

114FDC standard drive pumps

114 series

Watson-Marlow Pumps Group

FEATURES

- 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 170ml/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

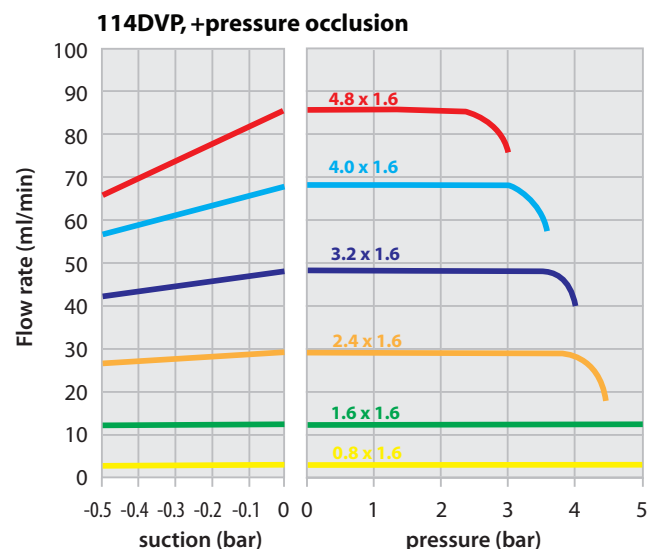
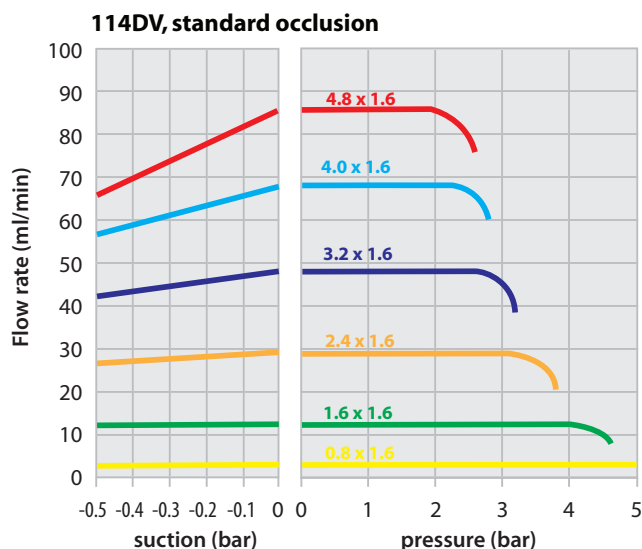
- Encoder, 3 pulses per motor revolution (only 12V)
- Alternative speeds available
- Lower speed gear reductions
- EMI noise reduction filter

Pumpheads

- No visible rotation - covered holes
- Logic off switch and rotation sensor
- Custom colours
- Logo less front
- Models for thin wall tubing
- Custom occlusion settings

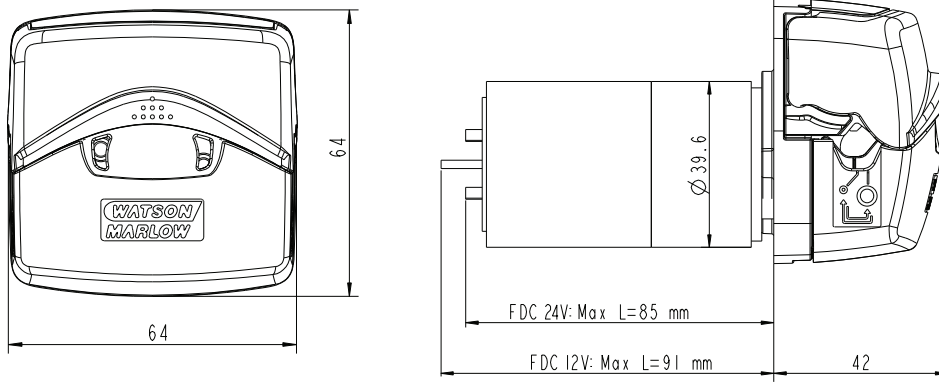
If you do not find exactly what you are looking for in this datasheet, we will make you a custom solution.

Pressure and flow performance



Flows obtained pumping water at 100rpm CCW-rotation

DIMENSIONS



SPECIFICATIONS

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 5000 hours
Supply voltage	12-15VDC, 24-30VDC
Power consumption	5 watts
Brushes	Silver palladium precious metal
Speed control	PWM or voltage control
Gearbox	Spur; 100:1, 30:1, 15:1
Operating temperature	-10 to +45°C 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 PEI, Grilamid PA12
Rotor	IXEF PEI
Rollers	PTFE filled PBT
Bearings	Stainless steel ball bearings
Shafts	Stainless steel
Springs	Stainless steel
Adapter plate	IXEF PEI

ORDER INFORMATION

Product codes				
Description	Supply	Nominal speed (rpm)	with 114DV	with 114DVP
114FDC drive	12 VDC	30	010.5DE0.00A	010.5DE0.P0A
	24 VDC	30	010.5EE0.00A	010.5EE0.P0A
	12 VDC	100	010.5DP0.00A	010.5DP0.P0A
	24 VDC	100	010.5EP0.00A	010.5EP0.P0A
	12 VDC	200	010.5DS0.00A	010.5DS0.P0A
	24 VDC	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	903.0005.016		
0.8/1.6mm	913.A008.016	902.0008.016	903.0008.016		
1.6/1.6mm	913.A016.016	902.0016.016	903.0016.016	965.0016.016	950.0016.016
2.4/1.6mm	913.A024.016	902.0024.016	903.0024.016		
3.2/1.6mm	913.A032.016	902.0032.016	903.0032.016	965.0032.016	950.0032.016
4.0/1.6mm			903.0040.016		950.0040.016
4.8/1.6mm	913.A048.016	902.0048.016	903.0048.016	965.0048.016	950.0048.016
Bore/wall	Neoprene*	STA-PURE PCS	Fluorel*		
0.5/1.6mm					
0.8/1.6mm	920.0008.016				
1.6/1.6mm	920.0016.016	960.0016.016	970.0016.016		
2.4/1.6mm					
3.2/1.6mm	920.0032.016	960.0032.016	970.0032.016		
4.0/1.6mm					
4.8/1.6mm	920.0048.016	960.0048.016	970.0048.016		

*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.

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Alitea

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