

# 323 Drive with 313D2 pumphead

**WATSON  
MARLOW  
Pumps**

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



CE

CE

## Technical specifications

323 Drive with 313D2 pumphead	
Pumphead number of rollers	3
Pumphead number of channels	1
Flow rate range	0.81 ml/min to 2000 ml/min
Speed control ratio	133:1, 27:1
Operating speed range	3 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	Du, E, 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	1.6, 3.2, 4.8, 6.4 mm
Compatible tubing wall thickness	2.4 mm

## Materials of construction

323 Drive with 313D2 pumphead	
Bearings	Carbon steel, Sintered bronze
Drive casework	Acrylonitrile butadiene styrene (ABS), Powder coated aluminium LM24
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)
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.

## 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		Partcode
Description		Partcode
323E	Drive only	036.3124.000*
323S	Drive only	036.3134.000*
323U	Drive only	036.3144.000*
323Du	Drive only	036.3154.000*
313DW2	Three-roller pumphead for 2.4 mm wall tube	033.3551.000

\*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	
1.6 / 2.4	933.0016.024	902.0016.024	913.A016.024	
3.2 / 2.4	933.0032.024	902.0032.024	913.A032.024	
4.8 / 2.4	933.0048.024	902.0048.024	913.A048.024	
6.4 / 2.4	933.0064.024	902.0064.024	913.A064.024	
8.0 / 2.4	933.0080.024	902.0080.024	913.A080.024	
Bore/wall (mm)	STA-PURE•Series PCS	STA-PURE•Series PFL		
1.6 / 2.4	961.0016.024	966.0016.024		
3.2 / 2.4	961.0032.024	966.0032.024		
4.8 / 2.4	961.0048.024	966.0048.024		
6.4 / 2.4	961.0064.024	966.0064.024		
8.0 / 2.4				

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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20 October 2025