

114FD economy drive pumps

114 series

Watson-Marlow Pumps

FEATURES AND BENEFITS

- Small size, compact and robust design
- Trouble-free continuous tube loading in seconds
- Reliable performance without any operator adjustments
- Automatic tube stretch for high accuracy and repetitive flow
- Safe and closed with visible rotor movement
- Spring-loaded operation for good pressure control
- Four roller pumphead, low pulsation
- Pumphead accepts seven bore sizes of tubing for flows up to 300 ml/min
- Robust iron-core, carbon brush motor design
- Low EMI thanks to integrated EMI suppression filter



Watson-Marlow...Innovation in Full Flow

PERFORMANCE

Flow rates (ml/min) Tubing 1.6mm wall

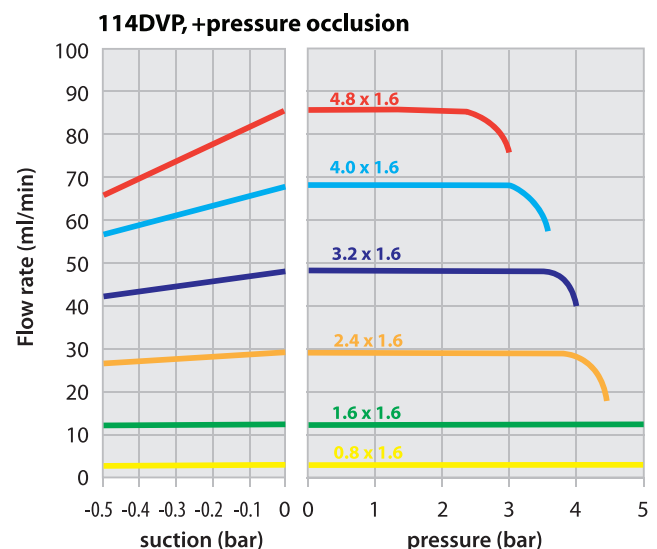
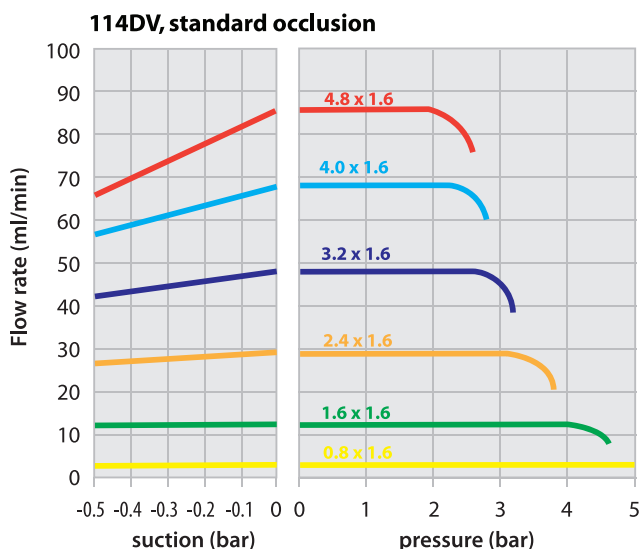
Tube bore (mm)	Speed (rpm)			
	(ml/rev)	60	190	350*
0.5	0.02	1.4	4.3	8.0
0.8	0.04	2.6	8.2	15
1.6	0.14	8.4	26.5	49
2.4	0.29	17.5	55	100
3.2	0.47	28.5	90.5	165
4.0	0.67	40.5	128	235
4.8	0.85	51	160	300

*Low pressure applications only. Pumpsil up to 4.8mm bore. Other tubing up to 3.2mm bore.

