

520SN/R, 520UN/R, 520DuN/R IP66 pumps fitted with 520R pumphead for 1.6mm wall tubing

500 series

Watson-Marlow Pumps Group

FEATURES

- Flow rates from 0.004ml/min to 2.4 litre/min using 1.6mm wall thickness tubing
- 520R pumphead features large swept volume with sprung rollers for high accuracy, gentle pumping of shear-sensitive fluids
- Robust pumphead construction with PPS (polyphenylene sulphide) track and rotor and stainless steel rollers and bearings
- Precise 2200:1 speed control range from 0.1 to 220rpm in 0.1rpm increments
- High efficiency maintenance free brushless DC motor
- IP66 enclosure provides the highest level of ingress protection for arduous conditions and high pressure washdown environments
- Dual voltage, 115V/230V 50/60Hz



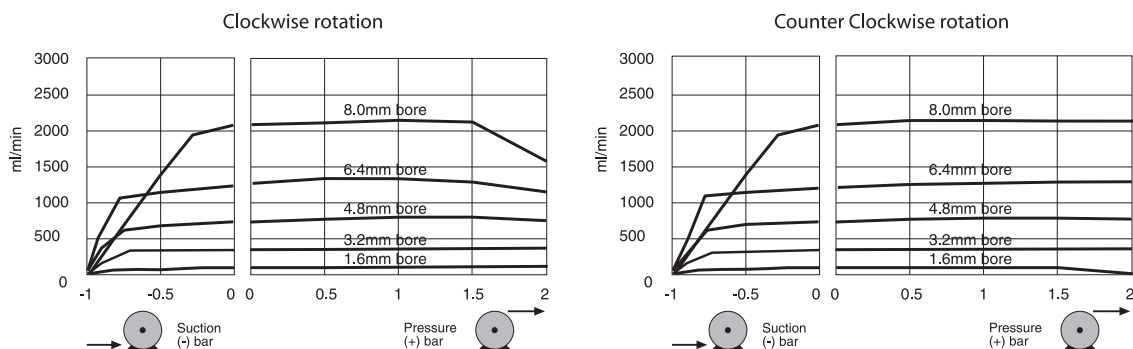
Watson-Marlow... Innovation in Full Flow

FUNCTIONALITY

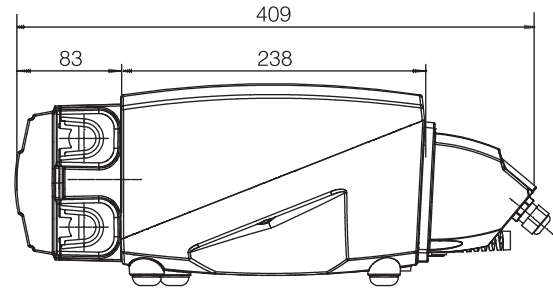
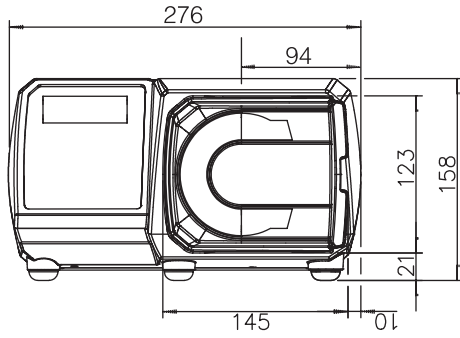
Pump drives	520SN	520UN	520DuN
Manual control			
MemoDose - accurate single shot dispensing	•	•	•
Full calibration with choice of flow units			•
Simple calibration to display flow in ml/min	•	•	
Choice of flowrate or speed display	•	•	•
Remote control			
Run/Stop, direction change, auto/manual toggle, leak detector input (via contact closure or 5V TTL or 24V industrial logic)		•	•
Remote operation of MemoDose (foot/hand-switch or logic input)		•	•
Analogue speed control			
Software programmable inputs; 0-10V, 1-5V or 4-20mA		•	•
Analogue outputs; 0-10V		•	
Analogue outputs; 0-10V, 4-20mA			•
Keypad/analogue input scaling (replacement of diaphragm pumps)			•
Tacho frequency output; 0-1258Hz		•	•
Digital communication			
RS485 network control			•
Security			
Basic security code to protect set-up		•	•

