

**WATSON
MARLOW**
Pumps



Industrial process pumps

robust · accurate · intuitive

NEW



- Flexible and scalable fluid handling with low cost of ownership
- Superior flow stability up to 33 L/min from three product ranges
- Equivalent accuracy and the same methods of control from 530, 630 and 730 pumps



530 flows between 0.004 ml/min to 3.5 L/min
630 flows between 0.0003 to 19 L/min
730 flows between 0.0005 to 55 L/min

Maintaining process integrity with visual status indication and an intuitive user interface

Simplify your system design with Watson-Marlow peristaltic technology

Ultimate process security with a 3-level PIN lock

875,000:1 flow control range, compared with 100:1 from a typical diaphragm metering pump



IP66 NEMA 4X module for watertight/dustproof protection in industrial environments



Industrial integration—manual, remote, analogue and digital communication, plus PROFIBUS

Reduce process downtime—one-minute maintenance

Safe operation with complete isolation of food ingredients or hazardous chemicals

Optimise metering of abrasive and viscous fluids, gases and suspended solids

Why Watson-Marlow makes the right pump for you

Watson-Marlow Fluid Technology Group is unique in being able to work with you at every process step to ensure your fluid transfer requirements are achieved. Whether performing flavouring addition or chemical metering, we have a solution which can cut pump downtime and reduce chemical costs.

In continuous daily use in food processing, manufacturing and environmental industries, peristaltic pumps play an increasingly important role for handling aggressive and shear sensitive fluids without contamination. The pumped fluid is totally contained within the tube, providing complete isolation of the fluid.

Confident controllability

Watson-Marlow pumps integrate seamlessly into your process control system. Pumps are self-contained and easily configurable, so there is no need for separate variable frequency drives or complex control devices.





Food and beverage

Food manufacturers demand many things from their process equipment, but the highest priority is maintaining product integrity throughout production. The 530, 630 and 730 pumps safely dose, meter and transfer colours, flavours and additives, providing linear flow rates from microlitres through to 33 L/min. Fluids are pumped from source to delivery using FDA 21CFR177.XXXX compliant tubing materials, with EC 1935/2004 also available on some materials.

Environmental

Flexible and scalable fluid handling with accurate flow rates ranging from 0.0040 ml/min to 55 L/min over the three pump series.

Widely used in water and wastewater treatment for metering sodium hypochlorite and other common disinfection chemicals, 530, 630, and 730 pumps are self-contained and easily integrated into your process control system.

A typical diaphragm metering pump has a flow control range of 100:1, in comparison to 875,000:1 from a Watson-Marlow process pump, with intuitive menu structures to provide visual status indication and streamlined setup.



Industrial

When higher pressure flow rates are a necessity, the process pumps range includes LoadSure tube element pumpheads to provide accurate and repeatable pumping up to 7bar.

