

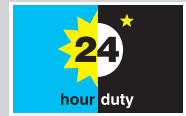
# 520SN/R2, 520UN/R2, 520DuN/R2 IP66 pumps fitted with 520R2 pumphead for 2.4mm wall tubing

# 500 series

Watson-Marlow Bredel

## FEATURES

- Flow rates from 0.04ml/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
- Maintenance free brushless DC motor
- IP66 enclosure provides the highest level of ingress protection for arduous conditions and high pressure washdown environments
- Manual control with additional flow calibration and MemoDose for accurate single shot dispensing
- Dual voltage, 115V/230V 50/60Hz



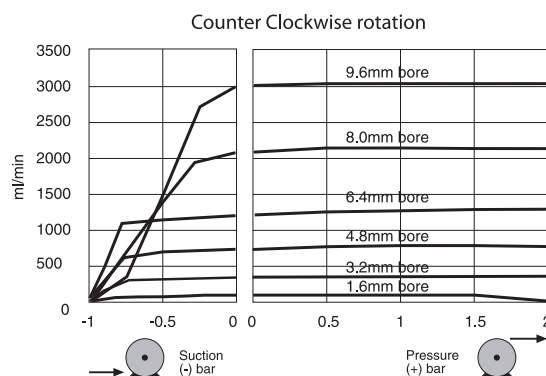
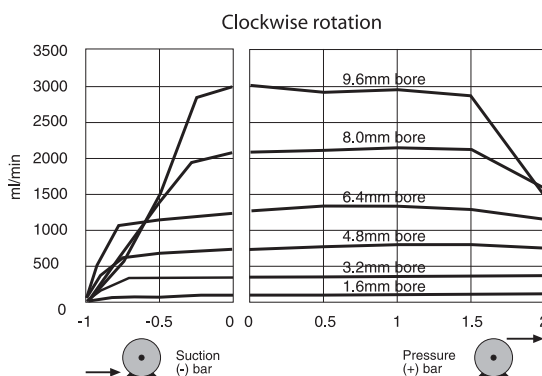
Watson-Marlow Bredel ... Value for life

## FUNCTIONALITY

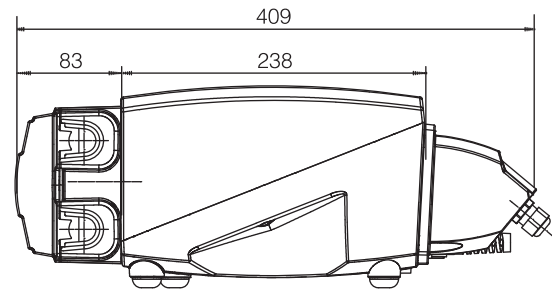
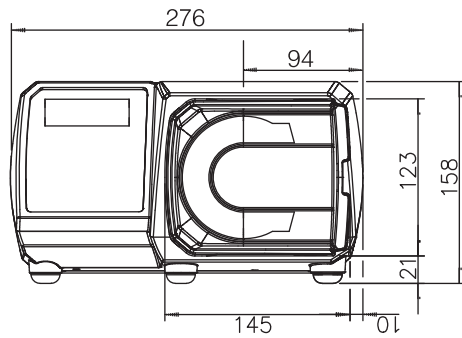
Pump drives	520SN	520UN	520DuN
<b>Manual control</b>			
Full calibration with choice of flow units			•
Simple calibration to display flow in ml/min	•	•	
Choice of flowrate or speed display	•	•	•
<b>Remote control</b>			
Run/Stop, direction change, Auto/manual toggle, Leak detector input (via contact closure or 5V TTL or 24V industrial logic)		•	•
Remote operation of MemoDose (foot/hand-switch or logic input)		•	•
<b>Analogue speed control</b>			
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		•	•
<b>Digital communication</b>			
RS485 network control			•
<b>Security</b>			
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, Chem-Sure, 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	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

	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
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 cover	PPS (polyphenylene sulphide)
Rollers – main/guide	Stainless steel 316/Nylatron
Main roller bearings	Stainless steel with PTFE seals

## ORDER INFORMATION

### Pump and pumphead product codes

Description	Partcode	Description	Partcode
520R2 pumphead only	053.1011.2L0	520SN drive only	056.713N.000*
520SN/R2 pump	050.713N.2L0*	520UN drive only	056.714N.000*
520UN/R2 pump	050.714N.2L0*	520DuN drive only	056.715N.000*
520DuN/R2 pump	050.715N.2L0*		

\*Replace 0 (2.4 metre mains lead without plug) with A, E or U for 2.8m American, European or UK mains lead

### Tubing 2.4mm wall thickness for 520R2

Tube bore	Tube	Bioprene	Marprene	Pumpsil	STA-PURE®	Chem-Sure®
1.6mm 1/16"	119	903.0016.024	902.0016.024	913.A016.024	960.0016.024	965.0016.024
3.2mm 1/8"	120	903.0032.024	902.0032.024	913.A032.024	960.0032.024	965.0032.024
4.8mm 3/16"	15	903.0048.024	902.0048.024	913.A048.024	960.0048.024	965.0048.024
6.4mm 1/4"	24	903.0064.024	902.0064.024	913.A064.024	960.0064.024	965.0064.024
8.0mm 5/16"	121	903.0080.024	902.0080.024	913.A080.024	960.0080.024	965.0080.024
9.6mm 3/8"	122	903.0096.024	902.0096.024	913.A096.024	960.0096.024	960.0096.024

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. ® Chem-Sure and ® STA-PURE are registered trademarks of W.L. Gore & Associates Inc. Please state the product code when ordering pumps and tubing.



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