

Syringe Manufacturer (all names TM)	Syringe (mL)	Inside Diameter (mm)	Maximum Rate (mL/hr)	Minimum Rate (µL/hr)	Maximum Rate (mL/min)				
B-D	1	4.699	191.1	1.459	3.185				
	3	8.585	637.9	4.868	10.63				
	5	11.99	1244	9.495	20.74				
	10	14.43	1802	13.76	30.04				
	20	19.05	3141	23.97	52.35				
	30	21.59	4035	30.79	67.25				
	60	26.59	6120	46.7	102				
HSW Norm-Ject	1	4.69	190.4	1.453	3.173				
	3	9.65	806.1	6.151	13.43				
	5	12.45	1341	10.24	22.36				
	10	15.9	2188	16.7	36.47				
	20	20.05	3479	26.55	57.99				
	30	22.9	4539	34.64	75.65				
	50	29.2	7380	56.32	123				
Monoject	1	5.74	285.2	2.176	4.753				
	3	8.941	692	5.28	11.53				
	6	12.7	1396	10.66	23.26				
	12	15.72	2139	16.33	35.65				
	20	20.12	3504	26.74	58.4				
	35	23.52	4788	36.54	79.81				
	60	26.64	6143	46.88	102.3				
	140	38	9999	95.37	208.3				
Terumo	1	4.7	191.2	1.459	3.187				
	3	8.95	693.4	5.291	11.55				
	5	13	1462	11.17	24.38				
	10	15.8	2160	16.49	36.01				
	20	20.15	3514	26.82	58.57				
	30	23.1	4619	35.25	76.98				
	60	29.7	7635	58.26	127.2				
Poulten & Graf (Glass)	1	6.7	388.5	2.965	6.476				
	2	8.91	687.2	5.244	11.45				
	3	9.06	710.5	5.422	11.84				
	5	11.75	1195	9.119	19.91				
	10	14.67	1862	14.22	31.04				
	20	19.62	3332	25.43	55.53				
	30	22.69	4456	34.01	74.27				
50	26.96	6291	48.01	104.8					
Steel Syringes	1	9.538	787.5	6.009	13.12				
	3	9.538	787.5	6.009	13.12				
	5	12.7	1396	10.66	23.26				
	8	9.538	787.5	6.009	13.12				
	20	19.13	3167	24.17	52.79				
	50	28.6	7080	54.03	118				
	Syringe (µL)	Inside Diameter (mm)	Maximum Rate (µL/hr)	Minimum Rate (µL/hr)	SGE Syringe (mL)	Inside Diameter (mm)	Maximum Rate (mL/hr)	Minimum Rate (µL/hr)	
SGE (Glass – Gas Tight)	5	0.343	1018	0.008	0.25	2.303	45.91	0.351	
	10	0.485	2036	0.016	0.5	3.257	91.82	0.701	
	25	0.728	4587	0.036	1	4.606	183.6	1.402	
	50	1.03	9183	0.071	2.5	7.284	459.2	3.505	
	100	1.457	9999	0.141	5	10.3	918.3	7.007	
Hamilton Microliter (Glass)	0.5	0.103	91.83	0.001	10	14.57	1837	14.03	
	1	0.146	184.5	0.002	25	23.03	4591	35.03	
	2	0.206	367.3	0.003	50	27.5	6546	49.95	
	5	0.326	919.9	0.008	100	34.99	9999	80.86	

1. Specifications

<u>Model</u>	<u>Style</u>	<u>Stall Detection</u>	<u>Number of Syringes</u>	<u>Maximum Syringe Size</u>
NE-1010	Stand-Alone	Yes	1	60 mL; 140 mL partially filled
NE-510	OEM	No	1	60 mL; 140 mL partially filled
NE-511	OEM	Yes	1	60 mL; 140 mL partially filled

1.1 Mechanical & Electrical

Motor type: Step motor
Motor steps per revolution: 200
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: 0.4252232 μ m to 1.700892857 μ m depending on motor speed

Power supply type: 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: 1000 mA at full load

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)

1.2 Operational

Maximum force: 100 lbs. at minimum speed, 18 lbs. at maximum speed

Syringe inside diameter range: 0.100 to 50.00 mm
Maximum speed: 18.36964 cm/min
Minimum speed: 0.008409 cm/hr
Maximum pumping rate: 6120 mL/hr with a B-D 60 mL syringe
Minimum pumping rate: 1.459 μ L/hr 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