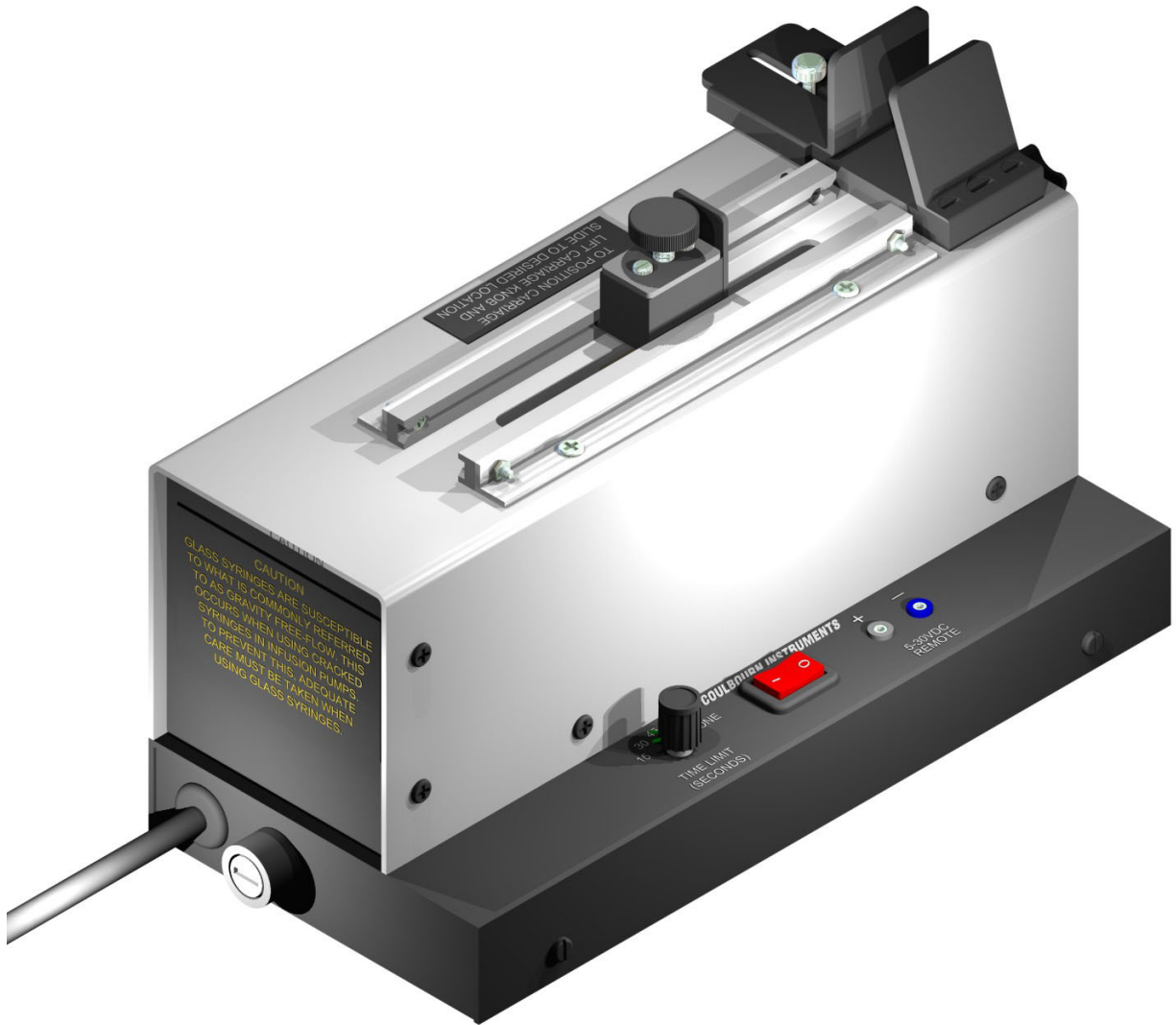




## E73-01-3.3 INFUSION PUMP



The *E73-01-3.3 Infusion Pump* is designed to administer a fluid/drug at a fixed flow rate. Typical applications include drug testing, flushing catheters, electrolyte therapy, sucrose gradients, and other applications when a fixed speed of delivery of a vehicle is required.

