

## Multi Programmable Syringe Pumps



**NE-1200  
DUAL-NE-1200**

- Holds 2, 4, 6, 8, 10 or 12 syringes of up to 3 cc each
- Infusion rates from 0.454  $\mu\text{L/hr}$  (1 cc syringe) to 121.2 mL/hr
- Higher flow rate models available
- Easy-to-use keypad interface



**NE-1600  
DUAL-NE-1600**

- Holds 2, 4 or 6 syringes of up to 60 cc each or 2 or 4 syringes up to 140 cc each
- Infusion rates from 0.454  $\mu\text{L/hr}$  (1 cc syringe) to 2376 mL/hr (140 cc syringe)
- Higher flow rate models available
- Easy-to-use keypad interface



**NE-1800  
DUAL-NE-1800**

- Holds 2, 4, 6 or 8 syringes of up to 10 cc each
- Infusion rates from 0.454  $\mu\text{L/hr}$  (1 cc syringe) to 342.6 mL/hr (10 cc syringe)
- Higher flow rate models available
- Easy-to-use keypad interface

### The NE-1000 Family of Syringe Pumps Features

- Built for Automation
- Operates stand-alone or from a computer
- Infuses and withdraws
- Applications range from simple infusions to complex pumping programs
- Programmable preset protocols
- Program up to 41 pumping phases: change pumping rates, set dispensing volumes, insert pauses, control and respond to external signals, sound the buzzer.
- RS-232 and TTL logic control interfaces

Two pumps connected with a dual cable create a Dual Pump System allowing for continuous infusion or emulsification. Network, control, and monitor up to 100 pumps with one computer. Worldwide power supplies available. Motor stall detection. Non-volatile memory of all parameters and programming. Upgradeable to the X and X2 advanced firmware versions for gradient pumping and increased program memory. Dispensing accuracy of +/-1%. Unlimited lifetime technical support. Two year warranty. Plus many, many more features!

**\*\*Not For Clinical Use On Humans\*\***



## NE-1600, NE-1800 & NE-1200 Multi Syringe Pump Maximum and Minimum Flow Rates

Mfgr.	Syringe (cc)	ID (mm)	Max Rate (mL/hr)	Min Rate (µL/hr)
B-D	1	4.699	36.33	0.454
	3	8.585	121.2	1.515
	5	11.99	236.5	2.954
	10	14.43	342.6	4.279
	20	19.05	597.1	7.457
	30	21.59	766.9	9.578
	60	26.59	1163	14.53
HSW Norm-Ject	1	4.69	36.19	0.452
	3	9.65	153.2	1.914
	5	12.45	255	3.185
	10	15.9	415.9	5.195
	20	20.05	661.4	8.26
	30	22.9	862.8	10.78
	50	29.2	1402	17.52
Monoject	1	5.74	54.21	0.677
	3	8.941	131.5	1.643
	6	12.7	265.3	3.314
	12	15.72	406.6	5.078
	20	20.12	666	8.318
	35	23.52	910.2	11.37
	60	26.64	1167	14.59
Terumo	1	4.7	36.34	0.454
	3	8.95	131.8	1.646
	5	13	278	3.473
	10	15.8	410.7	5.13
	20	20.15	668	8.343
	30	23.1	878	10.97
	60	29.7	1451	18.13
Air-Tite	10	15.9	415.9	5.195
	20	20.25	674.7	8.426
	30	22.5	832.9	10.41
	50	29	1383	17.28
	Syringe (µl)	ID (mm)	Max Rate (µl/hr)	Min Rate (µl/hr)
SGE (Glass - Gas Tight)	.5	0.1	16.45	0.001
	1	0.15	37.02	0.001
Hamilton Microlitre (Glass)	0.5	0.103	17.45	0.001
	1	0.146	35.07	0.001
	2	0.206	69.82	0.001
	5	0.326	174.8	0.003

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## Specifications

### Mechanical & Electrical

Syringe sizes:

NE-1600 Up to 140 cc in 4 channels 60mL in 6 channels

NE-1800 Up to 10 cc

NE-1200 Up to 3 cc

Number of syringes:

NE-1600 6

NE-1800 8

NE-1200 12

Motor type: Step motor

Motor steps per revolution: 200

Microstepping: 1/8 to 1/4 depending on motor speed

Advance per microstep: 0.132291667 to 0.264583333  $\mu\text{M}$  depending on motor speed

Motor to drive screw ratio: 5/1

Drive screw pitch: 24 revolutions/”

DC connector: 2.5 mm, center positive

Voltage at DC connector: 12V DC at full load

Amperage: 1000 mA at full load

Power supply type: Unregulated linear external wall adapter, country and power source specific

Power supply output rating: 12V DC @ 1000 mA

Dimensions: 10 1/4” x 15” x 5” High

(26.035 cm x 38.1 cm x 12.7 cm)

Weight: 10.125 lbs. (4.595 kg)

### Operational

Maximum speed: 3.4917 cm/min

Minimum speed: 0.0026 cm/hr

Maximum pumping rate: 1163 mL/hr with a B-D 60 cc syringe

Minimum pumping rate: 0.454  $\mu\text{L/hr}$  with a B-D 1 cc syringe

Force applied to all syringes: 160 lbs. at minimum speed, 30 lbs. at maximum speed

Number of Program Phases: 41

RS-232 pump network: 100 pumps maximum

RS-232 selectable baud rates: 300, 1200, 2400, 9600, 19200

Syringe inside diameter range: 0.100 to 50.00 mm

### Custom Applications

For specialized and OEM applications, contact your dealer or New Era Pump Systems Inc. Custom modifications can be made to the mechanics or the firmware.

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