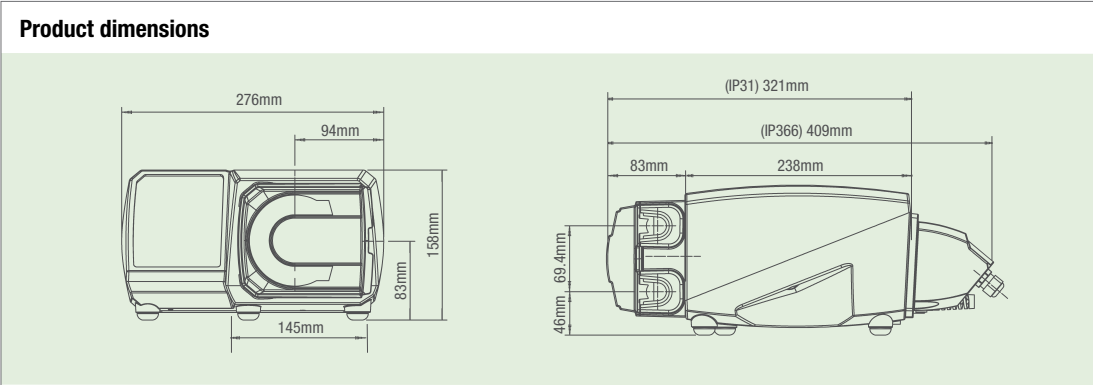
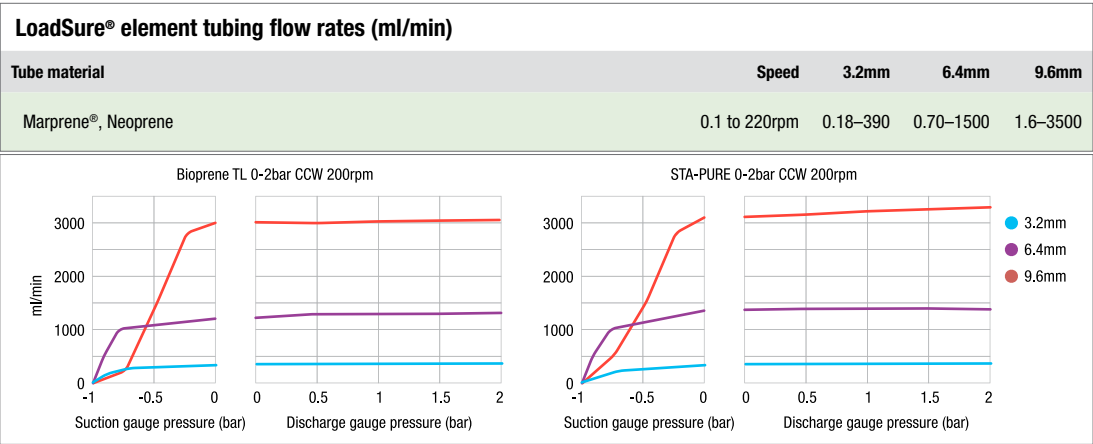
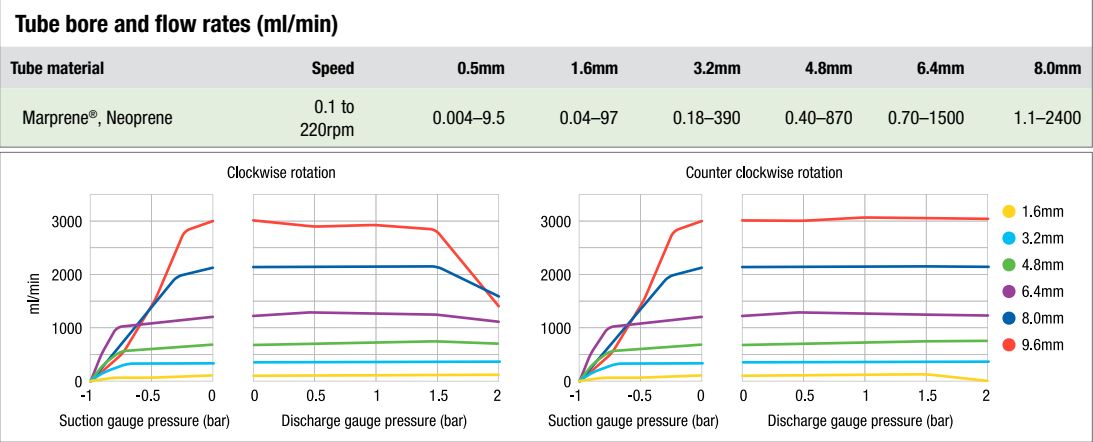
LoadSure pumps enable one minute maintenance, cutting downtime and reducing costs.

Four drive options offer configurable digital communication for ultimate process control.

| Feature | 530Du 630Du 730Du | 530DuN 630DuN 730DuN | 530U 630U 730U | 530UN 630UN 730UN | 530S 630S 730S | 530SN 630SN 730SN | 530Bp/530BpN 630Bp/630BpN 730Bp/730BpN |
|--|-------------------------|----------------------------|----------------------|-------------------------|----------------------|-------------------------|--|
| Manual control | | | | | | | |
| Intuitive keypad and colour display. Choice of flow rate or speed display | • | • | • | • | • | • | • |
| Full calibration with choice of flow units | • | • | • | • | • | • | • |
| Remote control | | | | | | | |
| Configurable Start/Stop, leak detector and pressure switch input (via contact closure or 5V TTL or 24V industrial logic) | • | • | • | • | | | |
| Direction change and auto/manual toggle input (via contact closure or 5V TTL or 24V industrial logic) | • | • | • | • | | | |
| Remote operation of MemoDose (foot/hand-switch or logic input) | • | • | • | • | | | |
| Four configurable digital status outputs through 24V, 30W relays | | • | | • | | | |
| Software configurable IP31 outputs | • | | • | | | | |
| Analogue speed control | | | | | | | |
| Fully configurable inputs; 0–10V or 4–20mA. analogue outputs; 0–10V, 4–20mA | • | • | • | • | | | |
| Keypad/analogue input scaling (replacement of diaphragm pumps) | • | • | | | | | |
| Tacho frequency output; 0–991Hz | • | • | • | • | | | |
| Digital communication | | | | | | | |
| RS485 network control | | • | | | | | |
| RS232 network control | • | | | | | | |
| Fieldbus technology | | | | | | | |
| PROFIBUS DP V0 | | | | | | | • |
| Security | | | | | | | |
| 3-level security PIN lock | • | • | • | • | • | • | • |



