



JiuYuHub

Precision Fluid Control Series



# High Precision Syringe Pump

SY-01C

Product Technical Specification | July 2026

---

Nanjing Jiuyuhui Environmental Technology Co., Ltd.  
[www.jiuyuhub.com](http://www.jiuyuhub.com)

## Product Overview

The SY-01C high-precision syringe pump is optimized for 0.5 mL~5 mL liquid-handling tasks. It uses a 30 mm stroke, trapezoidal screw drive, and maintenance-free stepper motor, supporting RS232/RS485/CAN multi-bus communication with up to 15 independent addresses. Its open architecture allows external hosts to implement automatic pipetting, dilution, and dispensing for chromatography, IVD, water-quality analysis, and laboratory automation.

- High Precision
- 0.5~5 mL
- 30 mm Stroke
- Multi-Bus
- Open Architecture

## Key Features



**High Precision**  
Accuracy ≤1%, repeatability 0.3%~0.5%.



**30 mm Rated Stroke**  
3,000 steps standard mode, 0.0025 mm step resolution.



**0.5~5 mL Optimized**  
25 µL~5 mL syringes for routine analytical needs.



**Multi-Bus Comm.**  
RS232/RS485/CAN with ASCII/custom/Modbus protocols.



**Up to 15 Addresses**  
Easy multi-pump coordination and system integration.



**DC24V/3A Supply**  
Industrial standard for easy embedding.

## Technical Specifications

| Parameter       | Specification                                 |
|-----------------|-----------------------------------------------|
| Model           | SY-01C                                        |
| Principle       | Precision positive-displacement syringe pump  |
| Accuracy        | ≤1% @ 100% rated stroke                       |
| Repeatability   | 0.3%~0.5% @ 100% rated stroke                 |
| Rated Stroke    | 30 mm (3,000 steps standard mode)             |
| Max Speed       | 450 rpm                                       |
| Linear Speed    | 0.0333~15 mm/s (water; 1 rated stroke/cycle)  |
| Stroke Runtime  | 2~900 s                                       |
| Resolution      | 0.0025 mm/step                                |
| Syringe Sizes   | 0.5 mL~5 mL (25 µL~5 mL optional)             |
| Valve Options   | M01 / M02 / M03 / M04 / M05 / M06 / M10 / M12 |
| Wetted Material | Borosilicate glass, PTFE, Sapphire, PCTFE     |
| Max Pressure    | 0.7 MPa                                       |
| Actuator        | Trapezoidal screw (lead 2 mm)                 |
| Connection      | 1/4-28UNF                                     |
| Communication   | RS232 / RS485 / CAN                           |

|                   |                                                                                                    |
|-------------------|----------------------------------------------------------------------------------------------------|
| Baud Rate         | RS232/RS485: 9600~115200 bps; CAN: 100 kbps~1 Mbps                                                 |
| Device Address    | Up to 15 independent addresses                                                                     |
| Power Supply      | DC24V / 3A                                                                                         |
| Operating Temp.   | 5~55 °C                                                                                            |
| Relative Humidity | <80% non-condensing                                                                                |
| Dimension         | 142.7 × 127 × 45 mm                                                                                |
| Net Weight        | 1.5 kg                                                                                             |
| Maintenance       | Stepper motor maintenance-free; periodic syringe seal replacement                                  |
| Application       | Chromatography autosampling, IVD, online water-quality analysis, automated lab dilution/dispensing |

## Typical Applications

- ▶ HPLC autosampler injection
- ▶ In-vitro diagnostic devices
- ▶ Online water-quality analyzers
- ▶ Automated lab dilution platforms
- ▶ Biopharma small-volume dispensing

## Ordering Guide

| Product Code | Description                                    |
|--------------|------------------------------------------------|
| SY-01C       | Syringe pump body + syringe + valve (optional) |

## Accessories/Consumables

| Accessory          | Specification | Note              |
|--------------------|---------------|-------------------|
| Glass Syringe      | 0.5~5 mL      | Volume-dependent  |
| Distribution Valve | M01~M12       | Channel-dependent |
| Tubing Fitting     | 1/4-28UNF     | Standard          |

## Why Choose Jiuyuhub

|                                                                                                                                                                                 |                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <b>Application-First Matching</b><br>Recommend the best model by volume and accuracy needs. |  <b>Southeast Asia Adapted</b><br>Wide temperature range for tropical laboratories. |
|  <b>One-Stop Supply</b><br>Pumps, valves and samplers supplied together.                     |  <b>24-Hour Response</b><br>Fast selection and technical support.                   |

This product is supplied and serviced locally by Jiuyuhub. Product images are for illustrative purposes only.