

# 620S, 620SN, 620U, 620UN, 620Du and 620DuN with 620R, 620RE and 620RE4 Mk II pumpheads

# 600 series

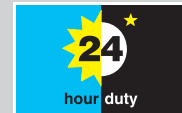
Watson-Marlow Bredel

## COMMON FEATURES AND BENEFITS

- Flow from 0.001 litre/min to 18 litre/min
- 4 bar pressure with LoadSure™ elements (STA-PURE, Bioprene™ or Marprene™)
- 2650:1 control ratio (0.1 to 265rpm speed range)
- Digital speed adjustment with choice of 0.1rpm, 0.5rpm, 1rpm, 2rpm, 5rpm and 10rpm step changes
- MemoDose for accurate single-shot dispensing
- Maintenance-free brushless DC motor
- Smooth easy-to-clean enclosure free from bug traps
- Wireless pumphead guard



- Compatible with Mk II 620R, 620RE and 620RE4 heads only (not 620L and 620LG - see separate datasheet)
- Two head positions as standard (inlet/outlet ports on the right or facing downwards)
- Retractable pumphead rollers for CIP, SIP and easy tube loading



Watson-Marlow Bredel ... Value for life

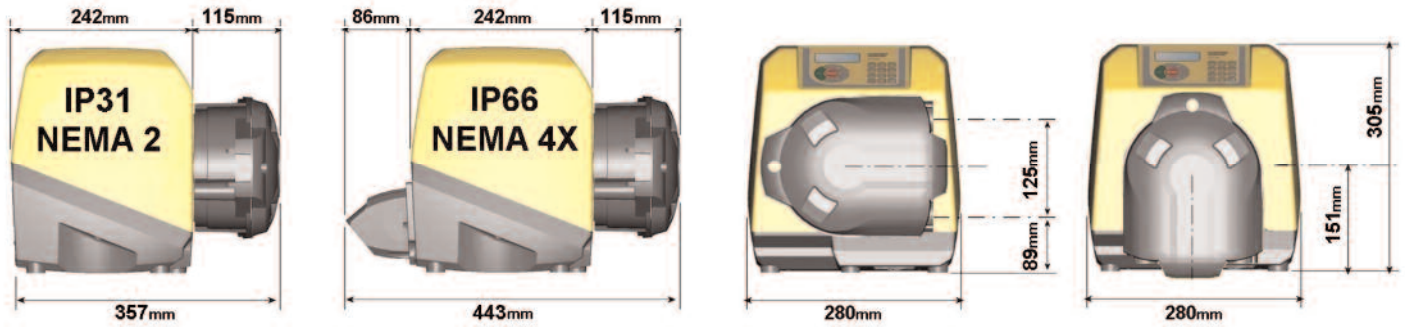
## TECHNICAL DATA

Functionality	620S	620SN	620U	620UN	620Du	620DuN
Enclosure - ingress protection rating	IP31	IP66	IP31	IP66	IP31	IP66
<b>Manual control</b>						
Digital speed control with simple calibration to display flow	•	•	•	•	•	•
Choice of flow rate display; metric or imperial units					•	•
Numeric keypad for entry of speed, flow or PIN code					•	•
<b>Remote control</b>						
Run/stop, direction change, auto/manual mode, leak detector input (via contact closure or 5V TTL to 24V industrial logic)			•	•	•	•
Remote operation of MemoDose (foot/handswitch or logic input)			•	•	•	•
Four programmable digital status outputs through 24V, 30W relays				•		•
<b>Analogue speed control</b>						
Software programmable inputs; 0-10V, 1-5V or 4-20mA			•	•	•	•
Analogue outputs; 0-10V (8 bit resolution)			•	•		
Analogue outputs; 0-10V, 4-20mA (high resolution)					•	•
Keypad/analogue input scaling (replacement of diaphragm pumps)					•	•
Tachometer output; 0-1478Hz			•	•	•	•
<b>Digital communication</b>						
Digital network serial control					RS232	RS485
<b>Security</b>						
Basic security code to protect set-up			•	•		
Dual operator/supervisor PIN code protection of pump settings					•	•

## PERFORMANCE

Flow ranges (l/min) (over 0.1 to 265rpm speed range)	Continuous tubing				LoadSure™ element tubing			
	620R (2 rollers)				620RE (2 rollers)		620RE4 (4 rollers)	
Tubing material	6.4mm	9.6mm	12.7mm	15.9mm	12mm	17mm	12mm	17mm
Marprene™ TL, Bioprene™ TL	0.001-3.4	0.003-6.6	0.004-11	0.01-12	0.004-9.8	0.01-16	0.003-8.3	0.004-11
Pumpsil silicone	0.001-3.2	0.003-7.2	0.004-11	0.01-15	0.004-10	0.01-16	0.003-8.7	0.004-11
STA-PURE, Neoprene	0.001-3.2	0.003-6.6	0.004-11	0.01-16	0.004-11	0.01-18	0.003-9.0	0.010-13