- » Flow rates from 0.0040 to 3,300 ml/min and pressures up to 7bar
- » Colour display and intuitive menu structure
- » IP31 or IP66 cased pumps, manual, remote, analogue or RS485 digital communication, plus PROFIBUS
- » Four drive options and three pumpheads for single and multi-channel flows
- » Precise 2200:1 speed control range



520R/520R2
Continuous tubing pumpheads for pressures up to 2 bar and flows to 3,500 ml/min



520REL/520REM/520REH
LoadSure tube element pumpheads for pressures up to 2, 4 or 7 bar operation



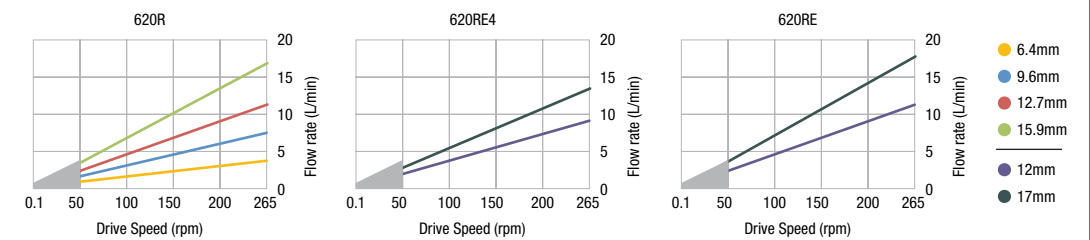
313D/314D
Flip top pumpheads for up to six individual channels of flow

630 Technical data



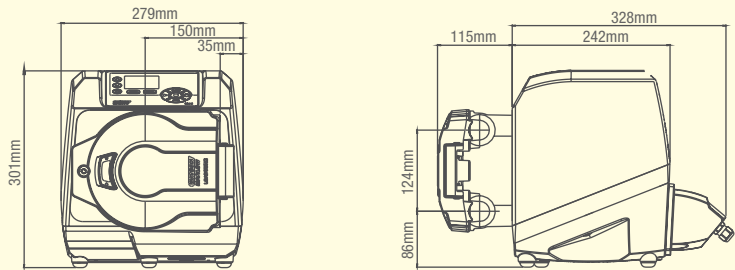
- » Flow rates from 0.001 to 19 L/min and pressures up to 4bar
- » Colour display and intuitive menu structure
- » IP31 or IP66 cased pumps, manual, remote, analogue or RS485 digital communication, plus PROFIBUS
- » Four drive options and two pumpheads for single channel flows
- » Precise 2650:1 speed control range

| 620 pumpheads: flow ranges, 0.1–265rpm. L/min | | | | | | | | | |
|---|-------------------------|-----------|-----|-----------|-----------|----------|-----------|------|----------|
| Tube Bore (mm #) | | 6.4, 17 | 8.0 | 9.6, 193 | 12.0 | 12.7, 88 | 15.9, 189 | 16.0 | 17.0 |
| 620R (continuous tubing) | Marpren [®] TL | 0.001–3.4 | - | 0.003–6.6 | - | 0.004–11 | 0.005–12 | - | - |
| | | | | | | | | | |
| 620RE (LoadSure elements, two rollers) | Marpren [®] TL | - | - | - | 0.004–11 | - | - | - | 0.006–16 |
| | Marpren [®] TM | - | - | - | 0.004–11 | - | - | - | 0.01–19 |
| 620RE4 (LoadSure elements, four rollers) | Marpren [®] TL | - | - | - | 0.003–8.3 | - | - | - | 0.005–12 |
| | Marpren [®] TM | - | - | - | 0.003–8.3 | - | - | - | 0.004–11 |



● Limited to 2bar below 50rpm. Flow rate varies with tube material, discharge pressure, suction and viscosity

Product dimensions



620 Pumpheads



620R

Twin sprung roller, continuous tubing pumphead



620RE / 620RE4

LoadSure tube element pumpheads with two or four rollers, for one minute maintenance

