



Precision Fluid Control Series



Reciprocating Syringe Pump

Rpm-01

Product Technical Specification | July 2026

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Product Overview

The Rpm-01 reciprocating syringe pump delivers continuous, constant-volume liquid flow through an eccentric-wheel mechanism, serving as a high-precision alternative to peristaltic pumps. Available in 1 mL/2 mL/3 mL sizes with single- or double-head configurations, it offers $\pm 1\%$ accuracy, 0.3%~0.7% repeatability, 0.3 MPa pressure rating, and 3 million-cycle service life. Ideal for analytical systems requiring continuous supply with low pulsation.

- Continuous Constant Flow
- Peristaltic Alternative
- 1/2/3 mL
- Single/Double Head
- 3M Cycles

Key Features



Reciprocating Continuous Delivery
Eccentric-wheel drive for continuous low-pulsation flow.



High Precision
 $\pm 1\%$ accuracy, 0.3%~0.7% repeatability.



Multiple Sizes
1 mL / 2 mL / 3 mL options.



Single/Double Head
Flow doubled with double-head configuration.



Long Service Life
3 million cycles no leakage (water test).



Standard Comm.
RS232/RS485/CAN buses.

Technical Specifications

Parameter	Specification
Model	Rpm-01
Principle	Eccentric-wheel reciprocating positive-displacement delivery
Rated Capacity	1 mL / 2 mL / 3 mL
Function	High-precision constant dosing alternative to peristaltic pumps
Accuracy	$\pm 1\%$ (one reciprocating stroke)
Repeatability	0.3%~0.7% (rated stroke)
Pressure Rating	0.3 MPa
Service Life	3 million cycles no leakage (water)
Max Speed	180 rpm/min (single head)
Min Speed	1 rpm/min
Single-Head Flow (ref.)	1 mL: 1~120 mL/min; 2 mL: 2~240 mL/min; 3 mL: 3~360 mL/min
Double-Head Flow (ref.)	1 mL: 2~240 mL/min; 2 mL: 4~480 mL/min; 3 mL: 6~720 mL/min
Actuator	Eccentric wheel
Wetted Material	Borosilicate glass, PTFE
Connection	1/4-28UNF internal thread
Communication	RS232 / RS485 / CAN

Baud Rate	RS232/RS485: 9600~115200 bps; CAN: 100 kbps~1 Mbps
Power Supply	DC24V / 1.5A
Operating Temp.	5~55 °C
Relative Humidity	<80% non-condensing
Dimension	98.3 × 42 × 116.4 mm (single) / 181.6 × 56 × 125.08 mm (double)
Weight	0.8 kg (single) / 2.158 kg (double)
Maintenance	Periodic check valve and seal inspection; avoid dry running
Application	Continuous reagent supply for online analyzers, IVD, lab constant dosing, bioreactor feeding

Typical Applications

- ▶ Continuous reagent supply for online analyzers
- ▶ IVD instrument wash/reagent circulation
- ▶ Laboratory constant dosing
- ▶ High-precision peristaltic-pump replacement
- ▶ Bioreactor nutrient delivery

Ordering Guide

Product Code	Description
Rpm-01	Reciprocating pump + 1/2/3 mL pump head (single/double head optional)

Accessories/Consumables

Accessory	Specification	Note
Pump Head	1/2/3 mL	Flow-dependent
Check Valve Kit	PTFE/Glass	Periodic replacement
Driver	Integrated	Standard

Why Choose Jiuyuhub

 Application-First Matching Single or double head recommended by flow and pulsation requirements.	 Southeast Asia Adapted Glass/PTFE materials resist corrosion in tropical environments.
 One-Stop Supply Reciprocating pump, heads and valve kits together.	 24-Hour Response Fast support for continuous-supply schemes.

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