

# TJ-3A/W0109-1B Syringe Pump



This pump is a single channel micro syringe pump which has infusion/withdrawal mode. It combines precision, compact size, multiple functions with ease of operation. It can hold milliliter unit standard syringe. The features of accurate distance control and broad linear speed range (7.9  $\mu\text{m}/\text{min}$  - 79.4 mm/min) can meet versatile requirements. The drive unit is independent. It is easy to combination and installation. It can meet different operation requirements and is suitable for various research fields.

## Functions and Features

**Working mode:** Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion, continuous

**User-defined syringe:** Save 4 inner diameters of user-defined syringe barrel

**Linear force output:** Whole course > 90 N

**Memory function:** Select resume operation or remain stopped when power returns after an interruption

**Signal output:** Start/Stop output, cw/ccw output (open collector)

**Calibration:** Acquire accurate volume through calibration

**Fast forward & fast reverse:** Infusion or withdrawal at the max. speed

## Specifications

**Max. infusion distance:** 90 mm

**Acceptable syringe:** 5  $\mu\text{L}$  - 60 mL

**Linear speed:** 7.9  $\mu\text{m}/\text{min}$  - 79.4 mm/min

**Adjusting resolution:** 7.9  $\mu\text{m}/\text{min}$

**Distance resolution:** 0.165  $\mu\text{m}$

**Linear force:** > 90 N

**Setting mode:** Membrane keypad and rotary encoded switch  
**Accuracy:**  $\leq \pm 0.5\%$  error in the condition of  $\geq 30\%$  of max. infusion distance

**Display:** 128 $\times$ 64 graphic LCD

**External control:** Start/stop control, fast forward control, fast reverse control

**Communication interface:** RS485

**Power:** AC 90 V - 240 V or DC 12 V

**Power consumption:**  $\leq 10$  W

**Operating condition:** Temperature 0 - 40  $^{\circ}\text{C}$

Relative humidity < 80 %

**Controller dimensions (L $\times$ W $\times$ H):** 170 $\times$ 108 $\times$ 65 (mm)

**Controller weight:** 0.8 kg

**Drive unit dimensions (L $\times$ W $\times$ H):** 245 $\times$ 100 $\times$ 95 (mm)

**Drive unit weight:** 1.3 kg

Syringe Pump (Part Number)	Glass Syringe Specification (mL)	Barrel Inner Diameter (mm)	Effective Stroke (mm)	Flow Rates ( $\mu\text{L}/\text{min}$ - mL/min)	Syringe Material	Weight (kg)
TJ - 3A / W0109 - 1B (0503121) (0503021)	1	4.7	57.00	0.138 - 1.38	Class Syringe Plastic Syringe	Controller 0.8 Drive Unit 1.3
	2	9.0	31.20	0.505 - 5.05		
	5	13.1	37.10	1.07 - 10.7		
	10	14.8	58.20	1.366 - 13.66		
	20	19.0	70.10	2.251 - 22.51		
	30	23.0	72.00	3.298 - 32.98		
	60	29.1	89.96	5.294 - 52.94		

Note: Flow rates = Linear rate  $\times$  Section area of the barrel