

# 520SN/REL, 520UN/REL, 520DuN/REL 0-2 bar IP66 pumps fitted with LoadSure® element pumpheads

# 500 series

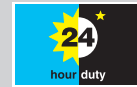
Watson-Marlow Pumps Group

## FEATURES

- Flow rates up to 3500ml/min at 2 bar (30psi) peak pressure with 520 LoadSure® elements
- 520REL 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



0 - 2 bar  
0 - 30 psi



*Watson-Marlow... Innovation in Full Flow*

## FUNCTIONALITY

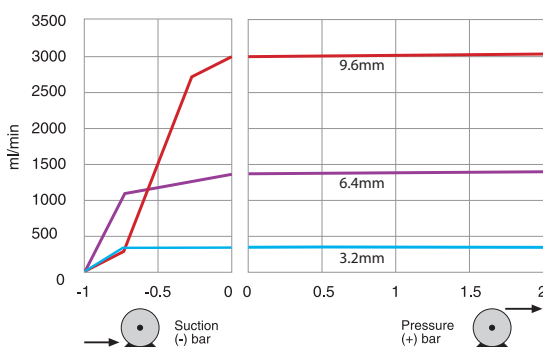
Pump drives	520SN	520UN	520DuN
<b>Manual control</b>			
MemoDose - accurate single shot dispensing	•	•	•
Full calibration with choice of flow units			•
Simple calibration to display flow in ml/min	•	•	•
Choice of flowrate or speed display	•	•	•
<b>Remote control</b>			
Run/Stop, direction change, auto/manual toggle, leak detector input (via contact closure or 5V TTL or 24V industrial logic)		•	•
Remote operation of MemoDose (foot/hand-switch or logic input)		•	•
IP66 outputs	•	•	•
<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

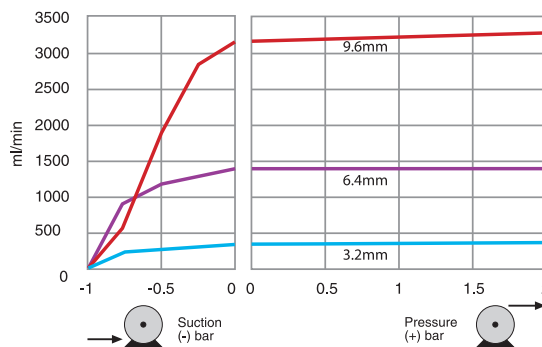
### LoadSure® Element tubing flow rates (ml/min)

Tube Material	Speed	3.2mm	6.4mm	9.6mm
Pumpsil, STA-PURE® Series PFL and Series PCS, Neoprene	0.1 to 220rpm	0.18-390	0.70-1500	1.6-3500
Marprene TL, Bioprene TL	0.1 to 220rpm	0.17-370	0.67-1500	1.5-3300

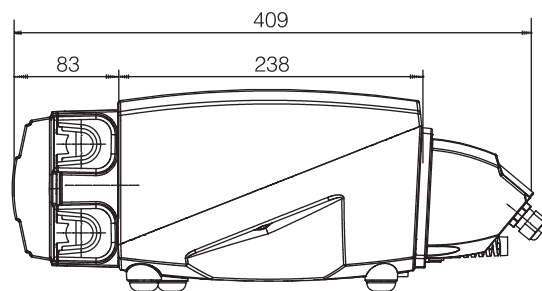
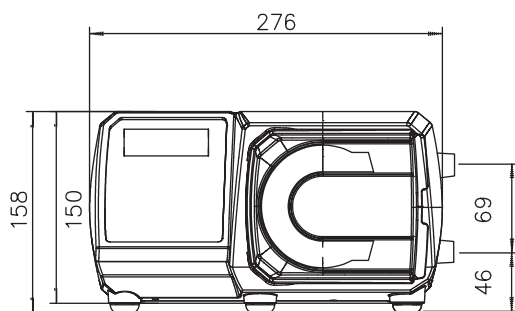
Marprene 0-2 bar 200rpm



STA-PURE® Series PCS 0-2 bar CCW 200rpm



## 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	(Condensing) 10-100% RH
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

## 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
Guard seal	Neoprene
Rotor hub	Stainless steel 316
Roller arms, rotor cover	PPS (polyphenylene sulphide)
Rollers – main/guide	Stainless steel 316
Main roller bearings	Stainless steel with PTFE seals
Drain port and nut	PP (polypropylene)
Drain plug	Hytrel

## ORDER INFORMATION

### Pump and pumphead product codes

Description	Partcode	Description	Partcode
520REL element pumphead only	053.1011.EL0	520SN drive only	056.713N.000*
520SN/REL pump	050.713N.EL0*	520UN drive only	056.714N.000*
520UN/REL pump	050.714N.EL0*	520DuN drive only	056.715N.000*
520DuN/REL pump	050.715N.EL0*	Leak Detector	059.8121.000

\* 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.

### Element product codes

	Industrial LoadSure® elements Quick-release PVDF connectors			Sanitary LoadSure® elements ¾ in Sanitary PVDF connectors		
	3.2mm	6.4mm	9.6mm	3.2mm	6.4mm	9.6mm
Pumpsil	913.A032.PFQ	913.A064.PFQ	913.A096.PFQ	913.A032.PFT	913.A064.PFT	913.A096.PFT
Bioprene TL				903.0032.PFT	903.0064.PFT	903.0096.PFT
STA-PURE® Series PCS				960.0032.PFT	960.0064.PFT	960.0096.PFT
STA-PURE® Series PFL	965.0032.PFQ	965.0064.PFQ	965.0096.PFQ	965.0032.PFT	965.0064.PFT	965.0096.PFT
Marprene TL	902.0032.PFQ	902.0064.PFQ	902.0096.PFQ			
GORE® Style 400		964.0064.PFQ				
Neoprene	920.0032.PFQ	920.0064.PFQ	913.A096.PFQ			

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.

**WATSON  
MARLOW**  
Watson-Marlow Pumps Group

Watson-Marlow Pumps Group  
Falmouth, Cornwall England TR11 4RU  
Tel: +44 (0)1326 370370 Fax: +44 (0)1326 376009  
www.wmpg.com info@wmpg.uk

*Watson-Marlow...Innovation in Full Flow*