

### Benefits

- Automatic dispensing of small volumes
- Constant delivery of fluids
- Hands free operation
- Better flow performance

### Features

- Accuracy  $\pm 0.35\%$
- Holds two or four syringes from  $0.5 \mu\text{l}$  to 140 ml
- High resolution color touch screen
- Real time clock
- Unparalleled ease of use
- Touch pad "lock" feature
- LED light on front panel
- Full metal chassis
- Built in syringe table
- Up to 75 lbs linear force
- Advanced microstepping techniques
- Built in RS-485 interface to link multiple pumps
- USB port & RS232 Interface
- I/O & TTL interface
- Continuous mode of operation
- Protection with a spill dam
- Analog control option
- CE, UL, CSA, CB Scheme, EU RoHS

### Applications

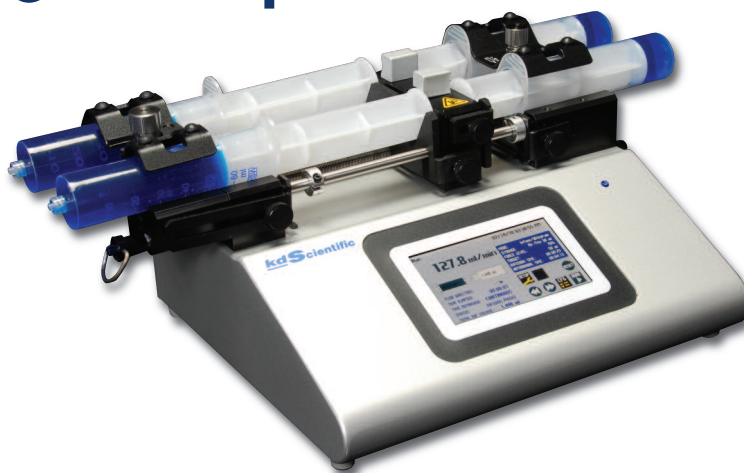
- Microfluidics
- Drug Discovery
- Nanofluidics
- Polymer Research
- HPLC - Mass Spec
- Organic Synthesis
- Electrospinning
- Reactor Injections

### Markets

- Pharmaceutical
- Biotech
- Chemical
- Neuroscience
- Research and Development
- Government
- Petrochemical
- Food and Beverage

# KDS Legato™ 270

## Infuse/Withdraw Continuous Syringe Pump



### The NEW KDS Legato™ 270 series is the next generation of syringe pumps

The KDS Legato 270 Push-Pull syringe pump offers unparalleled ease of use through the high resolution touch screen. The basic model works with two or four syringes. The Legato 270 is the first syringe pump to deliver full stroke syringes. The full touch screen interface enables the user to quickly create configurations and recall them for easy use. The 4.3" TFT color display with touch pad interface presents all the pump operating parameters on one easy to view run screen. Protective cover over the display prevents leakage into the display.

The Legato 270 is a Push-Pull syringe pump. It accommodates 2 syringes from  $0.5 \mu\text{l}$  to 140 ml for infusion and 2 syringes for withdrawal. This model supports infusion and withdrawal simultaneously at user defined flow rates and with selectable target volumes to control the total volume pumped. It also supports infuse only, withdraw only, infuse/withdraw, withdraw/infuse and continuous mode. An LED light on the front panel makes it easy to see if the pump is running. The programmable model offers maximum flexibility for configuring and running different programs. Up to 40 programs of 20 steps each can be configured and stored in the unit and recalled quickly with the touch of a button.

The pumps are versatile and can be connected through the RS-485 interface. Advanced microstepping techniques are employed to further reduce the step angle to eliminate flow pulsation. The accuracy is  $\pm 0.35\%$ . A wide dynamic flow range from 5  $\mu\text{l}/\text{min}$  to 215.803  $\text{ml}/\text{min}$  can be programmed into the pump. Add the New Adagio software to maximize the use of the pumps functions and features. Adagio allows you to configure the pump through the software as well as operate one or multiple pumps. In addition National Instrument lab view drivers are available on their website.

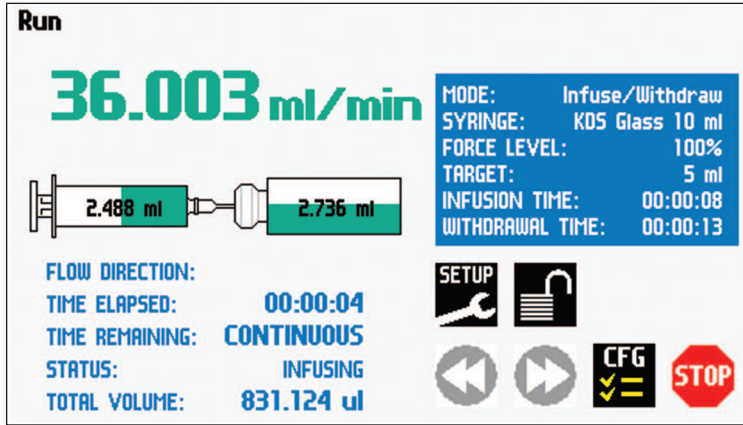
KD Scientific pumps are acknowledged as the industry's highest value solution for delivering precise and smooth flow. KD Scientific is recognized worldwide for quality and reliability at an economical price and has the broadest line of syringe pumps to meet your specific application. KD Scientific is committed to delivering the highest level of customer satisfaction, as well as technical support for all their products.

