

323S/MC4 Low-flow manual control variable speed microcassette pumps

300 series

Watson-Marlow Pumps

FEATURES

- High performance microprocessor controlled pumps
- Flow rates from 2µl to 53 ml/min per channel
- Precision digital speed control 1rpm steps from 3 to 110rpm
- Fitted with 314MC four-roller five channel microcassette pumphead
- Add one snap-fit 314MCX extension pumphead for ten channels of flow
- High visibility digital display and keypad lock
- Compact design, chemical resistant case, contemporary styling
- Zero maintenance, quiet brushless DC motor
- MemoDose facility for accurate single shot dosing
- Auto-restart for mains failure recovery and timer control
- Uses double segment, colour coded manifold tubing



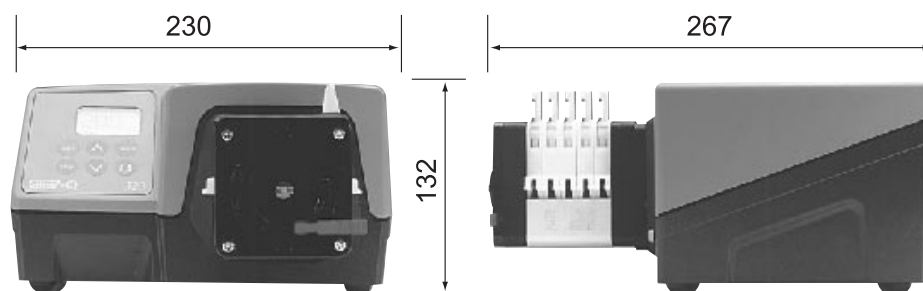
Watson-Marlow...Innovation in Full Flow

PERFORMANCE

Tube code	Orange/Black	Orange/Red	Orange/Blue	Orange/Green	Orange/Yellow	Orange/White	Black/Black	Orange/Orange	White/White	Red/Red	Grey/Grey	Yellow/Yellow	Yellow/Blue
Bore mm	0.13	0.19	0.25	0.38	0.50	0.63	0.76	0.88	1.02	1.14	1.29	1.42	1.52
3.0rpm	0.002	0.01	0.01	0.03	0.05	0.08	0.13	0.17	0.22	0.27	0.35	0.46	0.52
110rpm	0.09	0.3	0.5	0.9	1.7	3.1	4.6	6.4	8.1	9.9	13	17	19

Tube code	Blue/Blue	Green/Green	Purple/Purple	Purple/Black	Purple/Orange	Purple/White
Bore mm	1.65	1.85	2.05	2.29	2.54	2.79
3.0rpm	0.60	0.76	0.90	1.1	1.3	1.4
110rpm	22	28	33	40	47	53

TECHNICAL DRAWINGS



TECHNICAL SPECIFICATION

323Du/MC4	
Weight	5.0kg
Temperature	5C to 40C
Noise	<70dBA at 1m
Control ratio	133:1
Standards	CE, BS0800, IEC335-1, EN60529 (IP31)
Power supply	1ph, 100-120V, 220-240V 50/60Hz, 100VA

MATERIALS OF CONSTRUCTION

Component	Material
Drive	
Drive base	Powder coated aluminium casting
Drive top	Self-coloured ABS plastic
Pumphead	
Cassettes	Acetal copolymer-Kematal (PVDF optional)
Fixings	Stainless steel pins
Mounting plate, front and rear	Glass filled Nylon
Pumphead cradle	Aluminium extrusion, anodised
Rollers	MoS2 filled Nylon 6 (Nylatron)
Rotor spindle carriers	Machined aluminium
Spindles	Stainless steel
Fixings	Stainless steel
Sealed bearings	Carbon steel

ORDER INFORMATION

Product codes		
Description		Partcode
323S 3.0-400rpm	Drive only, 400rpm	036.3134.000*
314MC	four roller five channel pumphead	033.6453.000
314MCX	four roller five channel extension pumphead	033.6454.000

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

Tube ordering codes				
Colour code	Tube (mm)	Marpren* [*]	PVC	Silicone
Orange/black	0.13		981.0013.000	
Orange/red	0.19		981.0019.000	
Orange/blue	0.25	979.0025.000	981.0025.000	
Orange/green	0.38	979.0038.000	981.0038.000	
Orange/yellow	0.50	979.0050.000	981.0050.000	
Orange/white	0.63	979.0063.000	981.0063.000	983.0063.000
Black/black	0.76	979.0076.000	981.0076.000	983.0076.000
Orange/orange	0.88	979.0088.000	981.0088.000	983.0088.000
White/white	1.02	979.0102.000	981.0102.000	983.0102.000
Red/red	1.14	979.0114.000	981.0114.000	983.0114.000
Grey/grey	1.29	979.0129.000	981.0129.000	983.0129.000
Yellow/yellow	1.42	979.0142.000	981.0142.000	983.0142.000
Yellow/blue	1.52	979.0152.000	981.0152.000	983.0152.000
Blue/blue	1.65	979.0165.000	981.0165.000	983.0165.000
Green/green	1.85	979.0185.000	981.0185.000	983.0185.000
Purple/purple	2.05	979.0205.000	981.0205.000	983.0205.000
Purple/black	2.29	979.0229.000	981.0229.000	983.0229.000
Purple/orange	2.54	979.0254.000	981.0254.000	983.0254.000
Purple/white	2.79	979.0279.000	981.0279.000	983.0279.000

* For autoclavable Marprene tubing, please replace last "0" with "***" - for example 979.0238.00*

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

**WATSON
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Pumps**

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