

PERFORMANCE

Improve your



Put a peristaltic in your process

You face constant pressure to reduce costs and improve your products and processes. Not only that, but you have to satisfy environmental protection, safety and other regulatory demands.

The cost effective handling of fluids provides a major and often hidden opportunity to do all these things. The efficiency, reliability and low maintenance of peristaltic pumps can improve performance in almost every industry.

The expertise of Watson-Marlow Bredel lies in helping you to identify the opportunities and realise the benefits. We are a trusted source of knowledge in process improvement, and we have over one million pumps installed.

The results that we promise to deliver will contribute to the financial success of your organisation through increased efficiency and productivity, reduced waste, better products and regulatory compliance. All will contribute to your competitive advantage.



R Woods

Dr Richard Woods
Managing Director
Watson-Marlow Bredel Pumps

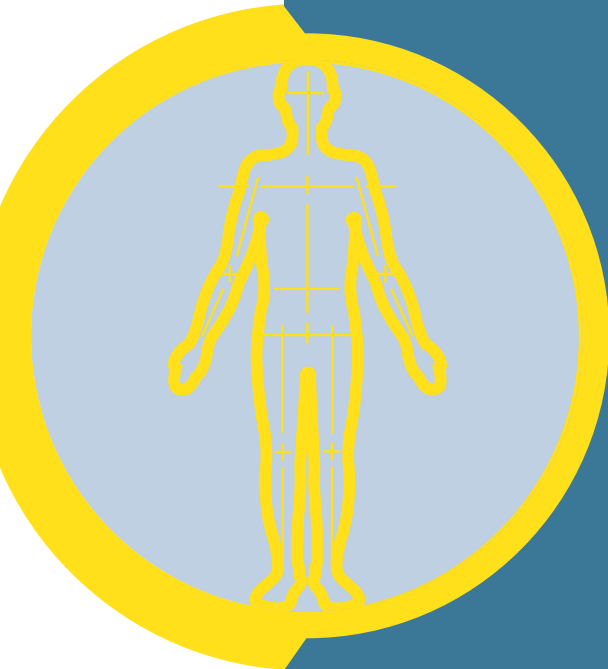
Nature developed the perfect pump

Over six billion peristaltic pumps are operating every day throughout the world handling sensitive and aggressive fluids.

They are inside every one of us.

The peristaltic process contracts muscle walls and squeezes out fluids completely and efficiently, wanted and unwanted, solids and liquids. It is the toughest of the pumping systems developed by nature and has not been surpassed since life began.

and
Watson-Marlow Bredel
engineered it



We have perfected this same principle, and have supplied over one million pumps to meet the needs of industry and science. We too have not been surpassed, and Watson-Marlow Bredel is the world's largest manufacturer of peristaltic pumps.

The world's

fastest growing
pump type

We perfected the principle

Squeeze a tube filled with fluid between your fingers, slide them along and the fluid moves. The only contact with the fluid is the tube. It is the perfect pumping principle.

The widest capability

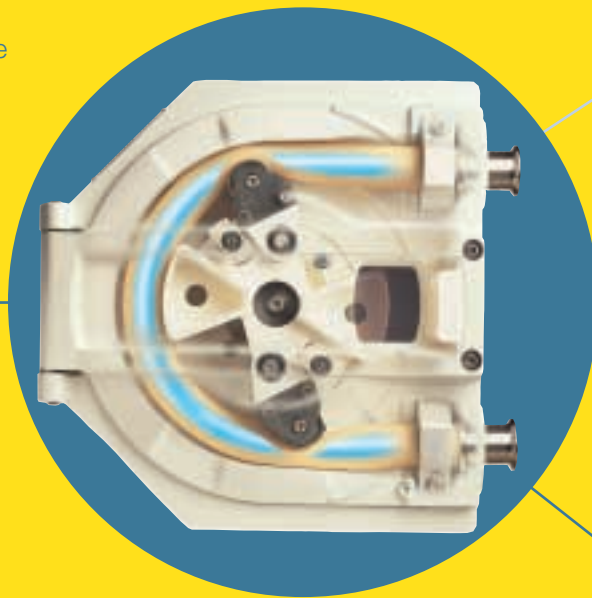
Watson-Marlow Bredel's range of problem-solving pumps matches the demands of valuable, delicate or difficult fluids in processes across all industries - from the heaviest of manufacturing duties to the most precise research task.

