEW, C++, Python, etc.



**AFFORDABLE**

Reduced cost per channel while multiple channels are required.

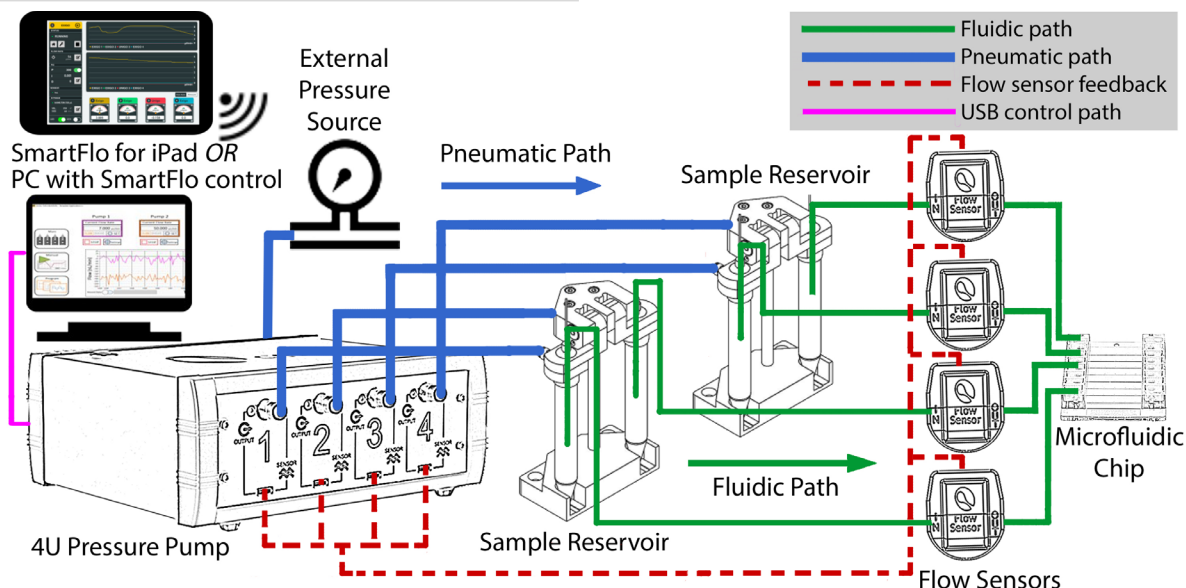


**CLOSED-LOOP FEEDBACK**

Integrates a plug-and-play flow sensor for active feedback and precise flow control.



## How does it work?



## TECHNICAL SPECIFICATIONS

Input Pressure	Up to 10 bar or 145PSI or vacuum -0.9bar <sup>(1)</sup>
Volumetric Flow Rates	1µL/min to 1mL/min
Flow Direction	Unidirectional (Push or Pull)
Pulse-free flow rate for microfluidic applications	1µL/min - 80µL/min ( $\pm$ 120nL/min) <sup>(2)</sup> 10µL/min - 1mL/min ( $\pm$ 2µL/min) <sup>(3)</sup>
Flow feedback options	Pressure-flow combined or Pressure only
Fast response	<50ms
Software Control	SmartFlo App running on iPad mini or PC
Dimensions	230mm (L) x 193mm (W) x 85mm (H)
Weight	~2.5kg
Power Requirements	110/220V - 50/60Hz   60W

(1) External compressor or vacuum required.

(2) Using a 80µL/min sensor (FS80.0)

(3) Using a 1mL/min sensor (FS-1000).

## APPLICATIONS

- ✓ Droplet Generation
- ✓ Organ-on-chip studies
- ✓ VOC experimental set-ups
- ✓ Shear based cell rolling, adhesion and transmigration assays on ligand-coated surfaces or endothelial cells
- ✓ Cell and particle manipulation
- ✓ Precise multichannel mixing
- ✓ Bacterial biofilm formation on solid surfaces

## What's included?

	INCLUDED	OPTIONAL
4U pump	✓	
Flow Sensor <sup>(4)</sup> x4	✓	
iPad Mini <sup>(5)</sup>		✓
Sample Reservoir		✓
Fluidic Manifold		✓

(4) More information available on [www.wearecellix.com/flowsensors](http://www.wearecellix.com/flowsensors)

(5) SmartFlo is controlled via iPad or PC. Please contact Cellix for more information.