vivoVerse
ACCELERATING IN VIVO SCREENING

vivoCube+
with **vivo**Flow

Your All-In-One Fluid Control Solution for Microfluidics

Introducing the **vivoCube+** paired with **vivoFlow**, a fluid controller for generating steady, smooth flows that are either **pressure- or flowrate-driven** over a wide measurement range. The configurable setup enables **easy programming of pressure and flowrate sequences** for your specific application and includes a library of out-of-the-box **preset programs**.

Key Benefits

Multiple applications
Microfluidics for cells, organoids, droplet generation, and many more

Pressure or flow control
Precise regulation of pressure or flowrate output with vivoFlow

Dual channel output
Independent control of 2 channels with different flow conditions

Customizable programs
Preset and user-defined programs for your specific applications

Compact, sleek design
Built-in pump and intuitive user interface packed in a portable case

Future advanced features
APIs for LabVIEW and MATLAB and other features via future updates

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APPLICATIONS

The operating flowrates and pressures are specified so that **vivoCube+** can be used for a **wide variety of microfluidic applications**:

- Perfusion for cell cultures
- Perfusion for organ-on-a-chip systems
- Pulsatile flow generation
- Droplet generation
- Automatic reagent distribution
- Nanoparticle syntheses

SPECIFICATIONS

vivoCube+ contains a **built-in pressure source and pressure-based control** of flow. **vivoFlow** expands the functionality of the vivoCube+, adding **precision flowrate sensing and control**.

VIVOCUBE+	
Pressure range (built-in pump)	0 to 10 psi (gauge)
Pressure range (opt. external source)	0 to 30 psi (gauge)
Sensing bias	<0.1 psi
Sensing resolution	±0.002 psi
Pressure accuracy	±7% 0.1 to 0.5 psi ±2% 0.5 to 1 psi ±1% greater than 1 psi
Pressure stability	±0.01 psi
Pressure channels	2
Max flow rate*	1000 mL/min

**total flow rate is divided among the two channels if operated simultaneously*

VIVOFLOW	
Flowrate range	±2000 µL/min (bidirectional)
Sensor output limit	±3250 µL/min
Sensing accuracy in flowrate range*	±5% of value ±0.5 µL/min (standard) ±0.1 µL/min (precision)
Sensing resolution	±0.1 µL/min (standard) ±0.004 µL/min (precision)
Flowrate stability*	±0.1% of value ±0.1 µL/min
Calibrated for	H_2O, IPA
Operating temperature range	5-50°C

**whichever value is greater*

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