**NOTE: KD Scientific syringe pumps are for laboratory use only.**

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## Intuitive Run Screen

Combining multiple parameters simultaneously with internationally recognizable icons allow the Legato™ Series to provide a new level of intuitive syringe pump operation.



## Specifications

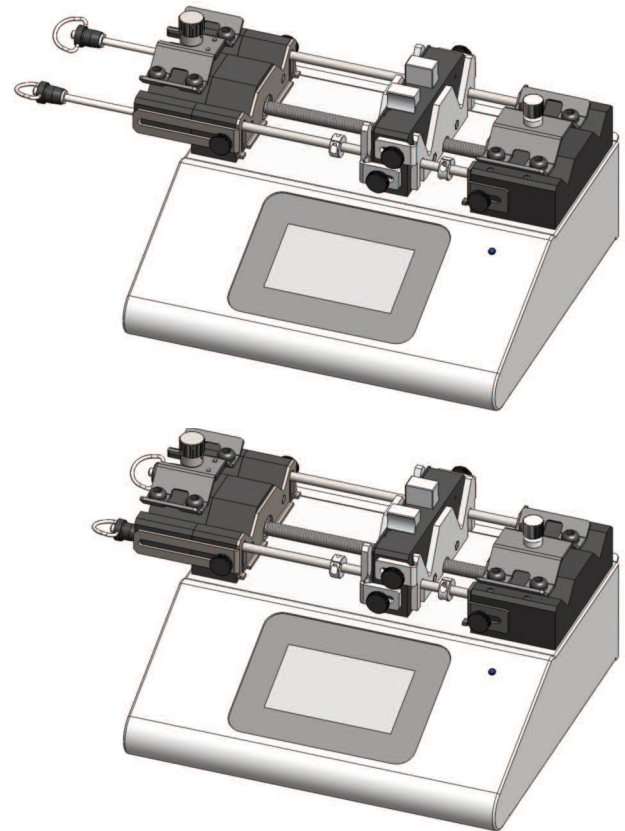
Model	KDS Legato 270
Syringe Size	0.5 µl to 140 ml
Power	100-240 VAC: 50/60 Hz, 50 W, 0.5 A fuse
Motor Drive Control	Microprocessor with 1/16 microstepping
Linear Force (Maximum)	34 kg (75 lbs) @ 100% force selection
Number of Microsteps per One Revolution of Lead Screw	6400
Step rate (Minimum)	27.5 sec/µstep
Step rate (Maximum)	26 µsec/µstep
Drive Motor	1.8 degree Stepper Motor
Pusher Travel Rate - (Minimum)	0.36 µm/min
Pusher Travel Rate - (Maximum)	190.80 mm/min
Flow Rate (Minimum)	5 pL/min (0.5 µl syringe)
Flow Rate (Maximum)	215.803 ml/min (140 ml syringe)
Dimensions	8.89 x 25.4 x 27.94 cm (3.5 x 10 x 11 in)
Weight	4.9 kg (10.75 lb)
Connectors	RS-232 - 9 Pin D-Sub Connector, RS-485 - IEEE-1394 6 pos, USB - Type B, I/O & TTL - 15 Pin D-Sub Connector

## Flow Rates

Syringe	Diameter	Minimum	Maximum
0.5 µl	0.103 mm	3.12 pL/min	1.589 µl/min
1 µl	0.146 mm	6.18 pL/min	3.180 µl/min
2 µl	0.206 mm	12.301 pL/min	6.358 µl/min
5 µl	0.343 mm	33.96 pL/min	17.630 µl/min
10 µl	0.485 mm	67.72 pL/min	35.249 µl/min
25 µl	0.729 mm	153.42 pL/min	79.640 µl/min
50 µl	1.03 mm	306.24 pL/min	158.984 µl/min
100 µl	1.457 mm	612.72 pL/min	318.126 µl/min
250 µl	2.304 mm	1.533 nL/min	795.51 µl/min
500 µl	3.256 mm	3.06 nL/min	1.588 ml/min
1000 µl	4.608 mm	6.129 nL/min	3.181 ml/min
1 ml	4.699 mm	6.373 nL/min	3.308 ml/min
3 ml	8.585 mm	21.272 nL/min	11.044 ml/min
5 ml	11.989 mm	41.485 nL/min	21.539 ml/min
10 ml	14.427 mm	60.073 nL/min	31.19 ml/min
20 ml	19.05 mm	104.74 nL/min	54.383 ml/min
30 ml	21.59 mm	134.533 nL/min	69.852 ml/min
50 ml	26.594 mm	204.122 nL/min	105.985 ml/min
100 ml	35.7 mm	367.839 nL/min	190.992 ml/min
140 ml	38.4 mm	415.623 nL/min	215.803 ml/min

Also Available in Programmable Version!

**kdScientific**



Large syringes can achieve full stroke length by repositioning the adjustable syringe holder.



**Wolflabs**

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**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

