

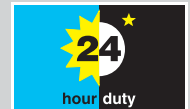
# 323E/D, 323S/D, 323U/D and 323Du/D variable speed pumps with three roller pumphead

# 300 series

Watson-Marlow Bredel

## COMMON FEATURES AND BENEFITS

- 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



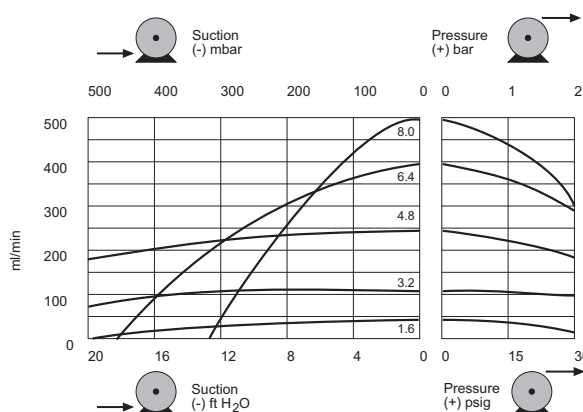
Watson-Marlow Bredel ... Value for life

## TECHNICAL DATA

Functionality	323E	323S	323U	323Du
<b>Enclosure – ingress protection rating</b>	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		•	•	•

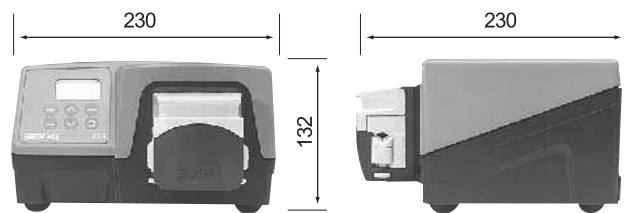
## PERFORMANCE

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



313D pumphead (3 roller) at 100rpm

## TECHNICAL DRAWINGS



All dimensions in mm

## 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	036.3144.000*
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®	Chem-Sure®	Fluorel®
1.6/1.6	903.0016.016	902.0016.016	913.A016.016	950.0016.016	920.0016.016	960.0016.016	965.0016.016	970.0016.016
3.2/1.6	903.0032.016	902.0032.016	913.A032.016	950.0032.016	920.0032.016	960.0032.016	965.0032.016	970.0032.016
4.8/1.6	903.0048.016	902.0048.016	913.A048.016	950.0048.016	920.0048.016	960.0048.016	965.0048.016	970.0048.016
6.4/1.6	903.0064.016	902.0064.016	913.A064.016	950.0064.016	920.0064.016	960.0064.016	965.0064.016	970.0064.016
8.0/1.6	903.0080.016	902.0080.016	913.A080.016	950.0080.016	920.0080.016	960.0080.016	965.0080.016	970.0080.016
1.6/2.4	903.0016.024	902.0016.024	913.A016.024			960.0016.024	965.0016.024	
3.2/2.4	903.0032.024	902.0032.024	913.A032.024			960.0032.024	965.0032.024	
4.8/2.4	903.0048.024	902.0048.024	913.A048.024			960.0048.024	965.0048.024	
6.4/2.4	903.0064.024	902.0064.024	913.A064.024			960.0064.024	965.0064.024	

All flow rates shown were obtained pumping water at 20C (68F) with zero suction and delivery heads. Watson-Marlow, Loadsure, 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. © CHEM-SURE and © STA-PURE is a registered trademark of W.L. Gore & Associates Inc. Please state the product code when ordering pumps and tubing.

