

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



NE-1000 Features:

Accepts 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 rate as low as 0.73 $\mu\text{L/hr}$ with a 1 mL syringe or as high as 35.33 mL/min with a 60 mL syringe. NE-1010 pumping rate as low as 1.459 $\mu\text{L/hr}$ 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 .008 nL/hr with a 0.5 μL syringe or as high as 1555 $\mu\text{L/min}$ with a 60 mL syringe.

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-1000 Single Syringe Pump Maximum and Minimum Flow Rates

Mfgr.	Syringe (cc)	ID (mm)	Max Rate	Min Rate	Max Rate			
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	4.69	52.86	0.727	0.881			
	3	9.65	223.8	3.076	3.73			
	5	12.45	372.5	5.119	6.209			
	10	15.9	607.6	8.349	10.12			
	20	20.05	966.2	13.28	16.1			
	30	22.9	1260	17.32	21			
	50	29.2	2049	28.16	34.15			
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	38.00	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			
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	218.66	3.005	3.644			
	20	19.13	879.5	12.09	14.65			
	50	28.6	1965	27.01	32.76			
	Syringe (µl)	ID (mm)	Max Rate	Min Rate	SGE Syringe	ID (mm)	Max Rate	Min Rate
SGE (Glass - Gas Tight)	5	0.343	209.2	0.004	.25	2.303	9.432	0.176
	10	0.485	418.3	0.008	.5	3.257	18.86	0.351
	25	0.728	942.5	0.018	1	4.606	37.73	0.701
	50	1.03	1886	0.036	2.5	7.284	94.36	1.752
	100	1.457	3775	0.071	5	10.3	188.6	3.504
Hamilton Micro-litre (Glass)	0.5	0.103	18.86	0.001	10	14.57	377.5	7.01
	1	0.146	37.91	0.001	25	23.03	943.2	17.52
	2	0.206	75.47	0.002	50	27.5	1344	24.98
	5	0.326	189	0.004	100	34.99	2177	40.43



Specifications

Mechanical & Electrical

Syringe sizes:	Up to 60 mL (140 mL partially filled)
Number of syringes:	1
Motor type:	Step motor
Motor steps per revolution:	400
Microstepping:	1/8 to 1/2 depending on motor speed
Advance per step:	0.2126 uM to 0.8504 uM depending on motor speed
Motor to drive screw ratio:	15/28
Drive screw pitch:	20 revolutions/”
DC connector:	2.1 mm, center positive
Voltage at DC connector:	12V DC at full load
Amperage:	750 mA at full load
Power supply type:	Unregulated linear external wall adapter, country and power source specific
Power supply output rating:	12V DC @ 800 mA
Dimensions:	8 3/4” x 5 3/4” x 4 1/2” High (22.86 cm x 14.605 cm x 11.43 cm)
Weight:	3.6 lbs. (1.63 kg)
Allen Wrench	3/32 Hex

Operational

Maximum speed:	5.1005 cm/min
Minimum speed:	0.004205 cm/hr
Maximum pumping rate:	1699 mL/hr with a B-D 60 cc syringe
Minimum pumping rate:	0.73 µL/hr with a B-D 1 cc syringe
Maximum force:	35 lbs. at minimum speed, 18 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.

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

