

Multi Programmable Syringe Pumps



**NE-1200
DUAL-NE**

- 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**

- 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**

- 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 $\pm 1\%$. 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 μ 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 μ 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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