


# New Era Syringe Pumps

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| <b>Syringe Pumps</b>  |
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| <b>Tool Type:</b> Single Syringe Pump   |
| <b>Location:</b> Microfluidics Lab  |
| <b>Description:</b> Single Syringe Pump for droplet generation and other milli/microfluidic experiments |
| <b>Manufacturer:</b> New Era  |

## About

Syringe pumps utilize a stepper motor, lead screw, and pusher block to dispense fluid from a syringe at a controlled rate. These New Era pumps can accommodate only one syringe at a time. If you need dual syringe capabilities, please check out the [Harvard Apparatus Syringe Pumps](#)

Syringe pumps are flow-rate-controlled devices, which means that you program the pump to operate at a fixed flow rate regardless of the pressure required. (As opposed to pressure-controlled devices which fix the pressure.)

## Detailed Specifications

See product manual for extended specifications.

Maximum force: 35 lb (155 N)

Minimum syringe size & minimum flow rate: 1 mL @ 0.73 uL/hr

Maximum syringe size & maximum flow rate: 60 mL @ 1.7 L/hr

## Safety Concerns

**Pinching Hazard** - Be careful when loading syringes to avoid pinching oneself with the syringe holders.

**High Pressure Hazard** - **Always wear goggles when operating syringe pumps.** If too much pressure accumulates in your system, often due to clogging, your tubing or attached fluidic devices can rupture. This can create a jet of fluid which presents a physical hazard to those nearby.

## Operating Procedures

Please reference the attach operation manual for detailed operating instructions.

### General Operation

- 1) Select your syringe size using either the measured internal diameter of the syringe.
  - 2) Install and fill your syringe.
  - 3) Select the desired flow rate.
  - 4) Select the desired target volume (optional). If you set a target volume and operate in volume mode, pumping will automatically cease when the target volume has been reached. Otherwise, the pump will not stop until manually turned off.
  - 5) When finished, remove syringes, power off the pump, and clean the pump if contaminated by any fluid during your experiment.
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## Reference Documentation

ne-1000.pdf

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