## TECHNICAL DRAWINGS



## TECHNICAL SPECIFICATION

	620S, 620U and 620Du	620SN, 620UN and 620DuN
Ingress rating	IP31 / NEMA 2	IP66 / NEMA 4X
Enclosure	Wipedown, vented	Watertight, dustproof
Suitability	Dry industrial environments with non-corrosive atmospheres	Corrosion resistant for heavy industrial environments
Humidity	(Non-condensing) 80% to 31C, 88F, decreasing linearly to 50% at 40C, 104F	(Condensing) 10-100% RH
Temperature	5C to 40C (40F to 104F)	5C to 40C (40F to 104F)
Pump weight	19.6kg (43lb 3oz) with 620R, 620RE 20.1kg (44lb 5oz) with 620RE4	20.5kg (45lb 3oz) with 620R, 620RE 21.0kg (46lb 5oz) with 620RE4
Control ratio	2650:1	2650:1
Torque rating	6Nm, continuous duty	6Nm, continuous duty
Noise	< 70dB(A) at 1m	< 70dB(A) at 1m
Standards	CE, cETLus	CE, cETLus
Power supply	100-120V/200-240V, 1ph, 50/60Hz	100-120V/200-240V, 1ph, 50/60Hz

## MATERIALS OF CONSTRUCTION

Component	Material
Keypad	Polyester
Switch-plate	ABS PA-765
Rear blanking plate	Stainless steel 316
Drive casework	Pressure die-cast aluminium (top - LM6, base - LM24)
Case work coating	Alcrom pre-treatment, exterior grade polyester powder coat
Drive shaft	Stainless steel 440C
Pumphead track	Powder coated aluminium LM24
Guard - inner/outer	Grilamid TR55/Polyurethane PBA
Rotor hub, roller arms	Fortron 1140L4 (PPS)
Rotor cover	Dupont Hytrel G5544
Rollers - main/guide	Stainless steel 303/Nylatron
Main roller bearings	Carbon steel
Tube clamp sets	Polypropylene

## ORDER INFORMATION

### Product codes

	620R MkII head	620RE MkII head	620RE4 MkII head	Accessories			
Pumphead only	063.4211.000	063.4231.000	063.4431.000	Footswitch	Handswitch	RS232 cable	Tube monitor
<b>IP31/NEMA 2 wipe-down pumps</b>				<b>IP31</b>	<b>IP31</b>	<b>IP31</b>	<b>IP31</b>
620S	060.4131.020*	060.4131.E20*	060.4131.E40*	n/a	n/a	n/a	n/a
620U	060.4141.020*	060.4141.E20*	060.4141.E40*	059.3002.000	059.3022.000	n/a	059.4501.520
620Du	060.4151.020*	060.4151.E20*	060.4151.E40*	059.3002.000	059.3022.000	059.3121.000	059.4501.520
* Replace 0 (plug-less) with A, E or U for 2.8m American, European or UK mains plug							
<b>IP66/NEMA 4X wash-down pumps</b>				<b>IP55</b>			<b>IP65</b>
620SN	060.413N.020**	060.413N.E20**	060.413N.E40**	n/a	n/a	n/a	n/a
620UN	060.414N.020**	060.414N.E20**	060.414N.E40**	069.5231.000	n/a	n/a	059.450N.520
620DuN	060.415N.020**	060.415N.E20**	060.415N.E40**	069.5231.000	n/a	n/a	059.450N.520
** Replace 0 (plug-less) with A for 2.8m American mains lead							

	Continuous tubing Sanitary				Sanitary LoadSure™ elements		Industrial LoadSure™ elements	
	(for 620R pumphead)				(3/4" Tri-clamp PVDF connectors)		(3/4" Cam & Groove PP connectors)	
	6.4mm	9.6mm	12.7mm	15.9mm	12mm	17mm	12mm	17mm
STA-PURE	960.0064.032	960.0096.032	960.0127.032	960.0159.032	960.0120.PFT	960.0170.PFT		
CHEM-SURE	965.0064.032	965.0096.032	965.0127.032	965.0159.032	965.0120.SST*	965.0170.SST*		
Bioprene TM					903.P120.PFT	903.P170.PFT		
Bioprene TL	903.0064.032	903.0096.032	903.0127.032	903.0159.032	903.0120.PFT	903.0170.PFT		
Marprene TM							902.P120.PPC	902.P170.PPC
Marprene TL	902.0064.032	902.0096.032	902.0127.032	902.0159.032			902.0120.PPC	902.0170.PPC
Pumpsil silicone	913.A064.032	913.A096.032	913.A127.032	913.A159.032	913.A120.PFT	913.A170.PFT	913.A120.PPC	913.A170.PPC
Neoprene	920.0064.032	920.0096.032	920.0127.032	920.0159.032			920.0120.PPC	920.0170.PPC
PVC	950.0064.032	950.0096.032	950.0127.032	950.0159.032				
Fluorel	970.0064.032	970.0096.032	970.0127.032	970.0159.032				

NB: 4 bar pressure capability with STA-PURE, Bioprene TM and Marprene TM

\*SST = sanitary stainless steel connectors

All flow rates shown were obtained pumping water at 20C (68F) with zero suction and delivery heads. Watson-Marlow, Loadsure, 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. © CHEM-SURE and © STA-PURE is a registered trademark of W.L. Gore & Associates Inc. Please state the product code when ordering pumps and tubing.



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