Cole-Parmer®

Premium Syringe Pumps

Precision Technology From a Name You Trust

Cole-Parmer® Syringe Pumps

What Sets Cole-Parmer-Brand Syringe Pumps Apart?

They make work easy—

- Preprogrammed syringe library provides automated settings for most popular brands of syringes
- Remote control interface allows convenient, hands-free operation
- Networkable up to 99 pumps

They maximize the precision and efficiency of your work—

- High-precision fluid delivery means maximum reproducibility
- Microprocessor control provides extremely smooth, low-pulse flow, from 1 nL/hr to 2451 mL/hr

They are among the best-made instruments in the industry—

- Fully welded seams prevent ingress of liquids
- CE approval available throughout the product family

Infusion Pumps

Ideal when accurate, precise amounts of fluids are required

- Set up in three simple steps:
  1. Select syringe brand and type
  2. Set flow rate
  3. Press "Run"

- Dispense preset volumes with automatic shutoff

Select brand/type of syringe

Set flow rate and press "run"

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Cole-Parmer® Syringe Pumps

Infusion/Withdrawal Pumps

Multipurpose instruments for the programmed infusion or withdrawal of solution

- Automated performance enables unattended filling of syringes at very low flow rates
- Power Failure indication provides long-term testing confidence

Push-Pull Pumps

Opposing syringes operating off the same drive allow simultaneous infusion and withdrawal

- Linear encoder eliminates motor overdrive
- Program using easy-to-operate keypad

Specialty Pumps

Our precision syringe pumps perform operations less sophisticated units cannot

- Continuous-cycle syringe pump utilizes push-pull technology with three-way valves to dispense a set amount over extended periods.
- Emulsifier pump emulsifies viscous fluid by cycling fluid back and forth through a micro-emulsifying needle. Ensures accuracy, eliminates operator fatigue, and saves time in preparation.

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Performance Specifications

- ±<1% accuracy
- ±0.1% reproducibility

Programmable models let you program the pump to control from seconds to days, change flow rates, pause, ramp rates up or down, control outputs, and respond to external TTL signals—all from the keypad.

Infusion syringe pumps

Standard models							
115 VAC		ML-74900-00	ML-74900-50	ML-74900-10	ML-74900-30	ML-74900-70	ML-74903-00
230 VAC (CE)		ML-74900-05	ML-74900-55	ML-74900-15	ML-74900-35	ML-74900-75	ML-74903-06
Programmable models							
115 VAC		—	—	ML-74900-60	ML-74900-80	ML-74901-20	ML-74903-10
230 VAC (CE)		—	—	ML-74900-65	ML-74900-85	ML-74901-25	ML-74903-16
Syringe capacity (number)		10 µL to 60 mL (one)	10 µL to 10 mL (two)	10 µL to 140 mL (two)	10 µL to 10 mL (ten), 20 mL to 60 mL (six), or 100 mL to 140 mL (four)	10 µL to 10 mL (four)	10 µL to 140 mL (one)
Min flow rate	10-µL syringe	0.1 µL/hr	0.001 µL/hr	0.001 µL/hr	0.001 µL/hr	0.001 µL/hr	0.001 µL/hr
Max flow rate	10-mL syringe	127 mL/hr	0.351 mL/min	21 mL/min	21 mL/min	21 mL/min	21 mL/min
	60-mL syringe	519 mL/hr	—	86 mL/min	—	—	83 mL/min
	140-mL syringe	—	—	145 mL/min	—	—	146 mL/min
Linear force		20 lb (9 kg)	40 lb (18 kg)	40 lb (18 kg)	40 lb (18 kg)	40 lb (18 kg)	>100 lb (45 kg)
Advance per microstep		0.529 micron (½ step)	0.088 micron (½ step)	0.165 micron (1/16 step)	0.165 micron (1/16 step)	0.165 micron (1/16 step)	0.165 micron (1/16 step)
Max step rate		400 / sec	400 / sec	1600 / sec	1600 / sec	1600 / sec	1600 / sec
Min step rate		1/30 sec	1/30 sec	1/100 sec	1/100 sec	1/100 sec	1 µstep / 120 sec

Infusion/withdrawal syringe pumps

Standard models				
115 VAC		ML-74900-20	ML-74900-40	ML-74902-00
230 VAC (CE)		ML-74900-25	ML-74900-45	ML-74902-06
Programmable models				
115 VAC		ML-74901-00	ML-74901-10	—
230 VAC (CE)		ML-74901-05	ML-74901-15	—
Syringe capacity (number)		10 µL to 140 mL (two)	10 µL to 10 mL (ten), 20 mL to 60 mL (six), or 100 mL to 140 mL (four)	1 µL to 100 µL (one)
Min flow rate	10-µL syringe	0.001 µL/hr	0.001 µL/hr	0.001 mL/min†
Max flow rate	100-µL syringe	—	—	127 µL/min
	10-mL syringe	21 mL/min	21 mL/min	—
	60-mL syringe	86 mL/min	—	—
	140-mL syringe	145 mL/min	—	—
Linear force		40 lb (18 kg)	40 lb (18 kg)	2.0 lb (0.9 kg)
Advance per microstep		0.165 micron (1/16 step)	0.165 micron (1/16 step)	1.58 micron (½ step)
Max step rate		1600 / sec	1600 / sec	916 / sec
Min step rate		1/100 sec	1/100 sec	¼ sec

†Using a 1-µL syringe

Continuous syringe pumps

Standard models		
115 VAC		ML-74901-50
230 VAC (CE)		ML-74901-55
Programmable models		
115 VAC		ML-74901-60
230 VAC (CE)		ML-74901-65
Syringe capacity (number)		10 µL to 60 mL (four)
Min flow rate	10-µL syringe	0.001 µL/hr
Max flow rate	10-mL syringe	21 mL/min
	40-mL syringe	86 mL/min
Linear force		40 lb (18 kg)
Advance per microstep		0.165 micron (1/16 step)
Max step rate		1600 / sec
Min step rate		1/100 sec