WATSON MARLOW Fluid Technology Solutions

Personal care and over-the-counter pharmaceuticals

Your partner in fluid management

wmfts.com/personal-care/

Industry experience

Maintaining product quality whilst having the processing and production flexibility to manufacture a broad spectrum of products, requires a complete understanding of your processing requirements.

Watson-Marlow Fluid Technology Solutions (WMFTS) offers comprehensive engineering solutions to manufacturers of personal care products—from pharmaceuticals and nutraceuticals, through to supplements and vitamins. Our diverse product range provides a complete fluid path solution, for use across research and development facilities through to large-scale production environments.

We control our manufacturing to the finest tolerances to ensure consistent and dependable performances.

Directives and standards

Adopting our equipment into your process is made simple through our commitment to validation.
Our equipment is rigorously tested to meet the latest regulatory frameworks and offered with comprehensive validation documentation. Backed by a global network of specialist engineers, technical support and servicing professionals, we partner with you to get the best from our engineering.

Rapid maintenance and cleaning

Our engineering is based on simple principles.
The result is high quality equipment that is easy to maintain, designed with cleaning methods and chemical compatibility in mind. This supports rapid product changeovers and accelerated loading and unloading duties. For internal cleaning of processing systems, we design our components for clean-in-place (CIP).

To guarantee the external cleaning procedure of our systems is effective, we design easy-to-clean hygienic solutions.

Applications

	 Sinusoidal pumps	 Peristaltic hose pumps	 Peristaltic tube pumps	 Filling machines	 Valves	 PTFE lined hoses and gaskets
Personal care products	Lotions Shampoo Soap Eye care products Hair gel	Toothpaste Deodorant	Surfactants Soap Lip balm Pomade	Essential oils	✓	✓
Cosmetics	Mascara Cream Eye liner Lip gloss Lip stick Compounding	Transfer of compounding ingredients	Make-up Nail polish Lipstick Eye-liner		✓	✓
Over-the counter pharmaceuticals and nutraceuticals	Suppositories Gels Ointment Creams APIs Raw material Glycerine Oils Cough syrup	Cough syrup	Vitamins Supplements Pills Fish oil	CBD Oil Homeopathic remedies	✓	✓
Facility management		Water and wastewater	Water and wastewater Zero liquid discharge			✓

Sinusoidal pumps

Certa by MasoSine outperforms lobe pumps in critical processing applications. The sinusoidal rotor design delivers a lower shear, gentle pumping action that safely transfers delicate products without risk of degradation.

- **Cleaner than lobe pumps:** Certified up to EHEDG Type EL Aseptic Class I standard
- **More efficient than lobe pumps:** Uses up to 50% less power
- **Lower shear than lobe pumps:** Maintains final product quality
- **Lower total cost of ownership than lobe pumps:** One shaft, one rotor, one seal and no timing gears
- **Handles viscosity better than lobe pumps:** Best NIPR/ NPSHR in the market to reduce risk of cavitation

masosine
Process Pumps

Certa pump

Max flow: 435 GPM

Max suction capability: Can pull up to 85% of full vacuum/25.4inHg

Max discharge pressure: 217psi

Viscosities: 1 cP to 8 million cP

Certified: EHEDG Type EL Class I and
EHEDG Type EL Aseptic Class I.
FDA and EC1935/2004 compliant, 3A Certified

Sinusoidal pump design

A single sinusoidal rotor creates four evenly sized chambers. As each chamber rotates it gently conveys the fluid from the inlet port to the outlet port. At the same time, the opposite chamber opens to draw in more fluid, resulting in a smooth flow with virtually no pulsation. A gate stops fluid flow from the higher pressure outlet to the low pressure inlet.

Peristaltic hose pumps

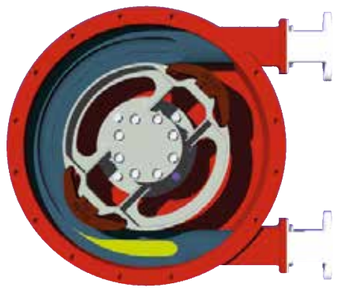
High maintenance diaphragm, rotary lobe, or progressive cavity pumps are unable to match the dependability of Bredel hose pumps in heavy duty applications.

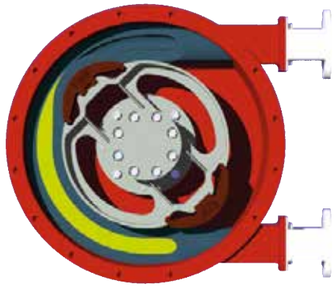
- **Abrasive handling:** The product only contacts the hose, so no wear on the pump
- **Gentle handling of large particles:** No damage to shear sensitive products
- **Accurate metering:** Perfect dosing every time to ensure end product consistency
- **Easy maintenance:** Just change the hose
- **FDA compliant**
- **Seal-less, valve-less design:** Lowers total cost of ownership

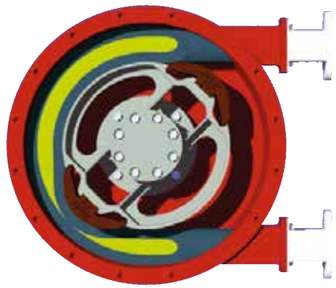
Hose pumps

The action of peristaltic hose pumps results from alternately compressing and relaxing a machined hose between the pump housing and the compressing shoes. The fluid ahead of the shoe is pushed towards the discharge while the recovering hose behind the shoe draws more fluid in.

With 100% compression at all times, the pump does not slip, providing unbeatable metering accuracy and pressure performance. With the fluid contacting only the inner wall of the hose, the pump is perfect for aggressive chemicals.