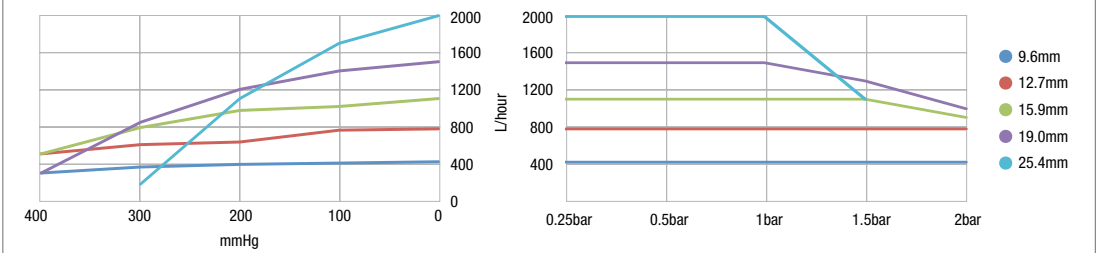
730 Technical data



- » Flow rates from 7 to 33 L/min
- » Colour display and intuitive menu structure
- » IP66 cased pumps, manual, remote, analogue or RS485 digital communication, plus PROFIBUS
- » Four drive options and two pumpheads for single and twin channel flows
- » Precise 3,600:1 speed control range

730 cased pumps' performance

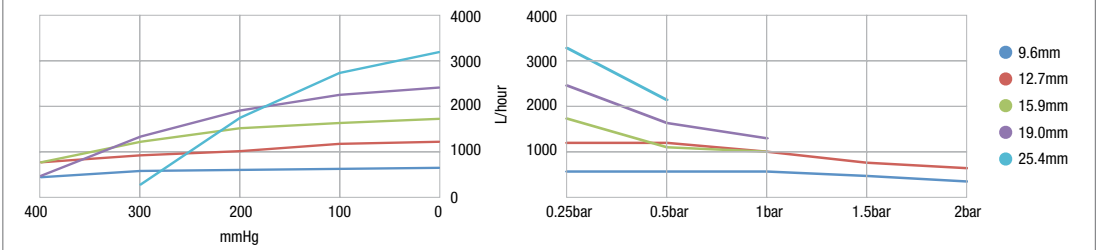
| Single pumphead (720R, 720RE) | 0.25bar | | 0.5bar | | 1bar | | 1.5bar | | 2bar | |
|-------------------------------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|
| | Max speed (rpm)* | Max flow | Max speed (rpm)* | Max flow | Max speed (rpm)* | Max flow | Max speed (rpm)* | Max flow | Max speed (rpm)* | Max flow |
| 9.6mm | 360 | 420 L/hr | 360 | 420 L/hr | 360 | 420 L/hr | 360 | 420 L/hr | 360 | 420 L/hr |
| 12.7mm | 360 | 780 L/hr | 360 | 780 L/hr | 360 | 780 L/hr | 360 | 780 L/hr | 360 | 780 L/hr |
| 15.9mm | 360 | 1100 L/hr | 360 | 1100 L/hr | 360 | 1100 L/hr | 360 | 1100 L/hr | 300 | 900 L/hr |
| 19.0mm | 360 | 1500 L/hr | 360 | 1500 L/hr | 360 | 1500 L/hr | 300 | 1300 L/hr | 250 | 1000 L/hr |
| 25.4mm | 360 | 2000 L/hr | 360 | 2000 L/hr | 360 | 2000 L/hr | 200 | 1100 L/hr | | |



