

RWD LIFE SCIENCE CO., LTD

R430 Series Syringe Pump

High Precision · Split Design · Full Scenario Adaptation



Product Introduction

The R430 series split-type micro syringe pump is a high-precision fluid control device featuring precision, stability and strong anti-interference capability. It can be equipped with syringes to deliver micro-volume liquids accurately, uniformly and continuously, and has been widely used in laboratory and industrial environments.

Advantages

- ④ **Split Design for Easy Use:** Compact and lightweight execution unit, easy to disassemble, convenient for joint use with stereotaxic instruments and micromanipulators for stereotaxic injection.
- ④ **Precision and Stability:** Excellent control system and precise mechanical structure, with strong anti-electromagnetic interference, remains stable, reliable operation in complex experimental environments.
- ④ **Intelligent Interaction:** 5-inch high-resolution color LCD touch screen with ergonomic tilt design, adjustable brightness, concise interface and one-click switching function.
- ④ **Multi-mode Adaptation:** Supports 5 working modes: Infuse, Withdraw, Infuse/Withdraw, Withdraw/Infuse and Continuous Cycle.
- ④ **Strong Compatibility:** Built-in parameters for mainstream syringe brands such as Hamilton and SGE, supports custom syringe specifications, and is compatible with domestic Gaoge syringes.
- ④ **Flexible Expansion:** Equipped with RS485, DB15 external control and USB-B interfaces, supports multi-unit cascade and remote automatic control.
- ④ **Safety Protection:** Screen lock + password protection, power failure memory, adjustable linear thrust, effectively preventing misoperation and syringe damage.



Models and Ranges

Model	Syringes	Application Scenarios
R430-S	0.5 μ L~100 μ L	ultra-micro stereotaxic injection, microinjection and microdialysis perfusion
R430-L	5.0 μ L~1000 μ L	conventional microinjection, reagent delivery and industrial microfluidics



Technical Parameters

Operating Modes: Infuse, Withdraw, Infuse/Withdraw, Withdraw/Infuse, Continuous Cycle

Channel Number: 1

Maximum Stroke: 70 mm

Linear Travel Accuracy: $\pm 0.35\%$ (when stroke > 30%)

Repeatability: $\pm 0.05\%$

Flow Rate Range: R430-S: 0.005 nL/min ~ 152.456 μ L/min; R430-L: 0.058 nL/min ~ 1.587 mL/min

Linear Thrust: R430-S > 1 kgf; R430-L > 4 kgf (adjustable from 25% to 100%)

Display: 5-inch high-resolution color LCD touch screen

Screen Lock Function: Prevents misoperation during operation

Power Failure Memory: Retains all parameter settings before power outage

Communication Interfaces: RS485 (Modbus), DB15 external control, USB-B

Power Supply: AC 100-240V 50Hz/60Hz wide-range power

Operating Environment: Temperature 5-40°C, relative humidity < 80%

Total Power Consumption: < 30W



Typical Application Scenarios

Neuroscience



Stereotaxic injection in small animals, optogenetic virus administration, behavioral studies

Animal Experiments



Precise micro-volume administration, microdialysis perfusion, tissue perfusion, blood collection

Biomedicine



Drug screening, cell culture, precise reagent addition, gene transfection

Industrial Applications



Microfluidics, electro-spinning, microsphere preparation, material synthesis, titration analysis



Product list

Name	Model	Configuration	Quantity	Usage
Control unit	\	standard	1	For parameter setting and injection unit operation control
Injection unit	\	standard	1	For syringe assembly, injection and withdrawal
Power Adaptor	\	standard	1	Available in GB, US, EU, UK and AU standards
Connection cable	\	standard	1	For injection unit and control unit connection
Foot switch and connection cable	R430-FS	optional	1	For controlling injection, emptying and other injection unit operations

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