Bredel
Hose Pumps

Bredel series

Max flow: 233 GPM

Max discharge pressure: 232psi

Max suction capability: Can pull up to 97% of full vacuum/29inHg

APEX series

Max flow: 27 GPM

Max discharge pressure: 116psi

Max suction capability: Can pull up to 97% of full vacuum/29inHg

Hose elements

The hose element is critical to ensure pump performance, durability and efficiency. Bredel reinforced hoses are constructed from high-quality compounded rubbers, reinforced with up to four individual layers of braided nylon, and finished by high-precision machining. Inner and outer layers are extruded and, after construction, the outer layer is machined to ensure critical tolerances are maintained

NBR for food: suitable for a wide range of food products. Resistant to various cleaning chemicals. Meets EC 1935/2004.

F-NBR: suitable for all food products including oils and greases. Meets FDA, EC 1935/2004 and 3A standards

Peristaltic tube pumps

Peristaltic tube pumps can handle aggressive and shear sensitive fluids. The pumped fluid is totally contained within the tube, providing complete isolation of the fluid and no cross contamination.

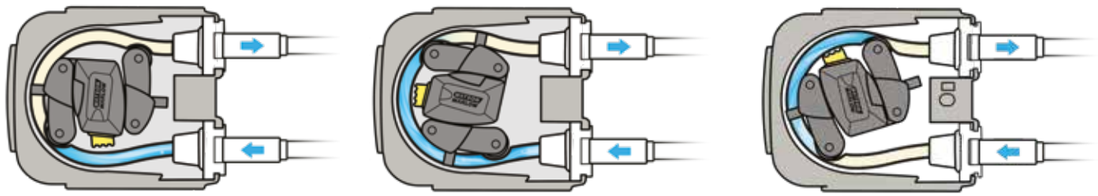
- **Unrivalled accuracy:** Reduce waste and save money with high accuracy delivery
- **Low shear:** Superior to lobe pumps, no damage to fragile food products and improved final product quality
- **Easy clean:** NEMA 4X (IP66) for washdown
- **Reduce process downtime:** One-minute maintenance, just change the tube
- **Intuitive:** Operator control, color display and language selection

Tube pumps

Rollers in a peristaltic pump compress the tube as they rotate, creating a vacuum which draws fluid through the tube.

Nothing but the pump tube touches the fluid, eliminating the risk of the pump contaminating the fluid, or the fluid contaminating the pump.

The complete closure of the tube when it is occluded (squeezed) between the roller and the track, gives the pump its positive displacement action, preventing backflow and eliminating the need for check-valves when the pump is not running.



Qdos

Flow rates: 0.001 to 32 GPH

Max discharge pressure: 100psi

530 series

Flow rates: 0.0006 GPH to 55 GPH

Max discharge pressure: 100psi

630 series

Flow rates: 0.0002 GPM to 4.94 GPM

Max discharge pressure: 60psi

730 series

Flow rates: 0.0005 GPM to 8.8 GPM

Max discharge pressure: 30psi

Tubing and tube elements

We are the only peristaltic pump manufacturer in the world to have our own tubing extrusion plant. Tubing is available in 10 different materials and 50 different sizes, from 0.0197" to 1".

Filling systems

Our range of filling and capping machines from Flexicon suit many different sizes of bottles with multiple formats for sealing including crimp and screw capping.

Our filling systems provide a simple and flexible means of production, which allows for a fast return on investment.

- Complete change-over in less than five minutes
- Modular integration with existing peristaltic fillers and capping machines
- Systems fill bottles between 0.47” and 3.07” in diameter
- Fill volumes from 0.003 fl oz to 16.9 fl oz at up to 2000 fills per hour

Gaskets

- Our sanitary gaskets are all compliant with FDA regulations CFR 21 177.2600
- USP Class VI compliant and animal derived component free (ADCF)
- Designed to achieve a smooth bore
- Advanced metal detectable gaskets are also available—automatically detect polymer decomposition inside your process line

	Purity	SIP	Continuous steam	Chemical resistance	Sealability	Max continuous temp
EPDM		★			★	310F
Silicone	★				★	490F
Viton				★	★	400F
PTFE	★			★		450F
PolySteel	★		★	★		620F
Envelope	★			★	★	450F

Key

- ★ Typically used
- ★ Often used
- Excellent
- Good
- Fair
- Not recommended

Valves

Our valves are designed to provide the highest level of reliability and safety.

- Tank, sample and in-line valve configurations available
- Simple Tri-clamp assembly makes maintenance up to 80% faster
- Diaphragm materials include silicone, EPDM and PTFE
- Manual or pneumatic actuators, limit switches and solenoids
- Fully CIP/SIP capable for efficient cleaning and sterilizing
- Up to three ports for CIP/SIP or flushing while closed
- No adjustment or retightening required after installation

PTFE lined hoses

Aflex hoses contain our unique liner technology, ‘convoluted outside, smooth inside’ for the combination of flow and flexibility, and an embedded ‘kink-proof’ helical wire.

- Easy clean, shorter cycles, avoiding costly downtime
- No CIP deterioration so no product contamination
- Kink proof and flexible hose. More than ten times the flex life of other PTFE lined hose
- Fewer hose changes with a long fatigue life results in a more economical product. Natural or anti-static patented PTFE liner
- Smooth bore for uninterrupted fluid flow and ease of cleaning
- High temperature and pressure capability
- Range of braid, cover and external protection options available
- FDA compliant, 3A and 1935 (10/2011) certified

WATSON MARLOW Fluid Technology Solutions

INDUSTRIAL SOLUTIONS

WATSON MARLOW Pumps

WATSON MARLOW Tubing

Bredel Hose Pumps

masosine Process Pumps

AFLEX HOSE

Watson-Marlow Fluid Technology Solutions

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

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HB0832 ISSUE 2

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