

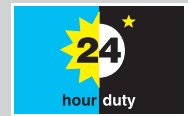
520S/R2, 520U/R2, 520Du/R2 IP31 pumps fitted with 520R2 pumphead for 2.4mm wall tubing

500 series

Watson-Marlow Pumps Group

FEATURES

- Flow rates from 0.004ml/min to 3.5 litre/min using 2.4mm wall thickness tubing
- 520R2 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
- IP31 ingress protection for light industrial and wipedown environments
- Dual voltage, 115V/230V 50/60Hz



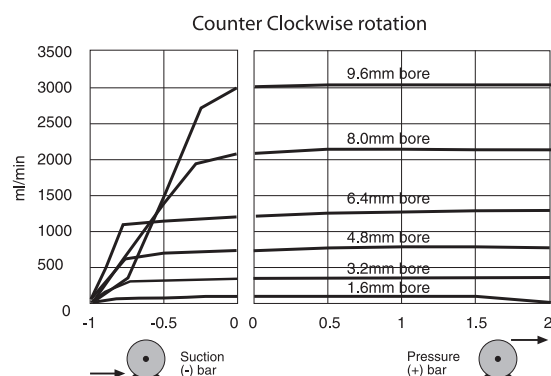
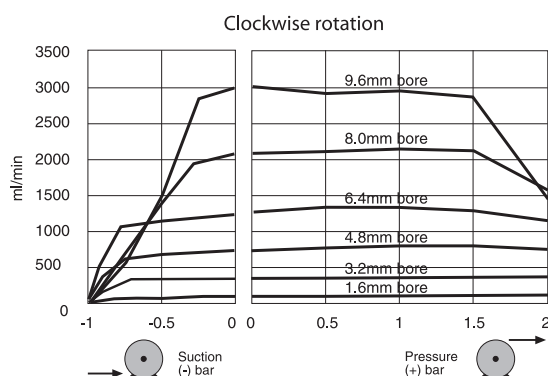
Watson-Marlow... Innovation in Full Flow

FUNCTIONALITY

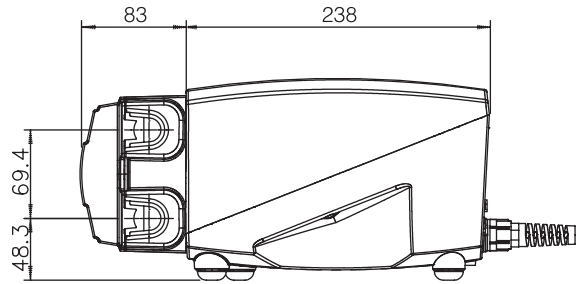
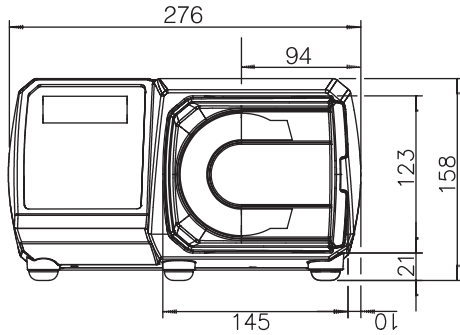
Pump drives	520S	520U	520Du
Manual control			
MemoDose - accurate single shot dispensing	•	•	•
Full calibration with choice of flow units			•
Simple calibration to display flow in ml/min	•	•	
Choice of flowrate or speed display	•	•	•
Remote control			
Run/Stop, direction change, auto/manual toggle, leak 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			
RS232 network control			•
Security			
Software configurable of collector outputs		•	•
Basic security code to protect set-up		•	•

PERFORMANCE

Tube bore and flow rates (ml/min)							
Tube material	Speed	1.6mm	3.2mm	4.8mm	6.4mm	8.0mm	9.6mm
STA-PURE® Series PCS and Series PFL, Pumpsil	0.1 to 220rpm	0.04-97	0.18-390	0.40-870	0.70-1500	1.1-2400	1.6-3500
Marprene/Bioprene, PureWeld XL	0.1 to 220rpm	0.04-92	0.17-370	0.38-830	0.67-1500	1.1-2300	1.5-3300



DRAWINGS



All dimensions in mm

SPECIFICATIONS

	520S, 520U, 520Du
Ingress rating	IP31 / NEMA 2
Enclosure	Wipe-down
Suitability	Dry industrial environments with non-corrosive atmosphere
Humidity	(Non-condensing) 80% to 31C, 88F, decreasing linearly to 50% at 40C, 104F
Temperature	5C to 40C (40F to 104F)
Pump weight	9.82kg, 21lb 10oz
Speed control ratio	2200:1
Torque rating	2.2Nm, continuous duty
Noise	< 70dB(A) at 1m
Standard	CE, cETLus

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
Main roller bearings	Stainless steel with PTFE seals
Drain plug	Hytrel

ORDER INFORMATION

Pump and pumphead product codes

Description	Partcode	Description	Partcode
520R2 pumphead only	053.1011.2L0	520S drive only	056.7131.000*
520S/R2 pump	050.7131.2L0*	520U drive only	056.7141.000*
520U/R2 pump	050.7141.2L0*	520Du drive only	056.7151.000*
520Du/R2 pump	050.7151.2L0*		

* Supplied as 2.4 metre mains lead without 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 2.4mm wall thickness for 520R2

Tube bore	Tube	Pumpsil	PureWeld XL	Bioprene	STA-PURE® Series PCS	STA-PURE® Series PFL
1.6mm (1/16in)	119	913.A016.024		903.0016.024	960.0016.024	965.0016.024
3.2mm (1/8in)	120	913.A032.024		903.0032.024	960.0032.024	965.0032.024
4.8mm (3/16in)	15	913.A048.024		903.0048.024	960.0048.024	965.0048.024
6.4mm (1/4in)	24	913.A064.024	941.0064.024	903.0064.024	960.0064.024	965.0064.024
8.0mm (3/16)		913.A080.024		903.0080.024	960.0080.024	965.0080.024
9.6mm (3/8in)		913.0096.024		903.0096.024	960.0096.024	965.0096.024
Tube bore	Tube	Marprene	GORE® Style 400			
1.6mm (1/16in)	119	902.0016.024				
3.2mm (1/8in)	120	902.0032.024				
4.8mm (3/16in)	15	902.0048.024	964.0048.024			
6.4mm (1/4in)	24	902.0064.024	964.0064.024			
8.0mm (3/16)		902.0080.024				
9.6mm (3/8in)		902.0096.024				

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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