



The intelligent syringe pump with infusion/withdrawl mode, stainless steel body, and 4.3" color LCD screen is easy to operate. It can install and fix different types of injectors or syringes, and it is suitable for transferring micro flow rates with high precision (non-medical).

#### 1.Online flow rate modification function: The pump is running, without stopping, adjust the flow rate at any time to meet complex application.

- 2.Colorful LCD display:Friendly interface, 4.3 inch LCD display every technical parameter in real time.
- 3.Input syringe inner diameter function: Can choose the injector from the list or input the injector inner diameter directly.
- 4.Two measurement mode for selection: Infusion volume --- Infusion flow rate, Infusion volume --- Infusion time.
- 5.4 different working modes: Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion. The parameters of each working mode saving separately. Each working mode can be changed to continuous mode by setting repeat parameters.
- 6.Alarm function: The pump will stall and give an alarm when the drive structure of the pump is blocked.



## Technical Specifications

Working mode	Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion		
Channel number	1		
Syringe size	0.5μL-150mL		
Syringe selection			
Linear speed range	1μm/min-132mm/min(Flow rate=Linear speed* syringe inner cut area)		
Min. linear rate	1μm/min		
Linear force	8-20kgf, online adjust		
Max. stroke	140mm		
Stoke resolution	0.078µm/µstep		
Accuracy	Error ≤±0.3% (Stoke ≥30% of maximum stroke)		
Back distance	0.01-10mm		
Stored modes	Can save at most 60 common modes		
Display	Industrial grade 4.3" LCD color display		
Control method	Touch screen and Mechanical keypad		
Power-off memory	ff memory Display the previous data parameter after power supply again		
Output	OC gate signal output,used to indicate running status and direction		
External control	Start/stop signal, withdrawal and infusion signal, active switch signal: (5-24V)		
external control	Start/stop signal, passive switch signal, such as foot pedal switch		
Communication interface	RS232/RS485, Modbus protocol(RTU mode)		
Power supply	AC100-240V/65W		
Condition temperature	0-40°C		
Relative humidity	<80%		
IP rate	IP31		
Dimension(mm)	282*215*165		
Weight	4.44kg		



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## VI-10BALL/20BALL

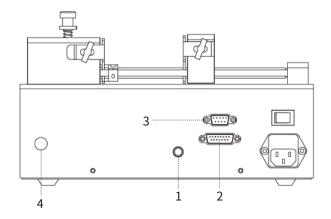
# **Technical Specifications**

Plastic syringe	Inside Diameter(mm)	Flow Rate(µL/min-mL/min)	
		VI-10BALL/20BALL	VI-40BALL/21BALL
1mL		0.0174-2.29	0.0174-2.29
2.0mL		0.0653-8.623	0.0653-8.623
5mL		0.1223-16.147	0.1223 -16.147
10mL	1	0.1983-26.177	0.1983 -26.177
20mL		0.3142-41.469	
30mL		0.3976-52.484	<u> </u>
50mL		0.6560-86.588	<u> </u>
100 mL		0.8042-106.154	<u> </u>
150 mL		1.2566-165.871	<u> </u>

Glass syringe	Inside Diameter(mm)	Flow Rate(μL/min-mL/min)
		VI-10BALL/20BAL
250μL	2.30	0.0042-0.5484
500μL	3.25	0.0083-1.095
lmL	4.60	0.0167-2 2033
2.5mL	7.28	0.0416-5.4944
5mL	10.30	0.0833-10.9986
10mL	14.57	0.1667-22.0081
25mL	23.00	0.4166-54.9859
50mL	32.57	0.8321-109.976
100 mL	32.57	0.8321-109.976

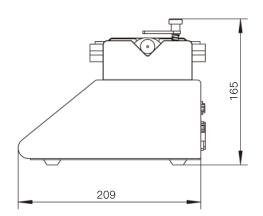
Microsyringe	Inside Diameter(mm)	Flow Rate(nL/min-µL/min)
		VI-10BALL/20BALL
0.5μL	0.10	0.008-1.0296
lμL	0.15	0.018-2.3232
2 μL	020	0.031-4.1448
5μL	0.35	0.096-12.6984
10μL	0.50	0.2-25.8
25μL	0.80	0.5-66.4
50μL	1.10	1-125.4
100µL	1.60	2-265.4

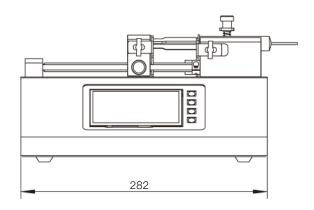
### **Syringe Pump External Control Schematic**



- 1-Foot pedal connector: Connect with foot pedal switch
- 2-15 Pin connector: External input and output
- 3-9 pin connector: RS232 and RS485
- 4-Ground pole

### **Dimension Drawing (Unit:mm)**







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