PERFORMANCE

Tube bore and flow rates (ml/min)							
Tube material	Speed	0.5mm	1.6mm	3.2mm	4.8mm	6.4mm	8.0mm
STA-PURE® Series PCS and Series PFL, Pumpsil	0.1 to 220rpm	0.004-97	0.04-97	0.18-390	0.40-870	0.70-1500	1.1-2400
Marprene/Bioprene, PureWeld XL	0.1 to 220rpm	0.004-92	0.04-92	0.17-370	0.38-830	0.67-1500	1.1-2300



DRAWINGS



All dimensions in mm

SPECIFICATIONS

	520SN, 520UN, 520DuN
Ingress rating	IP66 / NEMA 4X
Enclosure	Watertight/dustproof
Suitability	Corrosion-resistant for heavy industrial environments
Humidity	(Non-condensing) 80% to 31C, 88F, decreasing linearly to 50% at 40C, 104F
Temperature	5C to 40C (40F to 104F)
Pump weight	10.7kg, 23lb 9oz
Speed control ratio	2200:1
Torque rating	2.2Nm, continuous duty
Noise	< 70dB(A) at 1m
Standard	CE, cETLus
Power supply	115/230V 1ph 50/60Hz 135VA

MATERIALS OF CONSTRUCTION

Component	Material
Keypad	Polyester
Switch-plate	Glass filled ABS plastic
Rear blanking plate	Stainless steel 304
Drive casework	Pressure die-cast aluminium LM24
Case work coating	Alocrom pre-treatment, exterior grade polyester powder coat
Drive shaft	Electroless nickel plated carbon steel
Pumphead track	PPS (polyphenylene sulphide)
Guard	Polycarbonate
Rotor hub	Stainless steel 316
Roller arms, rotor	PPS (polyphenylene sulphide)
Rollers – main/guide	Stainless steel 316/Nylatron
Main roller bearings	Stainless steel with PTFE seals
Drain plug	Hytrel

ORDER INFORMATION

Pump and pumphead product codes

Description	Partcode	Description	Partcode
520R pumphead only	053.1011.100	520SN drive only	056.713N.000*
520SN/R pump	050.713N.100*	520UN drive only	056.714N.000*
520UN/R pump	050.714N.100*	520DuN drive only	056.715N.000*
520DuN/R pump	050.715N.100*		

* Supplied as 2.4 metre mains lead with plug. To specify American, European or United Kingdom 2.8m mains lead please specify A, E or U respectively. Replace the last zero with the mains lead code. For example - 050.7131.10A is a 520S/R pump with American mains lead.

Tubing 1.6mm wall thickness tubing for 520R

Tube bore	Tube	Pumpsil	PureWeld XL	Bioprene	STA-PURE® Series PCS	STA-PURE® Series PFL
0.5mm (1/50 in)	112	913.A005.016	941.0005.016	903.0005.016		
0.8mm (1/32 in)	13	913.A008.016		903.0008.016		
1.6mm (1/16 in)	14	913.A016.016	941.0016.016	903.0016.016	960.0016.016	965.0016.016
3.2mm (1/8 in)	16	913.A032.016	941.0032.016	903.0032.016	960.0032.016	965.0032.016
4.8mm (3/16 in)	25	913.A048.016	941.0048.016	903.0048.016	960.0048.016	965.0048.016
6.4mm (1/4 in)	17	913.A064.016	941.0064.016	903.0064.016	960.0064.016	965.0064.016
8.0mm (5/16 in)	18	913.A080.016	941.0800.016	903.0080.016	960.0080.016	965.0080.016
Tube bore	Tube	Marprene	GORE® Style 400	Neoprene	PVC	
0.5mm (1/50 in)	112	902.0005.016		920.0005.016		
0.8mm (1/32 in)	13	902.0008.016		920.0008.016		
1.6mm (1/16 in)	14	902.0016.016		920.0016.016	950.0016.016	
3.2mm (1/8 in)	16	902.0032.016	964.0032.016	920.0032.016	950.0032.016	
4.8mm (3/16 in)	25	902.0048.016		920.0048.016	950.0048.016	
6.4mm (1/4 in)	17	902.0064.016		920.0064.016	950.0064.016	
8.0mm (5/16 in)	18	902.0080.016		920.0080.016	950.0080.016	

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

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