No other pump has the controllability of the peristaltic - with flow rates from microlitres a minute to tens of thousands of litres an hour.

The highest reliability and lowest maintenance

Unlike other pumps, the peristaltic has no valves, seals or glands. This reduces maintenance and the risk of breakdown.

The only routine maintenance is changing the tube or hose - a task that can be done by the process operator. A change of fluid simply requires cleaning or changing the tube or hose.



Bredel pumps use reinforced high pressure hoses for flow rates up to 80 cubic metres/hour (350 US gpm) and pressures up to 16 bar (230 psi).

Watson-Marlow pumps use non-reinforced, high accuracy tubes for flow rates up to 8 cubic metres/hour (35 US gpm) and pressures up to 3.5 bar (50 psi).

- You gain in
- Efficiency
 - Productivity
 - Controllability
 - Reliability
 - Product quality

And the assurance of product quality

There is no contamination of the product, the pump or the environment. It is a contained process that does not damage, degrade or waste the fluid.



A pump for all industries ...



Industry Benefits

Water and Waste

Accurate, controllable metering of abrasive, gassing and shear sensitive water treatment chemicals. Abrasion resistant pumping of high-viscosity, solids-laden sludge and waste.

Brewing

Accurate, low-shear dosing and scavenging of live and spent yeast. Abrasion-resistant pumping of diatomaceous earth and finings.

Food and Beverage

Accurate, repeatable metering and dosing with a low-shear pumping action. Solids and soft-solids are handled without damage. Full clean-in-place capability.

Pharmaceutical and Biotechnology

Complete sterility and zero cross-contamination improve product and prevent waste. Accurate metering and contamination-free pumping from the cleanest of all pump types.

Print and Packaging

Accurate and controllable flow rates, smooth flow, quick and easy colour changes. Reversible operation minimises ink waste, gentle pumping action cuts ink foaming.

Pure or valuable product



Frequent product changes



Corrosive product



Abrasive product



Difficult to handle
(e.g viscous, shear sensitive products)



Join these world-class users



Kodak

Photographic chemicals are dispensed in extremely precise amounts using Watson-Marlow Bredel pumps under computerised control. The pumps require minimal maintenance.



Elopak

Elopak use Watson-Marlow Bredel pumps for flexographic inks because they are self-priming, low maintenance and offer linear control.



Warninks

"Easy to clean, easy to use and no seals, valves or glands to leak, clog, corrode or replace. Downtime is reduced significantly".



Sony

In the production of Trinitron television tubes, Watson-Marlow Bredel pumps feed a solution of carbon GA-37, potassium silicate and silicon carbide, significantly reducing maintenance costs.

Most industries have difficult pumping applications where care in handling the process fluid is required. The peristaltic pump is the pump of first choice wherever the process fluid is:

- *abrasive, corrosive or aggressive*
- *sensitive, valuable or pure*
- *delicate and must not be degraded*

Retro-fitting peristaltic pumps, where other pumps have failed, can pay for itself many times over in improved performance and lower maintenance.

The chart shows the benefits Watson-Marlow Bredel pumps have brought to a wide range of industries.



Chemical

Ceramics

Paper and Pulp

Paints and Pigments

Engineering

Accurate metering and dosing cuts waste and helps improve product quality. Hazardous chemicals are safely contained, eliminating pump damage and reducing environmental risks.

Highly abrasion-resistant, low-shear pumping ensures consistent slurry and slip quality with no air entrainment. Maintenance costs are significantly lower than with other pump types.

Precise metering of dyes, sizing agents, retention aids and optical brightening agents helps to eliminate waste and improve paper quality. Valve-free design eliminates clogging.

Low-shear pumping action ensures no ink damage. Simple tube changes eliminate cross-contamination. High-viscosity and abrasive inks and pigments are pumped with ease.

Wide chemical compatibility, flow rates and control options ensure there is a peristaltic pump for most applications. Ease of use ensures rapid acceptance by operators.

