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**WATSON  
MARLOW** PUMPS  
Bredel

## 720 SANITARY PUMPS

*Watson-Marlow Bredel... Value for life*

**NEW**



## The perfect solution for single-use

Pumping elements can be fitted to the 720 pump in seconds without breaking system integrity. Unlike lobe pumps, there is no cleaning to validate, dramatically

reducing product time to market. With control options to suit your process and your choice of pumphead and tube options, the new 720

### Buffer and media preparation

The peristaltic pump is the perfect pump for rapid bag filling and mixing of buffers and media for cell culture and filtration. Full remote and analogue control provides precise recipe mixing, plus integration with PLC



### Fermenter feed

Simple operation for charging and harvesting large bio-reactors



UPSTREAM

PREPARATION

### Bag mixing

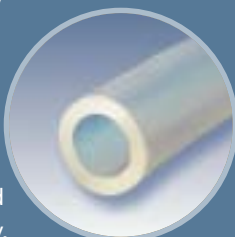
Two pumpheads can be mounted on a 720 drive to provide up to 4,000 litres per hour flow. Efficient mixing is proven to homogenise solutions quickly, maintaining any solids in suspension. Gentle pumping action prevents foaming



## Now make your tube material choice...

### Pumpsil for traceability

Pumpsil platinum-cured tubing has an extra-smooth bore for less protein binding and high levels of purity. Every length of Pumpsil is laser-etched to protect validated processes and comply with approval requirements.



### Bioprene for FDA approval

Bioprene complies with USP Class VI, FDA requirements 21 CFR 177.2600 and NSF and USDA standards for food handling. It has wide chemical compatibility and can handle repeated autoclaving.



### Sta-Pure for life

Sta-Pure has a unique construction of silicone in a PTFE lattice giving it superior burst resistance up to 7 bar (100psi) and 18 times longer life than silicone tubing. It produces virtually no spalling, is USP Class VI approved and is classified as non-toxic.



transfer package you've been waiting for

# bioprocessing

sanitary element pump maximises productivity, speeds development time and improves profitability.

DOWNSTREAM

## Filtration

The 720's four driven rollers provide a low-pulse, very low-shear flow for maximum live cell retention. Full skid integration through the comprehensive remote, analogue or RS485 control.



## Live cell transfer

Low-shear: cell vitality retained, cell damage minimised. Ease of cleaning validation. Flexible, unlike a lobe pump. Can be mobile. Change the tube, change the pump.



Images used by courtesy of Stedim Biosystems and Sartorius BBI Systems GmbH

## ...and connect up

### BioBarb disposable tube connectors

BioBarb polypropylene fittings assure sterility wherever a fluid flow must divide, or where tubing lengths must join. BioBarb fittings do not choke the fluid path



## No compromise

Your process is in place. After months of research you want to scale-up production with the same technology. The new Watson-Marlow Bredel 720 sanitary pump is the perfect choice: metering and transfer without loss, contamination or cell damage. No compromise.

- Up to 4,000 litres/hour; up to 2 bar
- 3,600:1 control ratio
- Maintenance-free, brushless DC motor with no carbon brush dust
- Tough, corrosion-resistant IP66 washdown case
- Five years warranty: value for life
- Low-shear pumping to maximise cell yield
- Simple operation and PIN protected: SOPs made easy
- Full remote, analogue and RS485 control for skid integration
- Four driven rollers for low pulse pumping

Removable track facilitates CIP, allowing cleaning to cGMP. Straight-through flow path ensures perfect cleaning—unlike a lobe pump where dead spots and seals make it difficult to ensure cleanliness.

### LoadSure elements: the tubing for the job

The 720 is perfect for use with Watson-Marlow Bredel validated, fully traceable LoadSure elements. Choose continuous tubing where no joins in the fluid line is a vital consideration, or tube elements if simple, fast and foolproof tube loading is preferred.

- LoadSure elements are fully traceable back to raw materials for all wetted parts
- LoadSure traceability via LOT number permanently laser-etched on the element
- Certificate of conformity is supplied with all tubing and elements
- Pumpsil, Bioprene and Sta-Pure validation packs are available upon request
- There are three material and four bore size options for LoadSure elements (Pumpsil, Bioprene, Sta-Pure)
- There are four materials and five bore size options for continuous tubing (Marprene, Pumpsil, Bioprene, Sta-Pure)





Industrial strength pumps with unrivalled precision

Pump	Specification	Pumphead	Product code
720SN/R	IP66 0.1-360rpm	720R pumphead, max 2 bar, continuous tubing	070.413N.000
720SN/RE	IP66 0.1-360rpm	720RE pumphead, max 2 bar, elements	070.413N.E00
720SN/R/RX	IP66 0.1-360rpm	720R plus 720RX pumpheads, max 1 bar, continuous tubing	070.413N.X00
720SN/RE/REX	IP66 0.1-360rpm	720RE plus 720REX pumphead, max 1 bar, elements	070.413N.EX0
720UN/R	IP66 0.1-360rpm	720R pumphead, max 2 bar, continuous tubing	070.414N.000
720UN/RE	IP66 0.1-360rpm	720RE pumphead, max 2 bar, elements	070.414N.E00
720UN/R/RX	IP66 0.1-360rpm	720R plus 720RX pumpheads, max 1 bar, continuous tubing	070.414N.X00
720UN/RE/REX	IP66 0.1-360rpm	720RE plus 720REX pumphead, max 1 bar, elements	070.414N.EX0
720DuN/R	IP66 0.1-360rpm	720R pumphead, max 2 bar, continuous tubing	070.415N.000
720DuN/RE	IP66 0.1-360rpm	720RE pumphead, max 2 bar, elements	070.415N.E00
720DuN/R/RX	IP66 0.1-360rpm	720R plus 720RX pumpheads, max 1 bar, continuous tubing	070.415N.X00
720DuN/RE/REX	IP66 0.1-360rpm	720RE plus 720REX pumphead, max 1 bar, elements	070.415N.EX0

