

# SyringeONE

SKU: 1002X

MicroFluidics

## Addendum

www.SyringePump.com

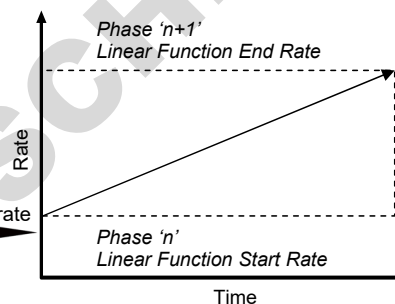


NewEra's  
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The SyringeONE (SKU: 1002X) is a modified version of the SyringeONE (SKU: 1000). All of the information contained in the (SKU: 1000) User Manual applies to the (SKU: 1002X), except for what is listed in this addendum.

### Features:

- All of the same programming features as the SyringeONE.
- Supports syringe sizes from .5uL to 140mL.
- Smooth, precise pumping at Ultralow flow rates.
  - From 0.008 nL/hr to 1246 uL/min.
  - **Linear/Gradient Pumping Feature:** Delivers a smooth, linear flow rate
  - **Advance per step: 4.252232 nm**
  - **Dispense accuracy within ± 1%**
- Upgradeable to X or X2 firmware versions



### Specifications:

Mechanical & Electrical		Operational	
Syringe sizes:	0.5 µm to 140 mL	Maximum speed:	0.224469144 cm/min
Number of syringes:	1	Minimum speed:	8.40896E-05 cm/hr
Motor type:	Step motor	Maximum pumping rate:	1246 µL/min with a B-D 60 mL syringe
Motor steps per revolution:	400	Minimum pumping rate:	14.59 nL/hr with a B-D 1 mL syringe
Microstepping:	1/16 to 1/2 depending on motor speed	Maximum force:	150 lbs. at minimum speed, 18 lbs. at maximum speed
Advance per step: <i>(depending on motor speed)</i>	4.25223214 nm to 34.0178571 nm	Number of Program Phases:	41
Motor to drive screw ratio:	15/28	RS-232 pump network:	100 pumps maximum
Drive screw pitch:	20 revolutions/"	RS-232 selectable baud rates:	300, 1200, 2400, 9600, 19200
DC connector:	2.1 mm, center positive	Syringe inside diameter range:	0.100 to 50.00 mm
Voltage at DC connector:	12V DC at full load		
Amperage:	750 mA at full load		
Power supply type:	Regulated external wall adapter, country and power source specific		
Power supply output rating:	12V DC @ 1000 mA		
Dimensions:	8 3/4" x 5 3/4" x 4 1/2" (LxWxH) (22.86 cm x 14.605 cm x 11.43 cm)		
Weight:	3.6 lbs. (1.63 kg)		
Motor gearbox reduction:	25:1		

Syringe Manufacturer (all names <sup>TM</sup> )	Syringe (mL)	Inside Diameter (mm)	Maximum Rate (µL/hr)	Minimum Rate (nL/hr)	Maximum Rate (µL/min)				
B-D	1	4.699	2335	14.59	38.92				
	3	8.585	7796	48.68	129.9				
	5	11.99	9999	94.65	253.4				
	10	14.43	9999	137.6	367				
	20	19.05	9999	239.7	639.7				
	30	21.59	9999	307.9	821.7				
	60	26.59	9999	467	1246				
HSW Norm-Ject	1	4.69	2326	14.53	38.77				
	3	9.65	9850	61.51	164.1				
	5	12.45	9999	102.4	273.2				
	10	15.9	9999	167	445.6				
	20	20.05	9999	265.5	708.7				
	30	22.9	9999	346.4	924.5				
	50	29.2	9999	563.2	1503				
Monoject	1	5.74	3485	21.76	58.08				
	3	8.941	8456	52.8	140.9				
	6	12.7	9999	106.8	284.3				
	12	15.72	9999	163.3	435.6				
	20	20.12	9999	267.4	713.6				
	35	23.52	9999	365.4	975.2				
	60	26.64	9999	468.8	1251				
	140	38	9999	954	2545				
Terumo	1	4.7	2336	14.59	38.94				
	3	8.95	8473	52.91	141.2				
	5	13	9999	111.7	297.9				
	10	15.8	9999	164.9	440.1				
	20	20.15	9999	268.2	715.8				
	30	23.1	9999	352.5	940.7				
	60	29.7	9999	583	1555				
Poulten & Graf (Glass)	1	6.7	4748	29.65	79.14				
	2	8.91	8397	52.44	139.9				
	3	9.06	8682	54.22	144.7				
	5	11.75	9999	91.19	243.4				
	10	14.67	9999	142.2	379.4				
	20	19.62	9999	254.3	678.6				
	30	22.69	9999	340.1	907.6				
	50	26.96	9999	480.1	1281				
Steel Syringes	1	9.538	9.623	0.061	0.1603				
	3	9.538	9.623	0.061	0.1603				
	5	12.7	17.06	0.107	0.2843				
	8	9.538	9.623	0.061	0.1603				
	20	19.13	38.71	0.242	0.6451				
	50	28.6	86.52	0.541	1.442				
		Syringe (µL)	Inside Diameter (mm)	Maximum Rate (µL/hr)	Minimum Rate (nL/hr)	SGE Syringe (mL)	Inside Diameter (mm)	Maximum Rate (mL/hr)	Minimum Rate (nL/hr)
SGE (Glass- Gas Tight)	5	0.343	12.44	0.078	0.25	2.303	561	3.503	
	10	0.485	24.88	0.156	0.5	3.257	1122	7.006	
	25	0.728	56.06	0.351	1	4.606	2244	14.02	
	50	1.03	112.2	0.701	2.5	7.284	5612	35.05	
	100	1.457	224.5	1.403	5	10.3	9999	70.07	
Hamilton Microliter (Glass)	0.5	0.103	1.122	0.008	10	14.57	9999	140.3	
	1	0.146	2.254	0.015	25	23.03	9999	350.3	
	2	0.206	4.488	0.029	50	27.5	9999	499.5	
	5	0.326	11.24	0.071	100	34.99	9999	808.6	