

# Reglo ICC

## Ismatec® Independent Channel Control Pump (Patent Pending)

### Pump Specifications

Motor Type:	Stepper Motor (1/channel)
Speed Range:	0.1-100 RPM
Speed Setting:	RPM (Resolution = 0.01 RPM)
Flow Rate Range:	0.0002 - 35 mL/min/channel (tubing dependent)
Number of Channels:	2-4
Number of Rollers:	8 Ertalyte® rollers standard; 6 and 12-roller options also available
Cassettes:	MS/CA Click'n'Go (POM-C; alternatives available)
Dimensions (HxWxD):	6.7" (170 mm) x 5" (125 mm) x 8.1" (205 mm)* (*=for 3-channel model)
Weight:	6 lbs. (2.7 kg)
Power Consumption:	30 W (Max)
Main Voltage:	100-264 VAC / 50/60 Hz (Requires use of included power supply, cables)
Protection Rating:	IP 30
Differential Pressure:	1.0 bar / 14.5 psi (Max)



### Flow Rate Range

Tubing ID (mm)	Flow Rate (mL/min per channel)	
	0.1 RPM	100 RPM
	Minimum	Maximum
0.13	0.0002	0.11
0.25	0.0005	0.41
0.51	0.0017	1.7
0.76	0.0036	3.6
1.02	0.0063	6.3
1.22	0.0088	8.8
1.52	0.013	13
1.85	0.017	17
2.54	0.027	27
3.17	0.035	35

(Note: Flow rates assume no differential pressure drop and the use of Tygon® tubing. Other tubing sizes and formulations are available.)

### Available Tubing Sizes

Inner Diameter Range:	0.13 - 3.17 mm (tubing material dependent)
Wall Thickness:	0.8 mm
Please Note:	All tubing must have stoppers with correct spacing to be used with MS/CA cassettes

### Environmental Conditions

	Operational	Storage
Temperature Range:	+5 °C to +40 °C (+41 °F to +104 °F)	-10 °C to +50 °C (+14 °F to +122 °F)
Relative Humidity:	up to 80% (non-condensing)	up to 80% (non-condensing)

### Harmonized Tariff Schedule (HTS) Code & ECCN

8413.60.0090 / EAR99

# Reglo ICC

## Independent Channel Control Pump (Patent Pending)

### Regulatory Compliance Information

CE-compatibility approved according to: EN 61326-1, EN 61010-1; product tested to the requirements of CAN/CSA-C22.2 No. 61010-1, second edition including Amendment 1 or a later version of the same standard incorporating the same level of testing requirements

### Supported Communication Protocol

Each channel can be independently controlled via the front panel, USB interface, or RS-232 interface.

Rear Panel Connections:



RS-232 In (DB9-female)

RS-232 Out (DB9-male)

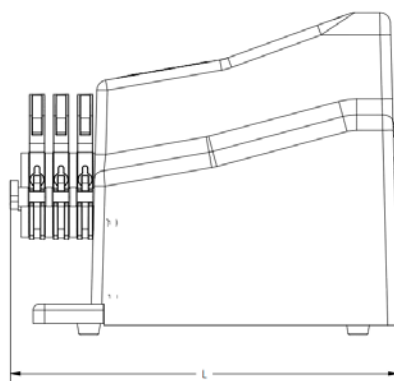
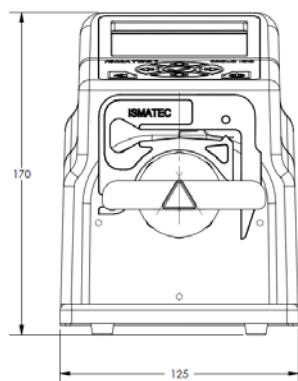
USB 2.0, Mini-B

### Operating Modes

Flow Rate:	continuous operation at a set rate and direction
Volume Over Time:	dispensing a desired volume over a desired time
Volume:	dispensing a desired volume at a set flow rate
Time Mode:	dispensing for a set time duration with a set flow rate
Volume With Pause:	dispensing a set volume over multiple cycles with defined pause time in between
Time With Pause:	dispensing for a set time duration over multiple cycles with defined pause time in between
Calibration:	allows each channel to be calibrated for dispensed fluid volume accuracy

More complex routines are available through the use of the supplied software. Additionally, up to eight pumps can be connected to a computer at once, either by a USB hub or daisy chaining the RS-232 in/out connectors on the pump(s). (Note: For full functionality of each channel via RS-232 control, each pump must be directly connected to a serial interface such as Hypercom or PuTTY.) In the ICC daisy chain configuration, the pumps can either be controlled in legacy mode where all of the pump channels on an individual pump perform the same, or all of the individual channels are programmed with one channel command, similar to channels 2, and 3 (or 4).

### Dimensions



Overall Height:	170 mm (~6.7")
Overall Width:	125 mm (~4.9")
Overall Length:	193 mm (~7.6") - 2-channel
	205 mm (~8.1") - 3-channel
	218 mm (~8.6") - 4-channel