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•	•	•	•	•
•		•	•	•
•	•	•	•	•
•	•	•	•	•



Elizabeth Arden

Watson-Marlow Bredel pumps ensure accurate, repeatable metering of oils and waxes heated to 95°C that are used in the manufacture of cosmetics.



Weetabix

Watson-Marlow Bredel pumps carefully meter abrasive and crystallising liquid vitamins on to breakfast cereals. They replaced other pumps because of their ability to provide accurate, repeatable flows.



Severn Trent Water

Severn Trent Water chose Watson-Marlow Bredel IP55 pumps for their ruggedness, reliability and ease of maintenance. The pumps operate 24 hours a day in outdoor filter houses.



BASF

Because of their ability to produce consistent, reproducible flows at low volumes, BASF chose Watson-Marlow Bredel pumps to replace double diaphragm pumps in their paint mixing plant.

Watson-Marlow Bredel pumps bring you...

- Accurate and repeatable flow rates
- Contamination free pumping - ideal for shear-sensitive fluids, viscous sludges or slurries, and aggressive acids and caustics
- Easy to install, operate and maintain
- Virtually maintenance free - no expensive seals, valves, diaphragms or rotors to leak, clog or corrode
- Designed for continuous duty - 24 hours/7 days
- Pumps act as their own checkvalves
- Self-priming up to 9 metres (30 feet) and dry running
- Reversible flow direction

Code descriptions eg: 101U/R = Manual/auto control variable speed with single channel pumphead

Drive

F	Fixed speed
S	Manual control variable speed
U	Manual/auto control variable speed
Du	Digital/analogue control variable speed
Dz	Dispenser
Di	Precision dispenser, RS232 control
Ti	Integral inverter controlled
FX	Fixed speed dual drive
DF	Exd fixed speed
P	Pneumatic
DVB	Exd, mechanical variable speed
PB	Pneumatic, baseplate mounted

Pumphead

R	Single channel pumphead
RL	Single channel, two roller pumphead with lockable guard
RE	Mid flow single channel pumphead for LoadSure elements
CA	High precision multi-channel cassette pumphead
D1	Single channel, four roller pumphead
D	Single channel, three or four roller, 'flip-top' pumphead
DM2-3	Three channel pumphead for three bridge manifold tubing
R1	Single channel, four roller pumphead
L2	Two channel, four roller pumphead
L	Precision 'low pulse' pumphead
VM2-4	Precision low flow multi-channel pumphead for two bridge manifold tubing
CIP	Retractable rollers/shoes

100

Low flow single channel pumps. Fixed and manual/auto control variable speed.

- Flow rates from 1µl/min to 53ml/min
- Rapid and simple tube loading
- Manual, auto and digital control

2 years warranty
2 bar



200

Near pulseless, multi-channel cassette pumps with up to 32 channels.

- Flow rates from 0.5µl/min to 22ml/min per channel
- Precise flow control for each individual channel
- Manual, auto and digital control

2 years warranty
2 bar



300

NEW
Compact single or multi-channel laboratory pumps with manual, remote, analogue, RS232 or dispensing control.

- Flow rates from 2µl/min to 2200ml/min
- Five modular pumpheads for single or multi-channel flows
- Manual, TTL, RS232 and 4-20mA or 0-10V analogue auto-control
- High visibility digital display with keypad

2 years warranty
2 bar



400

Ultra compact scientific pumps with up to four channels.

- Flow rates from 1µl/min to 610ml/min
- Precision multi-roller pumpheads for accurate flows
- Digital and analogue process signal control

2 years warranty
2 bar



500

Our core range of IP31 and industrial washdown process pumps.

- Flow rates from 10µl/min to 4.4 litre/min
- Manual, analogue and digital process control
- Close coupled pumps for the three phase operation including pneumatic and Exd option
- Extensive pumphead options

2 years warranty
2 bar



600

IP55 mid-flow process pumps with full clean-in-place and steam-in-place capability.

- Flow rates from 50ml/min to 18.3 litre/min
- Manual, analogue and digital process control
- Close coupled pumps for the three phase operation including pneumatic and Exd options
- One minute maintenance Load-sure elements

2 years warranty
4 bar



700

IP55 industrial pumps with manual or auto control, single or twin channel.

