

# 323E/D, 323S/D, 323U/D and 323Du/D variable speed pumps with three roller pumphead

# 300 series

Watson-Marlow Pumps

## FEATURES

- Flow rates from 0.81 to 2000 ml/min
- High visibility digital display and membrane keypad
- Compact design and chemical resistant case
- Zero maintenance, quiet brushless DC motor
- Rapid and simple tube loading 313DW flip-top pumphead uses 1.6mm wall thickness tubing
- Snap-fit 313X extension pumpheads for up to 6 channels of flow
- Alternative pumpheads 313DW2 three roller pumphead, 2.4mm wall thickness for higher suction and delivery pressure up to 2 bar
- 314DW four roller pumphead, 1.6mm wall thickness for tube for continuous duties up to 300rpm
- 314DW2 four roller pumphead, 2.4mm wall thickness for higher suction and delivery pressure up to 2 bar



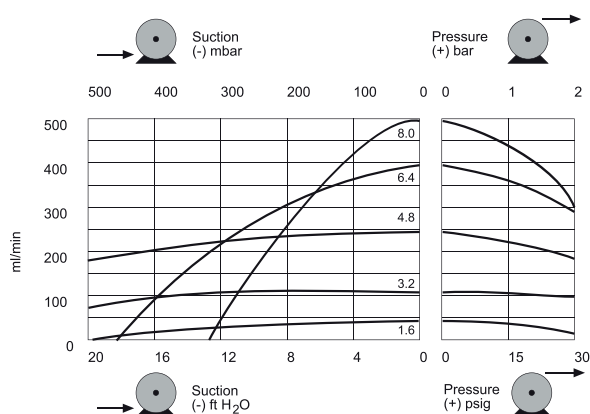
*Watson-Marlow...Innovation in Full Flow*

## TECHNICAL DATA

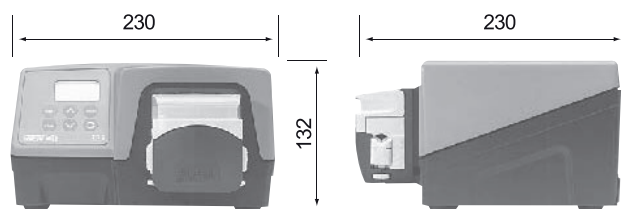
Functionality	323E	323S	323U	323Du
Enclosure – ingress protection rating	IP31	IP31	IP31	IP31
<b>Manual control</b>				
Keypad speed control	•	•	•	•
15-400rpm 27:1 speed control	•			
3-400rpm 133:1 speed control		•	•	•
1.5-220rpm 147:1 speed control		•	•	•
MemoDose for accurate single shot dosing		•	•	•
<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		•	•	•

## PERFORMANCE

Flow rates (ml/min)						
	Speed rpm	1.6mm	3.2mm	4.8mm	6.4mm	8.0mm
323E/D (3 roller pumphead)	15 - 400	4.1 - 110	15 - 400	33 - 880	54 - 1400	75 - 2000
323S/D 323U/D 323Du/D (3 roller pumphead)	3 - 400	0.81 - 110	3.0 - 400	6.6 - 880	11 - 1400	15 - 2000



## TECHNICAL DRAWINGS



## TECHNICAL SPECIFICATION

323E/D, 323S/D, 323U/D and 323Du/D	
Weight	4.7kg
Temperature	5C to 40C (40F to 104F)
Noise	< 70dB(A) at 1m
Control ratio	27:1-323E/D, 133:1-323S/D,323U/D,323Du/D
Standards	CE, IEC335-1, EN60529(IP31)
Power supply	1ph, 100-120V, 200-240V, 50/60Hz, 100VA

## MATERIALS OF CONSTRUCTION

Component	Material
Drive base	Powder coated aluminium casting
Drive top	Self-coloured ABS plastic
<b>Pumphead</b>	
Body rear	Glass filled polypropylene
Body front, body front extension	IXEF
Mounting plate, track and lever	IXEF
Rotor, tube clamps	Glass filled Nylon
Mounting plate locking tab	Glass filled Nylon
Rollers	MoS2 filled Nylon 6 (Nylatron)
Roller spindles	Electroless nickel plated, hardened steel
Fixings	Stainless steel
Bearings	Carbon steel - main shaft Sintered bronze - rollers
Drive shaft	Stainless steel

## ORDER INFORMATION

Product codes		
Description		Partcode
323E/D	drive and 313D three roller pumphead	030.3124.3D0*
323S/D	drive and 313D three roller pumphead	030.3134.3D0*
323U/D	drive and 313D three roller pumphead	030.3144.3D0*
323Du/D	drive and 313D three roller pumphead	030.3154.3D0*
323E	drive only	036.3124.000*
323S	drive only	036.3134.000*
323U	drive only	036.3144.000*
323Du	drive only	036.3154.000*
313DW	3 roller pumphead for 1.6mm wall tube	033.3451.000
313X	3 roller extension pumphead for 1.6mm wall tube (maximum five)	033.3431.000
313DW2	3 roller pumphead for 2.4mm wall tube	033.3551.000

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

Tubing								
Bore/wall(mm)	Bioprene	Marprene	Pumpsil	PVC	Neoprene	STA-PURE® Series PCS	STA-PURE® Series PFL	Fluorel®
1.6/1.6	903.0016.016	902.0016.016	913.A016.016	950.0016.016	920.0016.016	961.0016.016	966.0016.016	970.0016.016
3.2/1.6	903.0032.016	902.0032.016	913.A032.016	950.0032.016	920.0032.016	961.0032.016	966.0032.016	970.0032.016
4.8/1.6	903.0048.016	902.0048.016	913.A048.016	950.0048.016	920.0048.016	961.0048.016	966.0048.016	970.0048.016
6.4/1.6	903.0064.016	902.0064.016	913.A064.016	950.0064.016	920.0064.016	961.0064.016	966.0064.016	970.0064.016
8.0/1.6	903.0080.016	902.0080.016	913.A080.016	950.0080.016	920.0080.016	961.0080.016	966.0080.016	970.0080.016
1.6/2.4	903.0016.024	902.0016.024	913.A016.024			961.0016.024	966.0016.024	
3.2/2.4	903.0032.024	902.0032.024	913.A032.024			961.0032.024	966.0032.024	
4.8/2.4	903.0048.024	902.0048.024	913.A048.024			961.0048.024	966.0048.024	
6.4/2.4	903.0064.024	902.0064.024	913.A064.024			961.0064.024	966.0064.024	

All flow rates shown were obtained pumping water at 20C (68F) with zero suction and delivery heads. 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. It is the users responsibility to ensure product suitability for use within their application. Watson-Marlow, LoadSure, Qdos, ReNu, LaserTraceability, 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.

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