

# AL-1200

Aladdin SyringeTWELVE Programmable 12 Channel Syringe Pump - Holds 2, 4, 6, 8, 10 or 12 syringes of up to 3 cc

## Overview



- Holds 2, 4, 6 8, 10 or 12 syringes of up to 3 mL
- Infusion rates from 0.45  $\mu\text{L/hr}$  (1 mL syringe) to 153.2 mL/hr (3 mL syringe)
- Operates stand-alone or from a computer
- Programmable preset protocols
- RS-232 and TTL logic control interfaces
- Motor stall detection
- Non-volatile memory of all parameters and programming
- Upgradeable memory
- Dispensing accuracy of  $\pm 1\%$

|                                             |                                                                                  |
|---------------------------------------------|----------------------------------------------------------------------------------|
| <b>Channels</b>                             | 12                                                                               |
| <b>Type</b>                                 | Infusion / Withdrawal                                                            |
| <b>Flow Range</b>                           | 0.001 $\mu\text{L/hr}$ (0.5 $\mu\text{L}$ syringe) to 153.2 mL/hr (3 mL syringe) |
| <b>Dispensing Accuracy</b>                  | $\pm 1\%$                                                                        |
| <b>Syringe Sizes Accepted</b>               | 0.5 $\mu\text{L}$ to 3 mL                                                        |
| <b>Linear Force Applied To All Syringes</b> | 160 lb at low speed; 30 lb at maximum speed                                      |

The AL-1200 Programmable Syringe Pump is perfect for situations requiring flexibility or automation. With a variety of pumping rates (0.45  $\mu\text{L/hr}$  to 153.2 mL/hr), infusion and withdraw capability, and pumping phases that can be programmed, the AL-1200 was designed for automation. This pump can handle applications like simple infusions, as well as complex pumping programs. You can program up to 41 pumping phases that change pumping rates, set dispensing volumes, insert pauses, control and respond to external signals, or sound an alarm. Connect two pumps with a dual cable (WPI #GN-TTL) to create a dual pump system that allows for continuous infusion or emulsification. If required, you can network, control and monitor up to 100 pumps with a single computer.

### AL-1200 Twelve-Channel Syringe Pump Example Flow Rates

| Syringe Size | Maximum Rate | Minimum Rate |
|--------------|--------------|--------------|
| 0.5 µL       | 17.45 µL/hr  | 0.001 µL/hr  |
| 2 µL         | 69.82 µL/hr  | 0.001 µL/hr  |
| 5 µL         | 174.8 µL/hr  | 0.003 µL/hr  |
| 1 mL         | 36.19 mL/hr  | 0.452 µL/hr  |
| 3 mL         | 153.2 mL/hr  | 1.914 µL/hr  |

NOTE: This product is not approved for clinical use on humans.

### Specifications

|                                    |                                                                             |
|------------------------------------|-----------------------------------------------------------------------------|
| Syringe Sizes                      | Up to 3 mL                                                                  |
| Number of Syringes                 | 2, 4, 6, 8, 10 or 12                                                        |
| Motor Type                         | Step Motor, 1/8 to 1/4 step modes                                           |
| Steps per Revolution               | 200                                                                         |
| Advance per Step                   | 0.132291667µM to 0.264583333µM depending on motor speed                     |
| Motor to Drive Screw Ratio         | 5/1                                                                         |
| Drive Screw Pitch                  | 24 revolutions/inch                                                         |
| Power Supply                       | Wall adapter 12V DC @ 1000 mA                                               |
| DC Connector                       | 2.5mm, center positive                                                      |
| Power Supply Type                  | Unregulated linear external wall adapter, country and power source specific |
| Dimensions                         | 26.03 x 38.1 x 12.7 cm (10 1/4 x 15 x 5 in.)                                |
| Weight                             | 4,595 kg (10.125 lbs)                                                       |
| Max. Speed                         | 3.4917cm/min                                                                |
| Min. Speed                         | 0.0026cm/hr                                                                 |
| Max. Pumping Rate                  | 121.2 mL/hr. with a B-D 3cc syringe                                         |
| Min. Pumping Rate                  | 0.454 µL/hr. with a B-D 1cc syringe                                         |
| Max. Force applied to all syringes | 160 lbs. at minimum speed, 30 lbs. at maximum speed                         |



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The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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