

# KDS210



**The KDS210 offers you more advanced features than any other infusion / withdrawal pump in its price range -- including five operating modes plus independent rate and volume settings for both infusion and withdrawal.**

## **Features**

- Holds two syringes, 10  $\mu$ l to 140 ml each
- Backlit LCD display
- Knob locks/unlocks drive block for effortless, drag-free adjustment
- Simple menu-driven setup:
  - select syringe size from displayed table
  - dispense volume
  - dispense flow rate
- Continuous dispense volume display
- Preset volume control and automatic shut-off
- Settings can be reviewed or changed during operation
- Stall detection
- Choice of unit selection
- Last settings stored in permanent memory
- Built-in RS232C interface for computer "daisy chaining" up to 100 pumps
- TTL interface for foot switch, timer, relay control, outputs for run indicator, valve control
- Independent rate and volume settings for infusion and withdrawal
- Multiple mode selection:
  - Infusion
  - Withdrawal
  - Infusion then withdrawal
  - Withdrawal then infusion
  - Continuous cycle
- Optional multi-step keypad programmable feature ([KDS210P](#))

Specifications		Flow Rates		
Pump Type:	<ul style="list-style-type: none"><li>Infusion</li></ul>	Syringe	Minimum	Maximum
Max. No. of Syringes	<ul style="list-style-type: none"><li>Two</li></ul>	10 ml	0.001 ml/h	22.98 ml/min
Syringe Size	<ul style="list-style-type: none"><li>10 μl to 140 ml</li></ul>	25 ml	0.001 ml /h	60.68 ml/min
Dimensions	<ul style="list-style-type: none"><li>11 x 9 x 5.5 in.</li><li>28 x 23 x 1414 cm</li></ul>	50 ml	0.001 ml/h	105.8 ml/min
Weight	<ul style="list-style-type: none"><li>9 lb (4 kg)</li></ul>	100 ml	0.001 ml /h	212.6 ml/min
Linear Force	<ul style="list-style-type: none"><li>40 lb (18 kg)</li></ul>	250 ml	0.001 ml/h	527.6 ml/min
Advance Per Microstep	<ul style="list-style-type: none"><li>0.165 micron (1/16 step)</li></ul>	500 ml	0.001 ml /h	1.06 ml/min
Max Step Rate (1/2 Step)	<ul style="list-style-type: none"><li>1600/sec</li></ul>	1 ml	0.001 ml/h	2.203 ml/min
Min Step Rate	<ul style="list-style-type: none"><li>1 step / 30 sec.</li></ul>	3 ml	0.001 ml /h	7.36 ml/min
Accuracy	<ul style="list-style-type: none"><li>± &lt; 1%</li></ul>	5 ml	0.001 ml/h	14.33 ml/min
Reproducibility	<ul style="list-style-type: none"><li>± 0. 1%</li></ul>	10 ml	0.001 ml /h	20.91 ml/min
Audible Alarm	<ul style="list-style-type: none"><li>(Optional) **</li></ul>	20 ml	0.001 ml/h	36.19 ml/min
		30 ml	0.001 ml /h	46.49 ml/min
		60 ml	0.001 ml/h	70.57 ml/min
		140 ml	0.001 ml /h	147 ml/min