All pumps supplied with mains lead with no plug. For American plug, replace the last digit of the part code with an A

Accessory	Description	Product code	Pumphead		
720AL	Leak detector kit for 720SN, 720UN and 720DuN	079.6131.000			
Interface tubing	1m 19mm bore transparent PVC tubing with 3/4" PP female C&G connectors	069.6171.PFC	720R	4 roller pumphead for maximum 2 bar. Accepts continuous tubing only (includes continuous tube clamp set)	073.2001.000
	3m 19mm bore transparent PVC tubing with 3/4" PP female C&G connectors	069.6173.PFC			
	1m 19mm bore transparent PVC tubing with 3/4" PP female/male C&G connectors	069.6171.PTC			
	3m 19mm bore transparent PVC tubing with 3/4" PP female/male C&G connectors	069.6173.PTC	720RX	Extension pumphead for maximum 1 bar. Accepts continuous tubing only (includes continuous tube clamp set)	073.2011.000
	1m 25.4mm bore transparent PVC tubing with 1" PP female/male C&G connectors	079.61A1.PTC			
	3m 25.4mm bore transparent PVC tubing with 1" PP female/male C&G connectors	079.61A3.PTC			
	1m 19mm bore black PVC tubing with 3/4" PP female C&G connectors	069.6181.PFC	720RE	4 roller pumphead for maximum 2 bar. Accepts LoadSure tubing elements only (no requirement for tube clamp set)	073.2004.000
	3m 19mm bore black PVC tubing with 3/4" PP female/male C&G connectors	069.6183.PFC			
	1m 25.4mm bore black PVC tubing with 1" PP female/male C&G connectors	079.61B1.PTC			
	3m 25.4mm bore black PVC tubing with 1" PP female/male C&G connectors	079.61B3.PTC	720REX	Extension pumphead for maximum 1 bar. Accepts LoadSure tubing elements only (no requirement for tube clamp set)	073.2014.000
	1m 19mm bore Silicone tubing with 3/4" PVDF Tri-clamp style connectors	079.61C1.PVT			
	3m 19mm bore Silicone tubing with 3/4" PVDF Tri-clamp style connectors	079.61C3.PVT			
	1m 25.4mm bore Silicone tubing with 1" PVDF Tri-clamp style connectors	079.61D1.PVT			
	3m 25.4mm bore Silicone tubing with 1" PVDF Tri-clamp style connectors	079.61D3.PVT			

Continuous tubing for 720R and 720RX

	9.6mm	12.7mm	15.9mm	19mm	25.4mm
Marprene	902.0096.048	902.0127.048	902.0159.048	902.0190.048	902.0254.048
Pumpsil	913.A096.048	913.A127.048	913.A159.048	913.A190.048	913.A254.048
Neoprene	920.0096.048	920.0127.048	920.0159.048	920.0190.048	920.0254.048
Bioprene	903.0096.048	903.0127.048	903.0159.048	903.0190.048	903.0254.048
Sta-Pure	960.0096.048	960.0127.048	960.0159.048	960.0190.048	960.0254.048

Element codes for 720RE and 720REX

	LoadSure Industrial elements Cam and Groove PP connectors				LoadSure Sanitary elements Tri-clamp style PVDF connectors			
	12.7mm	15.9mm	19.0mm	25.4mm	12.7mm	15.9mm	19.0mm	25.4mm
Marprene	902.0127.PPC	902.0159.PPC	902.0190.PPC	902.0254.PPC				
Pumpsil	913.A127.PPC	913.A159.PPC	913.A190.PPC	913.A254.PPC	913.A127.PFT	913.A159.PFT	913.A190.PFT	913.A254.PFT
Neoprene	920.0127.PPC	920.0159.PPC	920.0190.PPC	920.0254.PPC				
Bioprene					903.0127.PFT	903.0159.PFT	903.0190.PFT	903.0254.PFT
Sta-Pure					960.0127.PFT	960.0159.PFT	960.0190.PFT	960.0254.PFT

Functionality

	720SN	720UN	720DuN
<b>Enclosure - ingress protection rating</b>	IP66	IP66	IP66
<b>Manual control</b>			
Keypad speed control with simple calibration to display flow	•	•	•
Comprehensive calibration for flow rate display; metric or imperial units			•
Numeric keypad for entry of speed, flow or PIN code			•
Cumulative volume indication			•
<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/hand-switch 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 (8 bit resolution)			•
Keypad/analogue input scaling (replacement of diaphragm pumps)			•
Frequency output; 0-768Hz			•
<b>RS485 digital communication</b>			
Digital network serial control			•
<b>Security</b>			
Basic security code to protect set-up		•	
Dual operator/supervisor PIN code protection of pump settings			•

IP66



NEMA 4X

