



# IPS-13R Syringe Pump

Simultaneous Dual Channel Infusion/Withdrawal Pump

The IPS-13R supports infusion and withdrawal on two synchronized channels. Each operates together with adjustable flow rate and direction. A practical choice for processes that require coordinated, bidirectional control.

<b>SYRINGES</b>	
CAPACITY	2 Interdependent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
<b>FLOW RATE</b>	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
<b>MOTOR SPECIFICATIONS</b>	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg (pusher block force for 2 syringes) (44 lbs)
<b>GENERAL SPECIFICATIONS</b>	
RECIPE SAVE-RECALL	No
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:211 L:250 H:143 mm
WEIGHT	3.2 kg (7 lbs)
<b>OPERATING CONDITIONS</b>	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3" intuitive touch display**
- **Dual synchronized infusion and withdrawal operation**
- **Adjustable flow direction and rate for both channels**