

323 Drive with 501RL pumphead

300 series cased pump

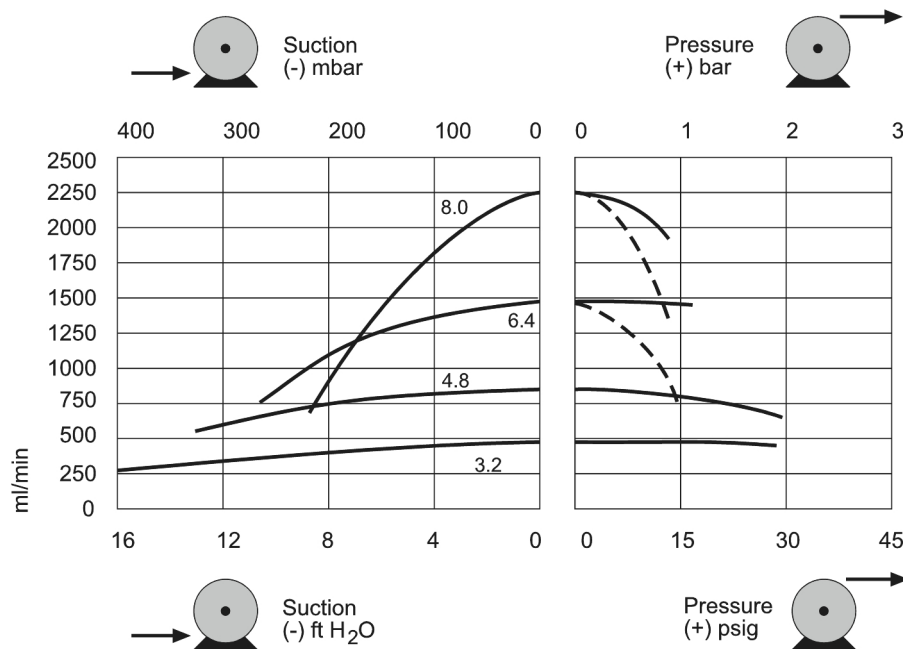
Features and benefits

- Manual or remote 4 mA to 20 mA or 0 V to 10 V analogue auto-control or RS232 control commands
- Up to 133:1 enhanced digital manual speed control
- Keypad lock prevents tampering or accidental changes
- MemoDose facility for accurate single-shot dosing
- Digital TTL inputs for run/stop and direction
- Instantly reversible
- Two-year warranty



323 Drive with 501RL pumphead performance

501RL spring-loaded single-channel pumpheads for continuous 1.6 mm wall thickness tubing – Tube bore and flow rates (ml/min)								
	Speed rpm	0.5 mm	0.8 mm	1.6 mm	3.2 mm	4.8 mm	6.4 mm	8.0 mm
323S/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
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
323Du/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
323Dz/RL	1.0 - 300	0.04 - 13	1.12 - 37	0.43 - 130	1.9 - 560	4 - 1200	6.4 - 1900	10 - 3000



Technical specifications

	323 Drive with 501RL pumphead
Pumphead number of channels	1
Flow rate range	0.04 ml/min to 3000 ml/min
Speed control ratio	147:1, 300:1
Operating speed range	1 rpm to 300 rpm
Operating temperature ranges	5 °C to 40 °C (40 °F to 104 °F)
Weight ranges	5.6 kg (12.3 lbs)
Drive control options	Du, Dz, S, U
Standards	CE, cETLus
Drive ingress protection	IP31
Drive humidity	80 % up to 31 °C, 88 °F, decreasing linearly to 50 % at 40 °C, 104 °F
Drive noise	<70dB(A) at 1m
Max. altitude	2000 m (6562 ft)
Drive power supply	1ph, 100 V to 120 V, 220 V to 240 V 50/60 Hz, 100 VA
Compatible tubing bore size	0.5, 0.8, 1.6, 3.2, 4.8, 6.4, 8 mm
Compatible tubing wall thickness	1.6 mm