- Flow rates from 1.6 litre/min to 2000 litre/hour per channel
- Driven roller pumphead extends tube life
- Baseplate pumps for three phase operation including pneumatic and Exd options

2 years warranty
2 bar



800

High-flow hygienic pumping using USP Class VI Bioprene tubing or STA-PURE tubing.

- Flow rates 2 litre/min to 8,000 litre/hour
- Full Clean-In-Place and Steam-In-Place capability
- Extensive motor/gearbox control options

2 years warranty
7 bar



SPX

High flow high-pressure industrial pumps with unique patented direct coupled design. Duplex and CIP models available.

- Flow rates to 0.3 litre/min 80 cubic metres/hour
- Reinforced hoses enable pressures up to 16 bar
- Fixed and mechanically or electronically variable speed drives including Exd versions

2 years warranty
16 bar



OEM

A wide range of instrument quality and industrial OEM pumpheads for fitting to users own drives, or with faceplate-mounted motor options

- Flow rates from 0.01µl/min to 33 litre/min
- Single and multi-channel pumpheads
- Synchronous, DC, induction, shaded-pole or stepper motors
- Optional Eurocard pcb enables full controllability

1 year warranty
1 bar



Tubing Hoses

Extensive range of tubing ensures chemical compatibility. USP Class VI and FDA approvals. Precision machined, re-inforced hoses provide flow stability and excellent suction performance.

- Twelve tubing materials in bore sizes 0.13mm to 25.4mm
- Autoclavable Marprene, Bioprene, STA-PURE, Chem-Sure and Silicone (platinum-cured)
- Four hose materials including Natural Rubber, Nitrile NBR, Hypalon and EPDM from 10mm to 100mm



United Kingdom
 Telephone +44 (0) 1326 370370
 Fax: +44 (0) 1326 376009
 Email support4gb@watson-marlow.co.uk

Belgium
 Telephone +32 (0) 2 481 60 57
 Fax: +32 (0) 2 481 60 58
 Email info@watson-marlow.be

Brazil
 Telephone + 55 11 7925 9153
 Fax: + 55 11 7925 9143

China
 Telephone +86 21 6485 4898
 Fax: +86 21 6485 4899

France
 Telephone +33 (0) 2 37 38 92 03
 Fax: +33 (0) 2 37 38 92 04
 Email info@watson-marlow.fr

Germany
 Telephone +49 (0) 2183 42040
 Fax: +49 (0) 2183 82592
 Email info@watson-marlow.de

Italy
 Telephone +39 030 6871184
 Fax: +39 030 6871352
 Email info@watson-marlow.it

Korea
 Telephone +82 (0) 2 525 5755
 Fax: +82 (0) 2 525 5764
 Email support4k@watson-marlow.co.uk

Malaysia
 Telephone +60 3735 3323
 Fax: +60 3735 7717

Netherlands
 Telephone +31 (0) 10 462 1688
 Fax: +31 (0) 10 462 3486
 Email info@watson-marlow.nl

United States of America
 Telephone 800 282 8823
 Fax: 978 658 0041
 Email support@wmbpumps.com

www.watson-marlow.com

Members of the Spirax-Sarco Engineering Group

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WARNING
 These products are not designed for use in, and should not be used for, patient connected applications.

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The information in this brochure is intended for general sizing. You should always seek the advice of a Watson-Marlow Bredel sales engineer or the technical support department when matching a pump to your requirements.

Full range of literature includes

Capabilities brochure

Encompasses what has made Watson-Marlow Bredel so successful in solving fluid handling problems worldwide.



New product launch literature

STA-PURE
 620 LoadSure technology
 400 series



Industry sector brochures

Outlining benefits of peristaltic pumping which are important to these industries, with application examples and customer testimonials.

- Food and Beverage
- Brewing
- Water and Waste
- Pharmaceutical and Biotechnology
- Print and Packaging
- Chemical
- Ceramics
- Pulp and Paper
- Paints and Pigments
- Engineering



Every peristaltic pump for science

A specialised range of products dedicated to science and laboratories



Technical binders

We have three types of technical data binders which include products specifically tailored to your industry.

- Scientific
- Industrial
- Combined



OEM pumps

Specifications and engineering detail for customers who are building pumps into their equipment

