

114FDC standard 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 170 ml/min
- High efficiency coreless motor design
- Smooth, cog-free operation



Watson-Marlow...Innovation in Full Flow

PERFORMANCE

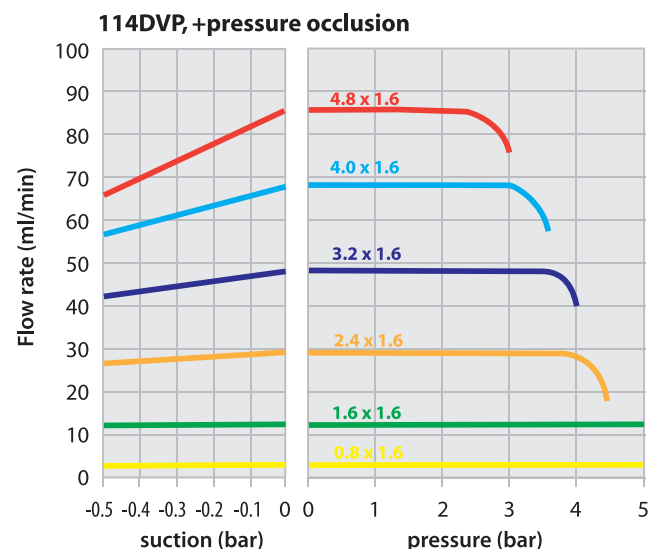
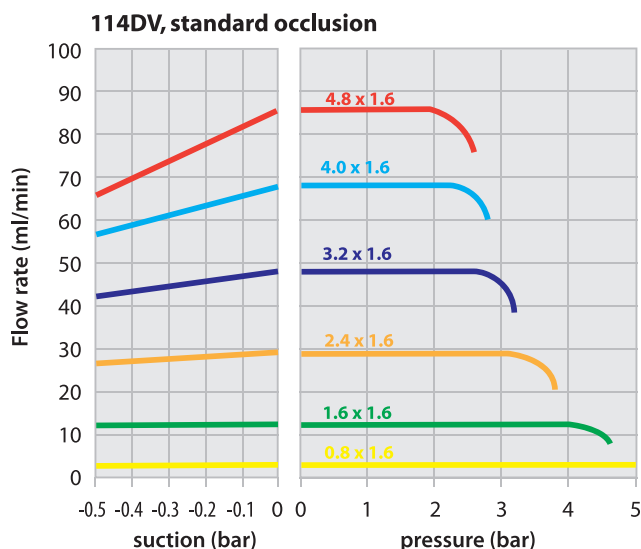
Flow rates (ml/min) Tubing 1.6mm wall

Tube bore (mm)	Speed (rpm)			
	(ml/rev)	30	100	200
0.5	0.02	0.7	2.2	4.6
0.8	0.04	1.3	4.3	8.6
1.6	0.14	4.2	14	28
2.4	0.29	8.7	29	58
3.2	0.47	14	47.5	95
4.0	0.67	20	67	135
4.8	0.85	25.5	85	170

Custom options
Drives
Encoder, 3 pulses per motor revolution (only 12V)
Alternative speeds available
Lower speed gear reductions
EMI noise reduction filter
Pumpheads
No visible rotation - covered holes
Logic off switch and rotation sensor
Custom colours
Models for thin wall tubing
Custom occlusion settings

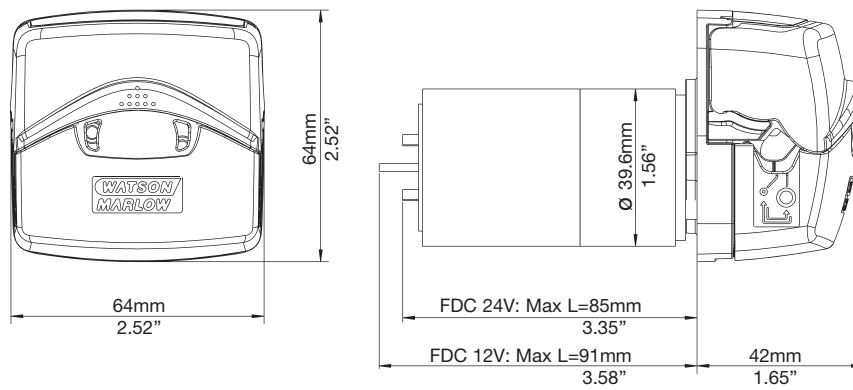
Pressure and flow performance

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



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	Continuous or intermittent applications
Operation	CW and CCW
Approximate motor life	Up to 5000hrs
Supply voltage	12-15VDC, 24-30VDC
Power consumption	5W
Brushes	Silver palladium precious metal
Speed control	PWM or voltage control
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	0.4kg
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
114FDC drive	12VDC	30	010.5DE0.00A	010.5DE0.P0A
	24VDC	30	010.5EE0.00A	010.5EE0.P0A
	12VDC	100	010.5DP0.00A	010.5DP0.P0A
	24VDC	100	010.5EP0.00A	010.5EP0.P0A
	12VDC	200	010.5DS0.00A	010.5DS0.P0A
	24VDC	200	010.5ES0.00A	010.5ES0.P0A

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**