The rocker switch on the front side of the unit provides an enable/disable function. When placed in the enable position, the pump is placed in a ready mode and will operate when a 5 to 30 Volt DC signal is applied to the REMOTE input. Please note that the polarity of the remote operate signal must be referenced as indicated on the panel at the remote input jacks.

The plunger carriage has been designed with a knob and spring mechanism for easily re-locating the carriage to any position. Simply lift on the cap of the plunger adjustment, slide it up against the end of the syringe, and then release the cap. This makes initial setup of the pump and syringe simple.

An adjustable limit switch is also integral to this unit. A screw on the power cord side of the unit can be turned to adjust the trip point for the switch. The limit switch will disable power to the motor when the extent of travel has been reached.

## **SPECIFICATIONS**

<b>Power:</b>	110-240 ~ 1A, 50/60Hz
<b>Time Limit (seconds):</b>	15, 30, 45, 60 & None (no time limit control set)
<b>Remote Input:</b>	+5-30 Volts DC
<b>Motor Velocity:</b>	3.3 RPM (other speeds available on special order)
<b>Dimensions:</b>	8.75 inches x 3.0 inches x 3.0 inches (22.23 cm x 7.62 cm x 7.62 cm)
<b>Weight:</b>	2.65 lbs (1.20 kg)

## **FLOW RATE**

The rate of flow is dependent not only on the velocity of the pump but also on the size of the syringe. For example the flow rate using a 2 cc syringe will be less than when a 10 cc syringe is used. Furthermore, it is the cross sectional size of the syringe that affects the rate of flow so the flow rate may also vary when using the same size syringe (e.g., 2cc) from different manufacturers.

The Flow Rate is determined by multiplying the velocity in RPM (3.3) by 0.19538 by the cross sectional area of the syringe. The Flow Rate in milliliters per minute for the E73-01-3.3 is equal to:

$$3.3 \times 0.19538 \times C$$

where C equals the cross sectional area of the syringe in square centimeters. Note that if your infusion pump was ordered with a different motor speed than the standard 3.3 RPM motor, then replace the "3.3" value in the formula above with the speed of the motor, in revolutions per minute, used in the pump you purchased. (See Appendix A for the Cross Sectional Area of some common syringes).

## APPENDIX A

### CROSS SECTIONAL AREAS OF COMMON SYRINGES

CROSS SECTIONAL AREA (cm sq)	SYRINGE SIZE (unless otherwise indicated)						
	1 cc	2 cc	5 cc	10 cc	20 cc	30 cc	50 cc
Becton, Dickinson & Co. Multifit Syringes	0.176	0.626	1.084	1.692	3.017	4.047	6.173
Becton, Dickinson & Co. Plastipak Syringes	0.173	0.578 (2.5 cc)	1.129	1.635	2.85	3.662	5.556
Burron Medical Products	0.184	0.712 (3 cc)	1.197	1.840	3.247	4.831	7.159 (60 cc)
Pharmaseal Laboratories Stylex Syringes	N/A	0.716	1.212	2.018	2.888	3.987	6.413
Sherwood Medical Monoject Syringes	0.173	0.622	1.263	1.977	3.308	4.474	5.545
Terumo Corporation	0.175	0.650 (2.5 cc)	N/A	1.947	N/A	4.174 (35 cc)	6.673 (60 cc)
	SYRINGE SIZE						
	0.05 cc	0.10 cc	0.25 cc	0.50 cc	1 cc	2.5 cc	5 cc
Hamilton Company	0.008	0.017	0.042	0.083	0.167	0.417	0.833
Unimetrics Corporation	0.008	0.017	0.042	0.083	0.167	N/A	N/A