

SeekOne[®] Microfluidic Control System

—The microfluidic controlling expert with high adaptability

Product Overview

The SeekOne[®] Microfluidic Control System (SeekOne[®] MFCS) is based on microfluidic technology for precise manipulation and control of fluids at the microscale, with the ability to precisely control very small amounts of fluid ranging from **nanoliters to picoliters**.

This advanced device is designed to provide **stable air pressure** for microfluidic chips. Featuring fast air pressure adjustments, multi-stage program control, and various other modes, the SeekOne[®] MFCS allows researchers to achieve their experimental goals with ease by **accurately driving fluids using air pressure**. Equipped with reservoir consumables for convenient loading and collection of samples, reagents, and other microfluidics, this system is a versatile solution for various research applications, including biomedical



research, clinical diagnostics, drug screening, and others. Whether you are conducting experiments in the lab or developing new technologies, this system is an excellent choice for achieving **precise and stable microfluidic control**.

Product Features



High cost-performance

The SeekOne[®] MFCS features **zero dead volume** and a plug-and-play reservoir. PDMS chips are ready to use, eliminating the need for customized chips.



Wide applicability

The SeekOne[®] MFCS is compatible with experimental needs from **μL to mL** liquid capacity. Independent channels can be expanded, compatible with **multiple expansion plans**, and can be customized as needed.



Strong stability

The SeekOne[®] MFCS uses air pressure braking, ensuring uniform force and pressure fluctuation of less than **0.03%**. It also includes a **built-in air pump** without the need for an external air source, which is convenient and user-friendly.

Product Components

The SeekOne[®] Microfluidic Control System consists of **three parts**: *microdroplet controller*, *microdroplet control software*, and *digital microfluidic chip*

Microdroplet controller

Built-in gas pump with no external air source required

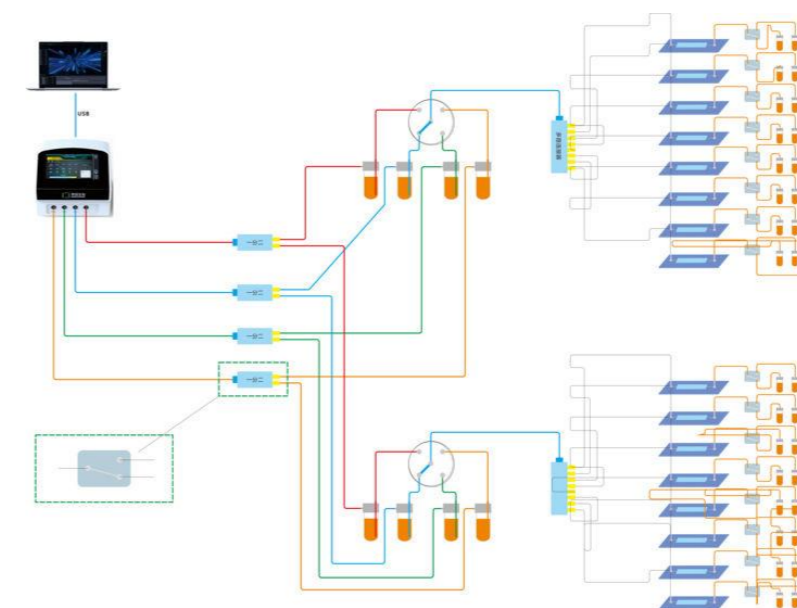
Zero-dead-volume external reservoir design with compatible volume of μL ~ mL .



Small volume reservoir/ plug-and-play reservoir

Microdroplet control software

Independent multi-channel pressure control and high-precision regulation, ensuring fast responses.



Flexible and extended applications/ compatible with multiple expansion plans

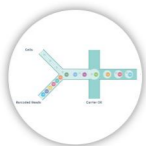
PDMS Chip

Provide customized service of the chip



Application Scenarios

Microfluidic chips are **versatile tools that find application in various areas of research.**



Cell biology research

microfluidic chips can be used to manipulate the study of single cell functions based on single cell microdroplet.



Organ-on-a-chip research

microfluidic chips can precisely culture organoids and simulates the microenvironment of human organs.



Pharmaceutical research

microfluidic chips are useful for precise drug development, drug synthesis, drug delivery, and drug component analysis.

Product Specifications

Parameters	SeekOne MFCS
Wide pressure range	Positive pressure channel: channels 1-3, range: 0—340mbar. Negative pressure channel: channel 4, range: -340~340mbar. Extensible
Precise pressure stability	0.03%
Pressure response time	≤1s
Reservoir	Microvolume: 380 μl/each (consumable) Large volume: 2~50ml (optional)
Chip material	PDMS
Chip size	No restrictions. Customizable to customer requirements
Chip inlet spacing	≥10 mm
PDMS chip thickness	≥3 mm

Order Information

Name	Cat.No.
SeekOne® Microfluidic Control System	M004A
Reservoir holder	SP00015
Lines group	SP00016
Dust cover	SP00017
Reservoir	SP00018
Gasket	SP00019
Microfluidic control system components	SP00023



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