Stated performance applies to all tube materials

730 cased pumps' performance

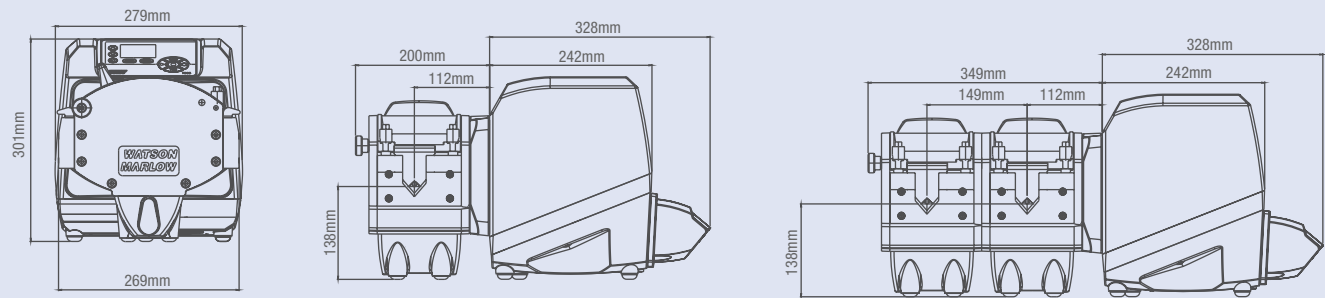
| Twin pumphead (720R/RX, 720RE/REX) | 0.25bar | | 0.5bar | | 1bar | | 1.5bar | | 2bar | |
|------------------------------------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|----------|------------------|----------|
| | Max speed (rpm)* | Max flow | Max speed (rpm)* | Max flow | Max speed (rpm)* | Max flow | Max speed (rpm)* | Max flow | Max speed (rpm)* | Max flow |
| 9.6mm | 300* | 700 L/hr | 300* | 700 L/hr | 300* | 700 L/hr | 250 | 590 L/hr | 200 | 470 L/hr |
| 12.7mm | 300* | 1300 L/hr | 300* | 1300 L/hr | 250 | 1100 L/hr | 200 | 870 L/hr | 175 | 760 L/hr |
| 15.9mm | 300* | 1800 L/hr | 200 | 1200 L/hr | 175 | 1100 L/hr | | | | |
| 19.0mm | 300* | 2500 L/hr | 200 | 1700 L/hr | 160 | 1390 L/hr | | | | |
| 25.4mm | 300* | 3300 L/hr | 200 | 2200 L/hr | | | | | | |



Stated performance applies to all tube materials

*The maximum speed is reduced at increased discharge pressures to ensure safe running of the pump

Product dimensions



720 Pumpheads



720R

Continuous tubing pumphead, which can be extended to provide two channels of flow



720RE

LoadSure tube element pumphead for single or twin channels of flow

LoadSure® pumpheads guarantee correct tube loading

Watson-Marlow LoadSure technology offers snap-fit one minute maintenance. LoadSure elements offer greater reliability, easy installation and increased productivity.

520 LoadSure pumphead



- LoadSure® elements with quick release connectors, in Marprene TL and Neoprene for pressures up to 2bar in 3.2mm, 6.4mm and 9.6mm bore, Marprene TM for pressures up to 4bar in 3.2mm and 6.4mm bore and Marprene TH up to 7bar in 3.2mm bore
- 7bar pressures with the 520REH. Flow rates up to 450 ml/min
- 4bar pressures with the 520REM. Flow rates up to 1500 ml/min
- 2bar pressures with the 520REL. Flow rates up to 3500 ml/min

620 LoadSure pumphead



- LoadSure® elements with Cam and Groove connectors available in Marprene TM for 4bar operation and Neoprene for 2bar operation
- Two tube element bore sizes of 12mm and 17mm
- Highest accuracy and minimal pulsation with the 620RE4's four rollers. Highest flow rates from the 620RE's two rollers
- Flow rates up to 13 litre/min, pressures up to 4bar

720 LoadSure pumphead



- LoadSure® elements with Cam and Groove connectors available in Marprene and Neoprene
- Four bore sizes: 12.7mm, 15.9mm, 19.0mm and 25.4mm
- Flow rates from 720RE pumphead up to 2,000 l/hr flow at up to 2bar pressure
- 720REX extension pumpheads offer identical performance, but at a maximum pressure of 1bar

LoadSure elements provide fast and simple tube loading every time



Pump and tubing have equal importance

It is important to recognise that the pump and tubing combination are selected to match your specific application criteria.

Watson-Marlow is the only company that manufactures both the cased pumps and peristaltic tubing, which is a real advantage for customers that want to be certain that their peristaltic pump will work right first time and every time.



Marprene®

Industrial grade thermoplastic elastomer tubing

- Wide chemical compatibility and long life
- Low gas permeability
- Highly resistant to oxidising agents



Neoprene

Industrial grade thermoplastic elastomer tubing

- Excellent performance with abrasive slurries
- Good suction and pressure capabilities



Fluid Technology Group

INDUSTRIAL SOLUTIONS



Watson-Marlow Fluid Technology Group

Watson-Marlow Fluid Technology Group supports its customers locally through an extensive global network of direct sales operations and distributors

wmftg.com/global



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