

# Drive with 313D pumphead



300 series cased pump

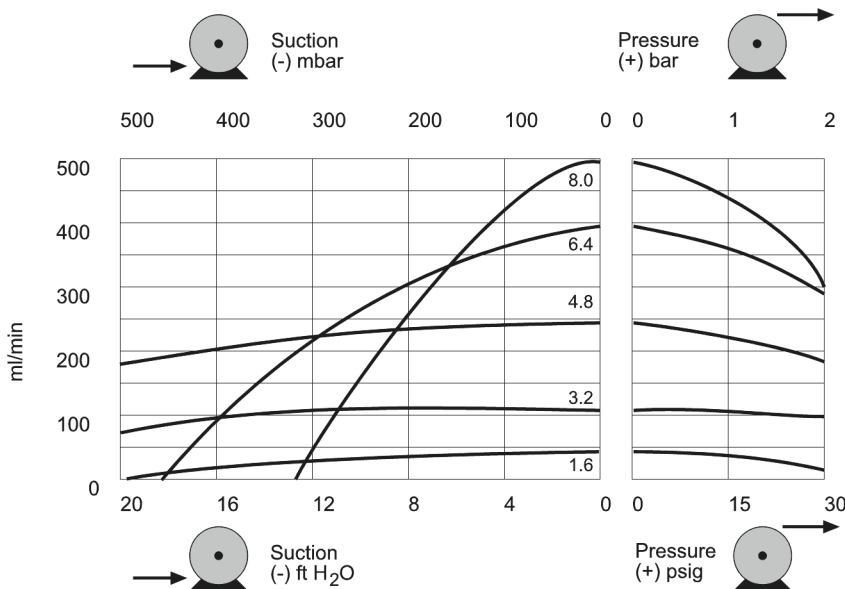
## Features and benefits

- Manual or remote 4-20 mA or 0-10 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



## Drive with 313D pumphead performance

313D three-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
323E/D	15 - 400	4.1 - 110	15 - 400	33 - 880	54 - 1400	75 - 2000
323S/D	3 - 400	0.81 - 110	3.0 - 400	6.6 - 880	11 - 1400	15 - 2000
323U/D	3 - 400	0.81 - 110	3.0 - 400	6.6 - 880	11 - 1400	15 - 2000
323Du/D	3 - 400	0.81 - 110	3.0 - 400	6.6 - 880	11 - 1400	15 - 2000
323Dz/D	2.0 - 400	0.54-110	2.0-400	4.4-880	7.2-1400	10-2000



313 pumphead (3 roller) at 100rpm

## Technical specifications

	Drive with 313D pumphead
Pumphead number of rollers	3
Pumphead number of channels	1
Max. flow rate	2000 ml/min
Min. flow rate	0.06 ml/min
Speed control ratio	133:1, 200:1, 27:1
Max. operating speed	400 rpm
Min. operating speed	2 rpm
Operating temperature range	5 to 40 °C
Operating temperature range	40 to 104 °F
Weight	4.7 kg
Weight	10.4 lbs
Drive control options	Du, Dz, E, S, U
Drive standards	CE, cETLus
Drive ingress rating	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
Drive power supply	1ph, 100-120 V, 220-240 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

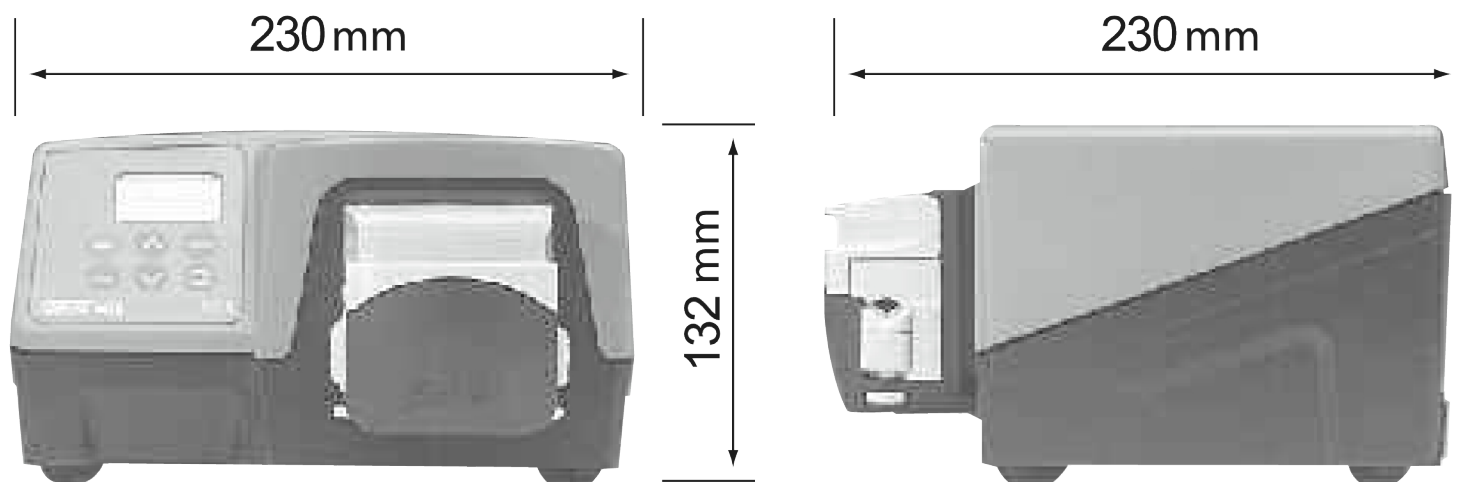
## Materials of construction

	Drive with 313D pumphead
Bearings	Carbon steel, Sintered bronze
Drive casework	ABS (Acrylonitrile butadiene styrene), Powder coated aluminum LM24
Mounting plate assembly	Glass filled Nylon, IXEF (Polyarylamide)
Pumphead body assembly	Glass filled polypropylene, IXEF (Polyarylamide), Stainless steel
Pumphead roller assembly	MoS2 filled Nylon 6 (Nylatron)
Pumphead rotor assembly	Electroless nickel plated hardened steel, Glass filled Nylon
Pumphead track	IXEF (Polyarylamide)
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.

## Drive with 313D 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

Pumps, drives and pumpheads 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*
323Dz/D	Drive and 313D three-roller pumphead	030.3184.3D0*
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	Three-roller pumphead for 1.6mm wall tube	033.3451.000
313X	Three-roller extension pumphead for 1.6mm wall tube (maximum five)	033.3431.000

\*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

Tubing product 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	
Bore/wall (mm)	STA-PURE®	STA-PURE®Series PCS	STA-PURE®Series PFL	Chem-Sure®	Fluorel®
0.8 / 1.6					970.0008.016
1.6 / 1.6	960.0016.016	961.0016.016	966.0016.016	965.0016.016	970.0016.016
3.2 / 1.6	960.0032.016	961.0032.016	966.0032.016	965.0032.016	970.0032.016
4.8 / 1.6	960.0048.016	961.0048.016	966.0048.016	965.0048.016	970.0048.016
6.4 / 1.6	960.0064.016	961.0064.016	966.0064.016	965.0064.016	970.0064.016
8.0 / 1.6	960.0080.016	961.0080.016	966.0080.016	965.0080.016	970.0080.016

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 users 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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