

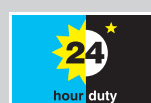
120F/DV, 120S/DV, 120U/DV cased pumps fitted with 114DV pumphead

100 series

Watson-Marlow Pumps Group

FEATURES AND BENEFITS

- Flow rates 0.002 to 190 ml/min at 2bar (30psi)
- Compact footprint requiring minimal benchtop space
- Superior speed control up to 20,000:1, $\pm 1\%$ set speed accuracy
- New 114DV single-channel pumphead with four rollers
- IP31 ingress protection for wipedown environments
- Maintenance-free brushless DC motor



Watson-Marlow...Innovation in Full Flow

TECHNICAL DATA

Functionality	120F	120S	120U
Manual control			
Fixed speed (CW direction)	•		
1 to 200rpm (200:1)		•	
0.1 to 200rpm (2000:1)			•
Numerical speed display		•	•
Reversible direction		•	•
Max (Prime)		•	•
Auto start		•	•
Remote control			
Run/stop, direction change, auto/man toggle, alarm			•
Analogue control			
0.01 to 200rpm (20,000:1)			•
Analogue speed input; 4-20mA, 0-10V			•
Tacho speed output; 0-5V			•
Security			
Keypad lock to protect set-up		•	•

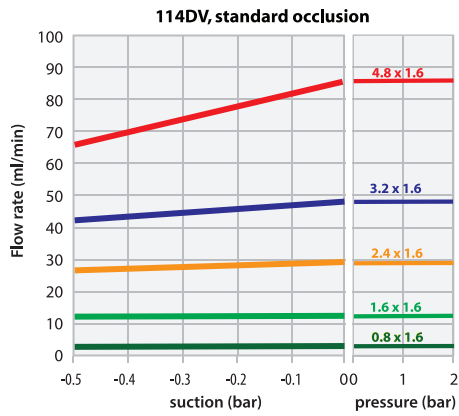
PERFORMANCE

Tube bore and flow rates 120F/DV (ml/min)							
Speed rpm	0.5mm	0.8mm	1.6mm	2.4mm	3.2mm	4.0mm ※ 1	4.8mm
10rpm	0.2	0.4	1.4	2.9	4.7	6.7	8.5
17rpm	0.3	0.7	2.4	4.9	8.0	11	14
31rpm	0.6	1.2	4.3	9.0	15	21	26
52rpm	1.0	2.1	7.3	15	24	35	44
220rpm	4.4	8.8	31	64	100	150	190

Tube bore and flow rates 120S/DV and 120U/DV (ml/min)							
Speed rpm	0.5mm	0.8mm	1.6mm	2.4mm	3.2mm	4.0mm ※ 1	4.8mm
1 - 200rpm	0.02 - 4.0	0.04 - 8.0	0.14 - 28	0.29 - 58	0.47 - 94	0.67 - 130	0.85 - 170
0.1 - 200rpm	0.002 - 4.0	0.004 - 8.0	0.014 - 28	0.029 - 58	0.047 - 94	0.07 - 130	0.085 - 170

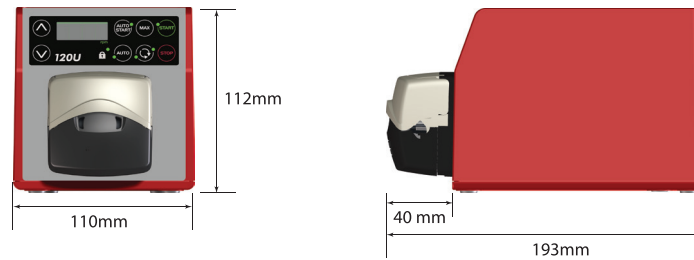
※1. 内径4.0mmのチューブは廃番になりました

PERFORMANCE



Flows obtained pumping water at 100rpm CCW-rotation
Typically 25% less pressure capacity in the CW direction

DIMENSIONS



TECHNICAL SPECIFICATION

120F, 120S, 120U	
Ingress rating	IP31 / NEMA 2
Enclosure	Wipedown
Suitability	Dry light-industrial environments
Humidity	Non-condensing 80% up to 31C, 88F, decreasing linearly to 50% at 40C, 104F
Temperature	5C to 40C (40F to 104F)
Pump weight	1.55kg (3lbs 4oz)
Control ratio	120F: fixed speed, 120S: 200:1 120U: Manual 2000:1, Auto 20,000:1
Torque rating	0.4Nm continuous duty
Noise	< 60dB(A) at 1m
Standard	CE, cETLus
Power supply	24VDC from mains transformer supplied (mains supply range 90~264VAC 47~63Hz)

MATERIALS OF CONSTRUCTION

Component	Material
Keypad	Polyester
Drive casework	ABS plastic
Drive shaft	Stainless Steel
Pumphead housing	IXEF PEI, Grilamid PA12
Rotor	IXEF PEI
Rollers	PTFE filled PBT
Bearings	Stainless steel
Shaft	Stainless steel
Springs	Stainless steel

ORDER INFORMATION

Pump and pumphead product codes			
Description	Partcode	Description	Partcode
120F/DV fixed speed 10rpm pump	010.6111.DA0	120S/DV manual speed pump	010.6131.DA0
120F/DV fixed speed 17rpm pump	010.6112.DA0	120U/DV manual and auto pump	010.6141.DA0
120F/DV fixed speed 31rpm pump	010.6113.DA0	114DV pumphead	013.6000.00A
120F/DV fixed speed 52rpm pump	010.6114.DA0		
120F/DV fixed speed 220rpm pump	010.6115.DA0		

Tubing 1.6mm wall thickness for 114DV							
	0.5mm	0.8mm	1.6mm	2.4mm	3.2mm	4.0mm *1	4.8mm
Bioprene	933.0005.016	933.0008.016	933.0016.016	933.0024.016	933.0032.016	903.0040.016	933.0048.016
Pumpsil (Silicone)	913.A005.016	913.A008.016	913.A016.016	913.A024.016	913.A032.016		913.A048.016
STA-PURE PCS			961.0016.016		961.0032.016		961.0048.016
Marprene	902.0005.016	902.0008.016	902.0016.016	902.0024.016	902.0032.016	902.0040.016	902.0048.016
STA-PURE PFL			966.0016.016		966.0032.016		966.0048.016

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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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