

# ExiGo™ – iPad mini or LabVIEW Microfluidic Pump

## Accurate and pulse-free flow rates for microfluidic applications

**ExiGo™ Microfluidic Pump** is a patented, precision, microfluidic, **syringe pump** for a variety of microfluidic applications, where accurate and stable flow rate delivery is required. The combination of a **high resolution stepper motor drive mechanism**, **patented pulse damping method** and **active feedback via a flow sensor** has produced a microfluidic pump with superior performance.

**SmartFlo Application** executed on the **iPad mini** or **LabVIEW based interface** communicates with up to 4 ExiGo™ pumps docked together allowing simultaneous control and independent programming of each pump's flow profile.

Uniquely, the ExiGo™ may be docked together with the UniGo™ pump combining the best features of both ExiGo™ and UniGo™ in one microfluidic set-up.



**ExiGo™ Microfluidic Pumps: up to 4 pumps controlled independently via Apple iPad mini**

### Performance Specifications

General specifications	Each ExiGo Microfluidic pump incorporates: <ul style="list-style-type: none"> <li>• 2 modes of pumping: manual flow rate set or preprogrammed flow rate operation</li> <li>• Preprogrammed mode includes: Constant, Ramp, Step, Sine functions.</li> <li>• Side port connections to integrate up to 4 ExiGo pumps into one setup</li> <li>• Wi-Fi communication with <b>iPad mini</b> software</li> <li>• USB communication with <b>LabVIEW</b> based PC control software</li> <li>• Tactile power switch</li> <li>• LEDs for power / status information</li> </ul>
Volumetric Flow rates:	10 nL/min - 20mL/min
Flow Direction:	Reversible - Push/Pull
Microsteps per one revolution of lead screw:	250,000
Step resolution :	0.008 $\mu$ m
Pulse-free flow rate for microfluidic applications*	10nL/min – 1mL/min $\pm$ 20nL/min @ 250 $\mu$ L glass syringe 100nL/min – 20mL/min $\pm$ 40nL/min @ 5mL plastic syringe
Flow rate stability for microfluidic applications*	$\pm$ 0.25% of Full Scale @ 250 $\mu$ L syringe and 7,000nL/min ExiGo Flow Sensor
Dynamic Response:	50 ms max (recorded at flow rate change from 0 to 10,000 nL/min)
Compatible Syringes:	100 $\mu$ L – 5mL (glass and plastic syringes)**
Working Pressure:	30 psi – 2 bars maximum
External Trigger:	2 inputs and 2 outputs of external trigger for operation with external units and software

\*Measured with ExiGo Flow Sensor and active PID feedback

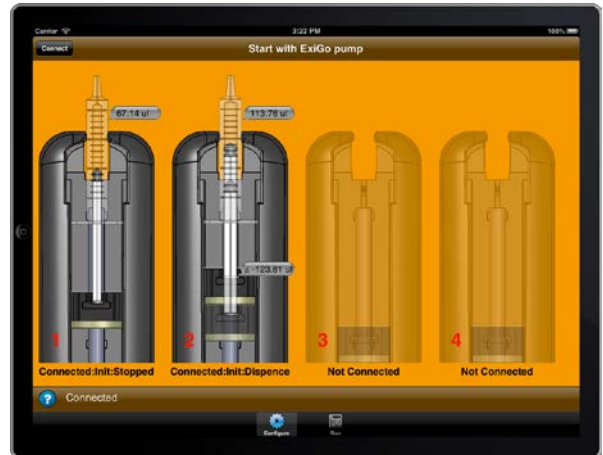
\*\* Refer to ExiGo supported syringes

<b>Technical Specifications</b>	
Software Control:	<b>SmartFlow App</b> running on iPad mini <b>LabVIEW</b> based PC software
Dimensions:	225mm (L) x 69mm (W) x 122mm (H)
Weight:	Approx. 1.3kg
Power Requirements:	110 / 220V - 50 / 60Hz - 60W

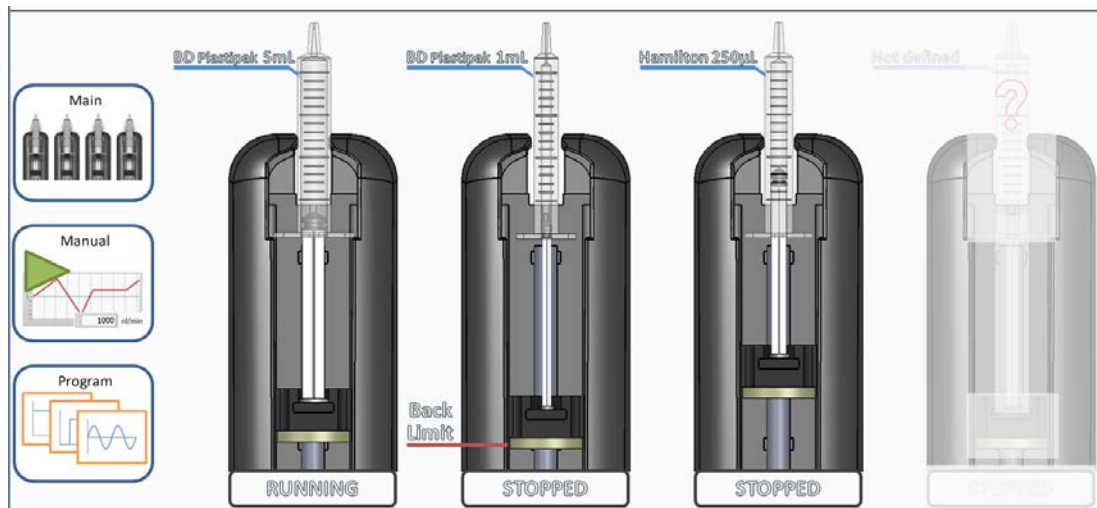
<b>Technical Specifications of ExiGo Flow Sensor (optional add-on, purchased separately)</b>	
Operation:	Plug and play connection to the ExiGo Microfluidic pump
Features	Allows monitoring of ExiGo pump flow rate and active PID (proportional, integral, differential) feedback of pump flow rate
Dead volume	1 - 25 $\mu$ L depending on Flow Sensor
Measured flow rate ranges	See Technical Note Flow Sensors
Max pressure	30 psi – 2 bars maximum
Dimensions   Weight:	60mm (L) x 51mm (W) x 21mm (H)   < 0.1 kg
Power Requirements:	Via cable to ExiGo Microfluidic Pump



ExiGo™ Microfluidic pump



SmartFlo App running two ExiGo Microfluidic Pumps on iPad mini



LabVIEW Interface