

Specialized Harvard Mechanical Syringe Pumps

'944' Reciprocating Pump



The pump has a 12-speed gear box with heavy brass gears that is operated by a pull-and-turn knob on the back of the pump. Motor speed can be further varied within each of the twelve gear settings by a Silicon Controlled Rectifier (SCR). This SCR controls pump speed from 10% to 100% within each of the 12 gear positions. Together the 12-speed gear box and the SCR provide for infinite speed adjustment over a range of 5,000 to 1.

This infinitely variable speed system is applicable for either 50 or 60 Hz and a switch converts the pump from 115 to 230 volts operation.

These pumps have two lead screws powered by the same motor but connected by a gear shaft. When this second lead screw, with a selection gear between them is added, the full, extraordinary flexibility of this syringe pump is realized. Both lead screws rotate at identical speeds but they can rotate in the same or opposite directions. When in parallel mode both syringes either deliver or withdraw simultaneously. When in reciprocate mode the lead screws rotate in opposite directions and one syringe infuses while the other withdraws.

Catalog No.	Product
CGS 8105.63	'944' Reciprocating Mechanical Syringe Pump

'909' High Pressure Syringe Pump



By replacing the traditional bronze half nut that rests on the lead screw with a full nut, the full force of the motor is delivered to the syringe pusher/withdrawal plate. The output pressure developed is a function of syringe size. With 1 syringe of size 20, 50, 100, or 200 cc the pressures developed are 600, 270, 180 and 125 psi, respectively.

Catalog No.	Product
CGS 8104.63	'909' High Pressure Syringe Pump (Infinitely Variable Speed)

'2265' Multiple Syringe Pump



This pump is supplied with two syringe racks. The first rack holds up to 37 syringes from 2 cc to 20 cc each. The second rack holds up to twenty syringes from 20 cc to 50 cc capacity.

The '2265' has the same infinitely variable speed motor as the models '944' & '909' and delivers flow rates from 0.000079 ml/min with a 2 cc syringe to 38.2 ml/min with a 50 cc syringe.

Catalog No.	Product
CGS 8106.63	'2265' Multiple Syringe Pump (Infinitely Variable Speed)

Harvard Mechanical Syringe Pumps										
Pump Model	Catalog No.	Syringe Type	Size (ml)	Pressure	Motor	Dimensions cm (in)	Weight kg (lb)	Power (VAC/Hz)	Flow Rate (ml/min)	
									Min	Max
944	CGS8105.20	2-Syringes; Infusion and Withdrawal Reciprocates	2, 5, 10, 20, 30, 50	Regular 60 p.s.i. with 50 ml syringe	Infinitely variable speed	55.9 x 22.9 x 22.9 (22 x 9 x 9)	16 (35)	115/60 230/50	0.000079	38.2
909	CGS8104.20	1-Syringe; Infusion and Withdrawal	2, 5, 10, 20, 30, 50	High 270 p.s.i. with 50 ml syringe	Infinitely variable speed	66 x 21.6 x 20.3 (26 x 8-1/2 x 8)	12.2 (27)	115/60 230/50	0.000079	38.2
2265	CGS8106.20	Mechanical Multiple-Syringe Infusion Only	Up to 20 Syringes: 20 to 50 Up to 37 Syringes: 2 to 30	Regular 60 p.s.i. with 50 ml syringe	Infinitely variable speed	81.3 x 69.9 x 21.6 (32 x 27.5 x 8.5)	22 (50)	115/60 230/50	0.000095	120.0