NEW ERA Pump Systems Inc.
SyringePump.com

Programmable and Customizable Syringe & Peristaltic Pumps

NE-1000 Single Syringe Pump

High Pressure Syringe Pump
NE-1010

Continuous Infusion Syringe Pump System
Dual-NE-1000

Microfluidics Single Syringe Pump
NE-1002X

The NE-1000 Series Syringe Pump Features

Holds 1 syringe from the smallest size available up to 60 mL. A 140 mL syringe can be filled up to 120 mL. NE-1000 & Dual-NE-1000 pumping rates are as low as 0.73 µL/hr with a 1 mL syringe or as high as 35.33 mL/min with a 60 mL syringe. NE-1010 pumping rate are as low as 1.459 µL/hr with a 1 mL syringe or as high as 127.2 mL/min with a 60 mL syringe. NE-1002X pumping rate as low as 0.007 nL/hr with a 0.5 µL syringe or as high as 1448 µL/min with a 60 mL syringe.

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.
- Monitor, network, and control up to 100 pumps from one computer.
- Motor stall detection; Non-volatile memory of all parameters and programming.

Connecting two pumps with a dual cable creates a **Dual Pump System** allowing for seamless continuous infusion or emulsification. Upgrade to the X or X2 advanced firmware versions for gradient pumping and increased program memory. Dispensing accuracy of +/-1 %. Unlimited lifetime technical support and Two-year warranty. ***Plus, many, many more features!***

Not For Clinical Use on Humans

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NE-1000 Single Syringe Pump Maximum and Minimum Flow Rates

Syringe Manufacturer	Syringe (mL)	Inside Diameter (mm)	Maximum Rate (mL/hr)	Minimum Rate (µL/hr)	Maximum Rate (mL/min)
Air-Tite	0.5	3.8	34.7	0.477	0.578
	50	29.2	2049	28.16	34.15
B-D	1	4.699	53.07	0.73	0.884
	3	8.585	177.1	2.434	2.952
	5	11.99	345.5	4.748	5.758
	10	14.43	500.4	6.876	8.341
	20	19.05	872.2	11.99	14.53
	30	21.59	1120	15.4	18.67
	60	26.59	1699	23.35	28.32
HSW Norm-Ject	1	4.7	53.09	0.73	0.884
	3	9.7	226.1	3.107	3.769
	5	12.5	375.5	5.16	6.259
	10	15.9	607.6	8.349	10.12
	20	20.1	971	13.35	16.18
	30	22.6	1227	16.87	20.45
	50	29	2021	27.78	33.68
Monoject	1	5.74	79.18	1.088	1.319
	3	8.941	192.1	2.64	3.202
	6	12.7	387.6	5.326	6.46
	12	15.72	593.9	8.161	9.899
	20	20.12	972.9	13.37	16.21
	35	23.52	1329	18.27	22.15
	60	26.64	1705	23.44	28.42
	140	38	3470	47.69	57.84
Terumo	1	4.7	53.09	0.73	0.884
	3	8.95	192.5	2.646	3.208
	5	13	406.1	5.581	6.769
	10	15.8	600	8.244	10
	20	20.15	975.8	13.41	16.26
	30	23.1	1282	17.63	21.37
	60	29.7	2120	29.13	35.33
Poulten & Graf (Glass)	1	6.7	107.8	1.483	1.798
	2	8.91	190.8	2.622	3.18
	3	9.06	197.2	2.711	3.288
	5	11.75	331.8	4.559	5.53
	10	14.67	517.2	7.107	8.62
	20	19.62	925.2	12.72	15.42
	30	22.69	1237	17.01	20.62
	50	26.96	1746	24.01	29.11
	100	34.21	2812	38.65	46.88
Steel Syringes	1	9.538	218.6	3.005	3.644
	3	9.538	218.6	3.005	3.644
	5	12.7	387.6	5.326	6.46
	8	9.538	218.6	3.005	3.644
	20	19.13	879.5	12.09	14.65
	50	28.6	1965	27.01	32.76
	100	34.93	2932	40.29	48.87
	200	44.75	4813	66.13	80.21

Syringe Manufacturer	Syringe (µL)	Inside Diameter (mm)	Maximum Rate (µL/hr)	Minimum Rate (µL/hr)
SGE (Gas Tight)	5	0.343	282.7	0.004
	10	0.485	565.3	0.008
	25	0.728	1273	0.018
	50	1.03	2549	0.036
	100	1.457	5102	0.071
Hamilton Microliter (Glass)	0.5	0.103	25.49	0.001
	1	0.146	51.23	0.001
	2	0.206	101.9	0.002
	5	0.326	255.4	0.004

SGE Syringe (mL)	Inside Diameter (mm)	Maximum Rate (mL/hr)	Minimum Rate (µL/hr)
0.25	2.303	12.74	0.176
0.5	3.257	25.49	0.351
1	4.606	50.99	0.701
2.5	7.284	127.5	1.752
5	10.3	254.9	3.504
10	14.57	510.2	7.01
25	23.03	1274	17.52
50	27.5	1817	24.98
100	34.99	2942	40.43

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Specifications

Model	Style	Stall Detection	Number of Syringes	Maximum Syringe Size
NE-1000	Stand-Alone	Yes	1	60 mL; 140 mL partially filled
NE-500	OEM	No	1	60 mL; 140 mL partially filled
NE-501	OEM	No	1	60 mL; 140 mL partially filled

Mechanical

Motor type: Step motor
Motor steps per revolution: 400
Motor to drive screw ratio: 15/28
Drive screw pitch: 20 revolutions/”
Micro-stepping: 1/8 to 1/2 depending on motor speed
Advance per step: 0.2126116 µm to 0.8504464 µm depending on motor speed
Dimensions: 8 3/4” x 5 3/4" x 4 1/2" (LxWxH) (Non-OEM Versions)
(22.86 cm x 14.605 cm x 11.43 cm)
Weight: 3.8 lbs. (1.63 kg)
Allen Wrench: 3/32 Hex (Not all models)

Electrical

Power supply type: Regulated external wall adapter, power source specific
Power supply output rating: 12V DC @ 1000 mA
Power connector: 2.1 mm, center positive, DC
Voltage at power connector: 12V DC at full load
Amperage: 750 mA at full load

Operational

Accuracy: Within 1% error
Reproducibility: Within 0.1% error
Maximum force: 45 lbs. at minimum speed, 18 lbs. at maximum speed
Syringe inside diameter range: 0.100 to 50.00 mm
Maximum speed: 5.100464828 cm/min
Minimum speed: 0.004204478 cm/hr
Maximum pumping rate: 1699 mL/hr with a B-D 60 mL syringe
Minimum pumping rate: 0.73 µL with a B-D 1 mL syringe
Number of Program Phases: 41
RS-232 pump network: 100 pumps maximum
RS-232 selectable baud rates: 300, 1200, 2400, 9600, 19200

Custom Applications

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

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