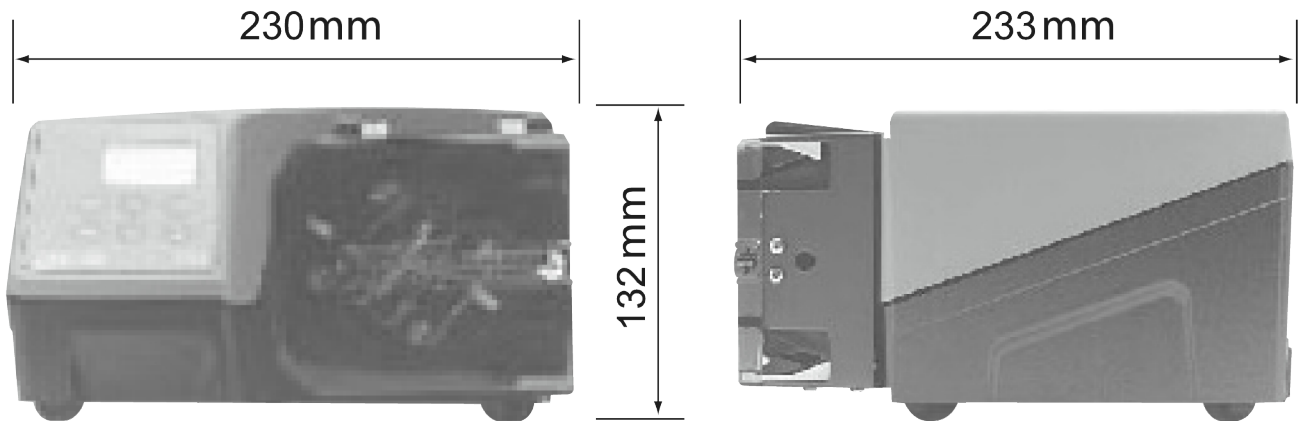
Materials of construction

	323 Drive with 501RL pumphead
Drive casework	Acrylonitrile butadiene styrene (ABS), Powder coated aluminium LM24
Guide roller assembly	Delrin
Pumphead body assembly	Polycarbonate (PC)
Pumphead guard	Polycarbonate (PC)
Pumphead roller assembly	Delrin, MoS2 filled Nylon 6 (Nylatron)
Pumphead rotor assembly	Mazak, chromium plated
Spindles	Stainless steel
Springs	Stainless steel
Tube clamp assembly	Acetal copolymer (Kematal)

Information listed covers the complete range.

For detailed specifications of individual models/components refer to user manual or contact WMFTS representative.

323 Drive with 501RL pumphead dimensions



Control options

Functionality	323E	323S	323U	323Du
Manual control				
Keypad speed control	✓	✓	✓	✓
15-400rpm 27:1 speed control	✓			
3-400rpm 133:1 speed control		✓	✓	✓
1.5-220rpm 147:1 speed control		✓	✓	✓
MemoDose for accurate single shot dosing		✓	✓	✓
Remote control				
Run/Stop, direction change via contact closure or 5V TTL			✓	✓
Remote operation of MemoDose (hand/foot switch)			✓	✓
Analogue speed control				
Inputs; 0-10V or 4-20mA			✓	✓
RS232 digital communication				
Digital serial control				✓
Security				
Keypad lock to protect set-up		✓	✓	✓

Product codes

Pumps, drives and pumpheads product codes		
Description		Partcode
323Dz/RL	drive + 501RL pumphead for 1.6 mm wall tube	030.3183.RL0*
323S/RL	drive + 501RL pumphead for 1.6 mm wall tube	030.3132.RL0*
323Du/RL	drive + 501RL pumphead for 1.6 mm wall tube	030.3152.RL0*
323U/RL	drive + 501RL pumphead for 1.6 mm wall tube	030.3142.RL0*
323S	drive only	036.3132.000*
323U	drive only	036.3152.000*
501RL	pumphead for 1.6mm wall tube	053.0001.L00

* Replace last 0 with A, E or U for American, European or UK mains supply (American 110 V 1 ph 60 Hz)

If required for use with STA-PURE tubing, please contact Watson-Marlow Bredel technical support for drive and pumphead selection

Tubing product codes			
Bore/wall (mm)	Bioprene	Marprene	Platinum Silicone
0.5 / 1.6	933.0005.016	902.0005.016	913.A005.016
0.8 / 1.6	933.0008.016	902.0008.016	913.A008.016
1.6 / 1.6	933.0016.016	902.0016.016	913.A016.016
3.2 / 1.6	933.0032.016	902.0032.016	913.A032.016
4.8 / 1.6	933.0048.016	902.0048.016	913.A048.016
6.4 / 1.6	933.0064.016	902.0064.016	913.A064.016
8.0 / 1.6	933.0080.016	902.0080.016	913.A080.016
Bore/wall (mm)	STA-PURE*Series PCS	STA-PURE*Series PFL	
0.8 / 1.6			
1.6 / 1.6	961.0016.016	966.0016.016	
3.2 / 1.6	961.0032.016	966.0032.016	
4.8 / 1.6	961.0048.016	966.0048.016	
6.4 / 1.6	961.0064.016	966.0064.016	
8.0 / 1.6	961.0080.016	966.0080.016	

Disclaimer: All flow rates shown were obtained pumping water at 20 °C (68 °F) with zero suction and delivery heads. 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. It is the user's responsibility to ensure product suitability for use within their application. Watson-Marlow, LoadSure, Pumpsil, PureWeld XL, Bioprene, Marprene are registered trademarks of Watson-Marlow Limited. Tri-Clamp is a registered trademark of Alfa Laval Corporate AB. GORE and STA-PURE are registered trademarks of W.L. Gore and Associates. Please state the product code when ordering pumps and tubing.



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