



# IPS-14R Syringe Pump

## Independent Dual Channel Infusion/Withdrawal Pump

The IPS-14R supports infusion and withdrawal on two independent channels. Each channel's flow direction and rate can be set individually, offering maximum flexibility. Perfect for applications requiring distinct and adaptable dual-channel operation.

### SYRINGES

CAPACITY	2 Independent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 $\mu$ l (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)

### FLOW RATE

MIN	17.89 $\mu$ l/min (Hamilton 0.5 $\mu$ l)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%

### MOTOR SPECIFICATIONS

MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/ $\mu$ step
MIN STEP RATE	10 sec/ $\mu$ step
MAX STEP RATE	200 $\mu$ sec/ $\mu$ step
MIN LINEAR SPEED	2.14 $\mu$ m/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg for each syringe (44 lbs)

### GENERAL SPECIFICATIONS

RECIPE SAVE-RECALL	No
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:211 L:257 H:143 mm
WEIGHT	3.6 kg (8 lbs)

### OPERATING CONDITIONS

OPERATING TEMPERATURE	-10 to 50 $^{\circ}$ C
STORAGE TEMPERATURE	-30 to 85 $^{\circ}$ C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3" easy-to-use touchscreen display**
- **Independent infusion and withdrawal control for each channel**
- **Adjustable flow direction and speed per channel**