

# 323 Drive with 314D pumphead

300 series cased pump

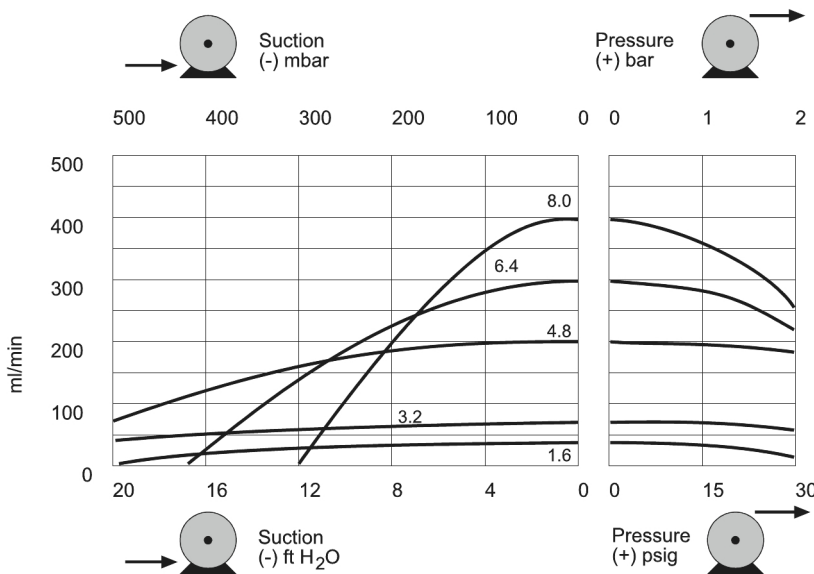
## Features and benefits

- 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 314D pumphead performance

314D four-roller flip-top pumpheads for continuous tubing – Tube bore and flow rates (ml/min)						
	Speed rpm	1.6 mm	3.2 mm	4.8 mm	6.4 mm	8.0 mm
323Dz/4D	2.0 - 400	0.5 - 100	1.7 - 340	3.8 - 760	6 - 1200	8 - 1600



## Technical specifications

323 Drive with 314D pumphead	
Pumphead number of rollers	4
Pumphead number of channels	1
Flow rate range	0.6 ml/min to 1600 ml/min
Speed control ratio	200:1
Operating speed range	2 rpm to 400 rpm
Operating temperature ranges	5 °C to 40 °C (40 °F to 104 °F)
Weight ranges	4.7 kg (10.4 lbs)
Drive control options	Dz
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	1.6, 3.2, 4.8, 6.4, 8 mm
Compatible tubing wall thickness	1.6 mm

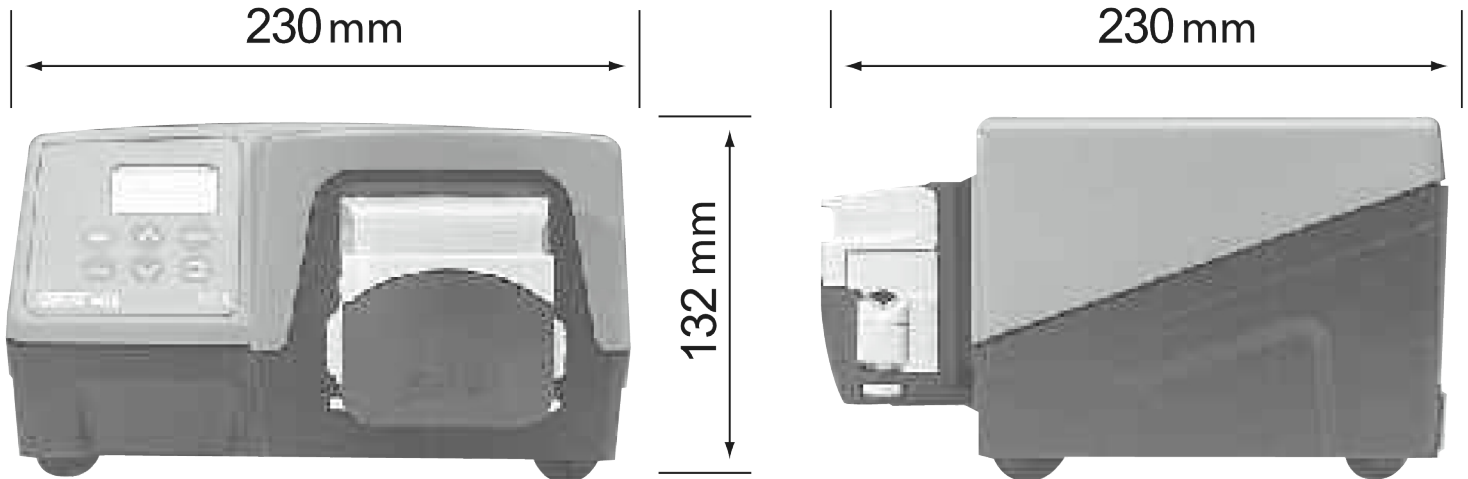
## Materials of construction

323 Drive with 314D pumphead	
Bearings	Carbon steel, Sintered bronze
Drive casework	Acrylonitrile butadiene styrene (ABS), Powder coated aluminium LM24
Mounting plate assembly	Glass filled Nylon, IXEF (Polyarylamide)
Pumphead body assembly	Glass filled polypropylene, Polyacrylamide-IXEF (PARA), Stainless steel
Pumphead roller assembly	MoS2 filled Nylon 6 (Nylatron)
Pumphead rotor assembly	Electroless nickel plated hardened steel, Glass filled Nylon
Pumphead track	Polyacrylamide-IXEF (PARA)
Spindles	Electroless nickel plated hardened steel
Tube clamp assembly	Glass filled Nylon

Information listed covers the complete range.

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

## 323 Drive with 314D pumphead dimensions



## Control options

Functionality	323E	323S	323U	323Du
<b>Manual control</b>				
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		✓	✓	✓
<b>Remote control</b>				
Run/Stop, direction change via contact closure or 5V TTL			✓	✓
Remote operation of MemoDose (hand/foot switch)			✓	✓
<b>Analogue speed control</b>				
Inputs; 0-10V or 4-20mA			✓	✓
<b>RS232 digital communication</b>				
Digital serial control				✓
<b>Security</b>				
Keypad lock to protect set-up		✓	✓	✓

## Product codes

Drives and pumpheads product codes		
Description		Partcode
323Dz	Drive only	036.3184.000*
314DW	4 roller extension pumphead for 1.6 mm wall tube	033.4451.000
314X	4 roller extension pumphead for 1.6 mm wall tube (maximum five)	033.4431.000

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

Tubing product codes			
Bore/wall (mm)	Bioprene	Marpene	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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