Custom options
Drives
Encoder, three pulses per motor revolution
Alternative speeds available
Pumpheads
No visible rotation - covered holes
Logic off switch and rotation sensor
Custom colours
Models for thin wall tubing
Custom occlusion settings

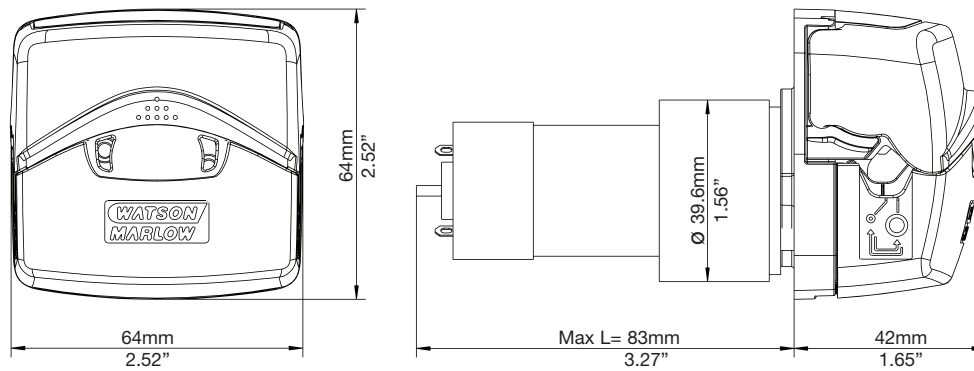
If you do not find exactly what you are looking for in this datasheet, we will make you a custom solution.

Pressure and flow performance



Flows obtained pumping water at 100rpm CCW-rotation

DIMENSIONS



TECHNICAL SPECIFICATION

Pump type	Single channel peristaltic pump
Tubing	1.6mm wall, continuous tubing
Recommended use	Intermittent use or light applications
Operation	CW and CCW
Approximate motor life	Up to 3000hrs
Supply voltage	12VDC, 24VDC
Power consumption	5W
Brushes	Carbon
Other	EMI noise reduction filter
Gearbox	Spur; 100:1, 30:1, 15:1
Operating temperature	-10 to +45C Please consider the tubing temperature range. Refer to www.wmpg.com
Weight	0.3kg
114DV standard pumphead	Optimised for tube life
114DVP +pressure pumphead	Optimised for pressure performance

MATERIALS OF CONSTRUCTION

Component	Material
Housing	IXEF PARA, Grilamid PA12
Rotor	IXEF PARA
Rollers	PTFE filled PBT
Bearings	Stainless steel ball bearings
Shafts	Stainless steel
Springs	Stainless steel
Adapter plate	IXEF PARA

ORDER INFORMATION

Product codes				
Description	Supply	Nominal speed (rpm)	with 114DV	with 114DVP
114FD drive	12VDC	60	010.5AM0.00A	010.5AM0.P0A
	24VDC	60	010.5BM0.00A	010.5BM0.P0A
	12VDC	190	010.5AS0.00A	010.5AS0.P0A
	24VDC	190	010.5BS0.00A	010.5BS0.P0A
	12VDC	350	010.5AU0.00A#	010.5AU0.P0A#
	24VDC	350	010.5BU0.00A#	010.5BU0.P0A#

Low pressure applications only. Pumpsil up to 4.8mm bore. Other tubing up to 3.2mm bore

Tube ordering codes for 114DV and 114DVP pumpheads					
Bore/wall	Pumpsil	Marprene	Bioprene	STA-PURE PFL	PVC*
0.5/1.6mm	913.A005.016	902.0005.016	933.0005.016		
0.8/1.6mm	913.A008.016	902.0008.016	933.0008.016		
1.6/1.6mm	913.A016.016	902.0016.016	933.0016.016	965.0016.016	E3603.016.16
2.4/1.6mm	913.A024.016	902.0024.016	933.0024.016		
3.2/1.6mm	913.A032.016	902.0032.016	933.0032.016	965.0032.016	E3603.032.16
4.0/1.6mm			933.0040.016		E3603.040.16
4.8/1.6mm	913.A048.016	902.0048.016	933.0048.016	965.0048.016	E3603.048.16
Bore/wall	Neoprene*	STA-PURE PCS			
0.5/1.6mm					
0.8/1.6mm	920.0008.016				
1.6/1.6mm	920.0016.016	960.0016.016			
2.4/1.6mm					
3.2/1.6mm	920.0032.016	960.0032.016			
4.0/1.6mm					
4.8/1.6mm	920.0048.016	960.0048.016			

*recommended for 114DVP +pressure pumphead only

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