

# 323U/RL and 323U/RL2 Analogue auto/manual control high-flow pumps

# 300 series

Watson-Marlow Pumps

## FEATURES

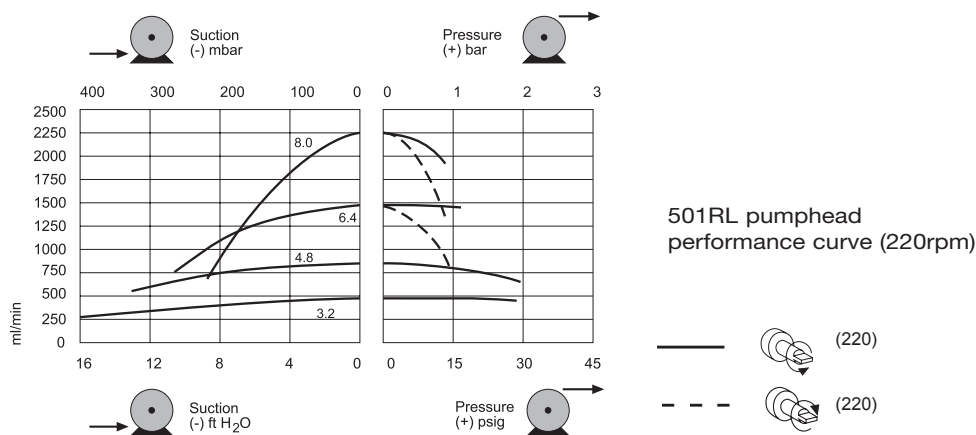
- Rear panel 25D socket accepts analogue auto-control signal input for speed control 4-20mA, 0-10V
- Digital TTL or remote switch inputs for run/stop and direction
- Single channel flow rates from 0.06ml/min to 2200ml/min
- Precision digital speed control 220 steps from 1.5 to 200rpm, 147:1 control ratio
- High visibility digital display and keypad lock
- Compact design, chemical resistant case, contemporary styling
- Zero maintenance, quiet brushless DC motor
- Rapid and simple tube loading 501RL pumphead accepts seven tube bore sizes



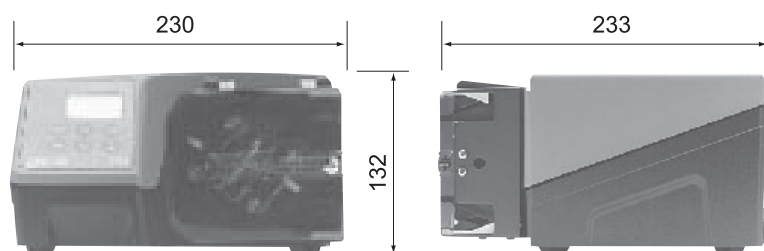
*Watson-Marlow... Innovation in Full Flow*

## PERFORMANCE

Tube bore and flow rates (ml/min)								
	Speed rpm	0.5mm	0.8mm	1.6mm	3.2mm	4.8mm	6.4mm	8.0mm
323U/RL	1.5-220	0.06-9.2	0.18-27	0.84-94	2.8-410	6.1-890	9.5-1400	15-2200



## TECHNICAL DRAWINGS



## TECHNICAL SPECIFICATION

Weight	5.6kg
Control ratio	147:1
Standards	CE, EN60529 (IP31)
Supply	1ph, 100-120V, 220-240V 50/60Hz, 100VA

## MATERIALS OF CONSTRUCTION

Component	Material
<b>Drive</b>	
Drive base	Powder coated aluminium coating
Drive top	Self-coloured ABS plastic
<b>Pumphead</b>	
Rotor	Mazak, chromium plated
Tube clamps, hinges	Acetal copolymer kematal
Guide rollers	Delrin
Rollers	MoS2 filled Nylon 6 (Nylatron)
Guard	Polycarbonate
Springs, spindles	Stainless steel

## ORDER INFORMATION

Product codes		
Description		Partcode
323U/RL 1.5-220rpm	drive + 501RL pumphead for 1.6mm wall tube	030.3142.RL0*
323U 1.5-220rpm	drive only	036.3142.000*
501RL	pumphead for 1.6mm wall tube	053.0001.L00
501RL2	pumphead for 2.4mm wall tube	053.0001.L20

\* Replace last 0 with A, E or U for American, European or UK mains supply (American 110V 1ph 60Hz)  
If required for use with STA-PURE and Chem-Sure tubing, please contact Watson-Marlow Bredel technical support for drive and pumphead selection

Tube ordering codes				
Bore/wall (mm)	Bioprene	Marprene	Platinum Silicone	PVC
0.5 / 1.6	903.0005.016	902.0005.016	913.A005.016	
0.8 / 1.6	903.0008.016	902.0008.016	913.A008.016	
1.6 / 1.6	903.0016.016	902.0016.016	913.A016.016	950.0016.016
3.2 / 1.6	903.0032.016	902.0032.016	913.A032.016	950.0032.016
4.8 / 1.6	903.0048.016	902.0048.016	913.A048.016	950.0048.016
6.4 / 1.6	903.0064.016	902.0064.016	913.A064.016	950.0064.016
8.0 / 1.6	903.0080.016	902.0080.016	913.A080.016	950.0080.016
1.6 / 2.4	903.0016.024	902.0016.024	913.A016.024	
3.2 / 2.4	903.0032.024	902.0032.024	913.A032.024	
4.8 / 2.4	903.0048.024	902.0048.024	913.A048.024	
6.4 / 2.4	903.0064.024	902.0064.024	913.A064.024	
8.0 / 2.4	903.0080.024	902.0080.024	913.A080.024	
Bore/wall (mm)	Neoprene	STA-PURE®	Chem-Sure®	Fluorel®
0.8 / 1.6	920.0008.016			970.0008.016
1.6 / 1.6	920.0016.016	960.0016.016	965.0016.016	970.0016.016
3.2 / 1.6	920.0032.016	960.0032.016	965.0032.016	970.0032.016
4.8 / 1.6	920.0048.016	960.0048.016	965.0048.016	970.0048.016
6.4 / 1.6	920.0064.016	960.0064.016	965.0064.016	970.0064.016
8.0 / 1.6	920.0080.016	960.0080.016	965.0080.016	970.0080.016
1.6 / 2.4		960.0016.024	965.0016.024	
3.2 / 2.4		960.0032.024	965.0032.024	
4.8 / 2.4		960.0048.024	965.0048.024	
6.4 / 2.4		960.0064.024	965.0064.024	
8.0 / 2.4		960.0080.024	965.0080.024	

All flow rates shown were obtained pumping water at 20C (68F) with zero suction and delivery heads. Watson-Marlow, Bioprene and Marprene are trademarks of Watson-Marlow Limited. Disclaimer: The information contained in this document is believed to be correct but Watson-Marlow Limited accepts no liability for any errors it contains, and reserves the right to alter specifications without notice. LoadSure is a trademark of Watson-Marlow Limited. © STA-PURE PFL and © STA-PURE PCS are registered trademarks of W.L Gore & Associates Inc. Please state the product code when ordering pumps and tubing.

**WATSON  
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Pumps**

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