

# 520US/REL, 520DuS/REL 0-30 psi NEMA 4X SCADA pumps fitted with LoadSure® element pumpheads

# 500 series

Watson-Marlow Bredel

## FEATURES

- Flow rates up to 55.5 gph (3500 ml/min) at 30psi (2 bar) 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
- Maintenance free brushless DC motor
- NEMA 4X washdown protection for corrosive and heavy duty industrial environments
- Manual control with additional flow calibration and MemoDose for accurate single shot dispensing
- Dual voltage, 115V/230V 50/60Hz

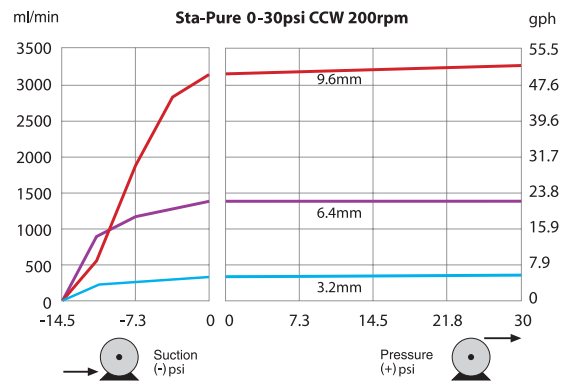
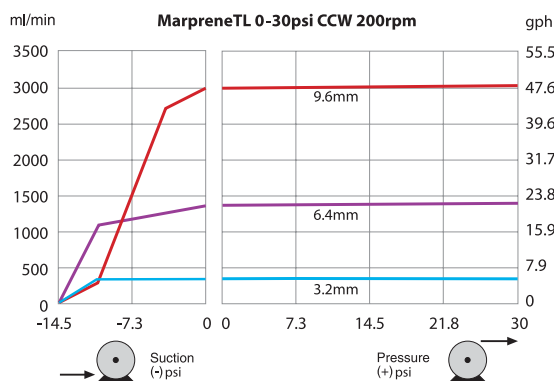


## FUNCTIONALITY

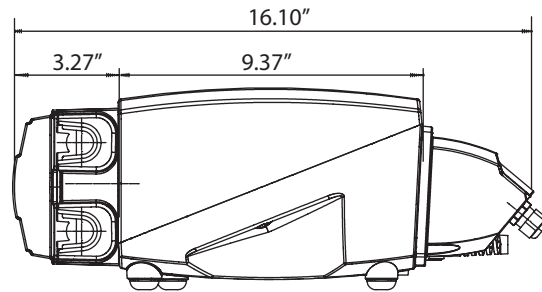
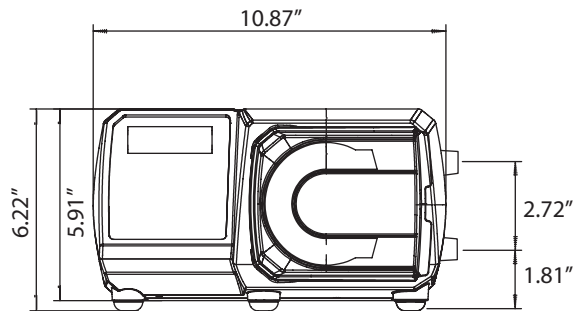
Pump drives	520US	520DuS
<b>Manual control</b>		
Full calibration with choice of flow units		•
Simple calibration to display flow in ml/min	•	
Choice of flowrate or speed display	•	•
<b>Remote control</b>		
Run/Stop, direction change, Auto/manual toggle, Leak detector input (via 115V AC industrial logic)	•	•
Remote operation of MemoDose (foot/hand-switch or logic input)	•	•
<b>Analog speed control</b>		
Software programmable inputs; 0-10V, 1-5V or 4-20mA	•	•
Analog outputs; 0-10V (8 bit resolution)	•	
Analog outputs; 0-10V, 4-20mA (8 bit resolution)		•
Keypad/analog input scaling (replacement of diaphragm pumps)		•
Tacho frequency output; 0-1258Hz	•	•
<b>Digital communication</b>		
RS232 network control		•
<b>Security</b>		
Basic security code to protect set-up	•	•

## PERFORMANCE

LoadSure® Element tubing flow rates, ml/min(gph)				
Tube Material	Speed	3.2mm	6.4mm	9.6mm
Pumpsil, Sta-Pure, Chem-Sure, Neoprene	0.1 to 220rpm	0.18-390(0.003-6.2)	0.70-1500(0.01-23.8)	1.6-3500(0.03-55.5)
Marprene TL, Bioprene TL	0.1 to 220rpm	0.17-370(0.003-5.9)	0.67-1500(0.01-23.8)	1.5-3300(0.02-52.3)



## DRAWINGS



## SPECIFICATIONS

	520US, 520DuS
Ingress rating	NEMA 4X
Enclosure	Washdown / watertight / dustproof
Suitability	Corrosion resistant for heavy industrial environments
Humidity	(Condensing) 10-100% RH
Temperature	40F to 104F
Pump weight	23lb 9oz
Control ratio	2200:1
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 aluminum LM24
Case work coating	Alcrom pre-treatment, exterior grade polyester powder coat
Drive shaft	Electroless nickel plated carbon steel
Pumphead track	PPS (polyphenylene sulphide)
Guard - inner/outer	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	Hytre

## ORDER INFORMATION

### Pump and pumphead product codes

Description	Partcode	Description	Partcode
520REL element pumphead only	053.1011.EL0	520US drive only	056.714S.00A
520US/REL	050.714S.ELA	520DuS drive only	056.715S.00A
520DuS/REL	050.715S.ELA	Leak Detector	059.8121.000

### Element product codes

	Industrial LoadSure® elements Quick-release PVDF connectors			Sanitary LoadSure® elements <sup>3</sup> / <sub>4</sub> in Sanitary PVDF connectors		
	3.2mm	6.4mm	9.6mm	3.2mm	6.4mm	9.6mm
Marprene TL	902.0032.PFQ	902.0064.PFQ	902.0096.PFQ			
Pumpsil	913.A032.PFQ	913.A064.PFQ	913.A096.PFQ	913.A032.PFT	913.A064.PFT	913.A096.PFT
Neoprene	920.0032.PFQ	920.0064.PFQ	920.0096.PFQ			
Chem-Sure	965.0032.PFQ	965.0064.PFQ	965.0096.PFQ	965.0032.PFT	965.0064.PFT	965.0096.PFT
Bioprene TL				903.0032.PFT	903.0064.PFT	903.0096.PFT
Sta-Pure				960.0032.PFT	960.0064.PFT	960.0096.PFT

All flow rates shown were obtained pumping water at 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. Pumpsil is a trademark of Watson-Marlow Limited. Please state the product code when ordering pumps and tubing.



Watson-Marlow-Bredel Pumps  
37 Upton Technology Park  
Wilmington, MA 01887  
Tel: 800 282 8823 Fax: 978 658 0041  
www.watson-marlow.com support@watson-marlow.com