

industrial pumps

capabilities & solutions

ACCUFLOW
systems
www.accuflo systems.com - 240.457.4413

Thermo
SCIENTIFIC

Markets & applications



Bioprocessing - Cell culture suspensions are difficult to handle with other pump technology. Peristaltic pumps provide contamination – free pumping, while preventing damage to sensitive cell culture media. Thereby increasing the culture productivity and improving process cycle time.



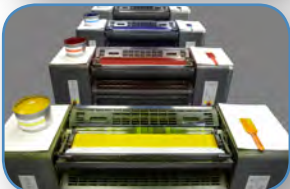
Chemical Feed - Peristaltic pumps are the ideal choice for delivering precise metering for demanding, high-accuracy chemical feed requirements. Peristaltic pumps eliminate vapor-lock and have a broad range of chemical compatibility.



Food and Beverage - Peristaltic pumps food handling capabilities enable them to meet the FDA's stringent standards and high purity requirements. They can deliver exact ingredient blends in a variety of food processes from beverage vending to fruit smoothie production.



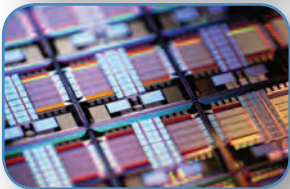
Hatcheries - Peristaltic pumps are ideal for dispensing nutrients, chemicals and liquid feeds ensuring precise dosing which is critical for the integrity of growth development.



Inks/Coatings - Flexographic and gravure printing presses rely on peristaltic pumps to deliver inks to the press fountains and doctor blade assemblies. The low shear pumping, self-priming capability and ease of tubing replacement makes peristaltic pumps an ideal choice.



Pulp & Paper - Handling tough, viscous slurries are never a problem due to the peristaltic pump's high suction lift capabilities. In addition, there are no glands, valves, or seals to become clogged or wear out.



Semiconductor - Masterlex pumps provide the linearity and repeatability required for optimal point-of-use slurry which is dispensed to the wafer polishing head. The pump's inherent abrasion resistance, and its variable speed operation allows for precise flow control or pressure over a wide operating range to maintain process integrity.



Water & Wastewater - Sodium hypochlorite, the most common disinfectant used for treating waste and potable water presents specific challenges to many pump technologies. Peristaltic pumps with their ability to pump multi-phase solutions and their high suction lift capability (in excess of 26 feet) solve many of the issues with this chemical feed process.

Thermo Scientific Fluid Handling

complete solutions for your applications

Thermo Scientific™ Fluid Handling is a leader in the peristaltic pump industry and is known for its dedication to quality through its well-regarded Thermo Scientific™ Masterflex™ brand. Decades of experience in the industrial segment, has resulted in the development of a comprehensive product line of peristaltic tubing and hose pumps for our customers. Whether you're seeking to deliver chemical feed or perform high-efficiency production in the food & beverage segment, we have the right solution for you.

The Masterflex pumps are highly durable, offer optimal performance and ease of use that can handle a wide variety of fluids. Our pumps and systems meet current regulatory requirements for ETL, CE, ISO and ROHS. They are an ideal choice for the challenges that facilities face today – optimizing efficiency and minimizing downtime.

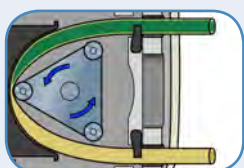
Key advantages of the Masterflex pump systems include:

- Rugged design to withstand operation in a harsh environment
- Accuracy, repeatability and precision performance
- High volumetric efficiency
- Fluid contacts only the tubing or hose material

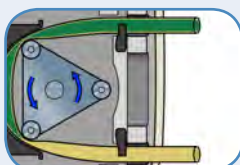
OEM Capabilities

We offer custom OEM (Original Equipment Manufacturing) solutions from concept to manufacture from our vertically integrated Midwest based manufacturing facility. Our experienced in-house Engineering team is ready to work with you on your next project. Utilizing state-of-the-art 3D CAD systems, stress analysis tools and performance modeling, we will design a complete product solution that meets your performance specifications. Contact us today at 1-800-637-3739 to speak with our staff.

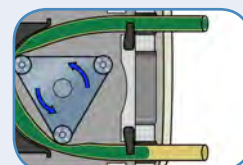
Peristaltic Technology



A pump head consists of only two parts: the rotor and the housing. The tubing is placed in the tubing bed—between the rotor and housing—where it is occluded (squeezed).



The rollers on the rotor move across the tubing, moving the fluid. Tubing behind the rollers recovers its shape, creating a vacuum and drawing in fluid behind it.



A "pillow" of fluid is formed between the rollers. This is specific to the ID of the tubing and the geometry of the rotor. This pillow stays fairly constant except with extremely viscous fluids.



Comprehensive product line

P/S Series Pumps and Systems



P/S Fixed Speed

Economical fixed flow rate solutions



P/S General Purpose Console

Pump and controls in one convenient enclosure



P/S Digital Dispensing Console

Digital metering features in one convenient enclosure



P/S NEMA 4X Process Console

Corrosion protection and water proof pump systems



P/S General Purpose Modular

Place controller and drive in separate locations



P/S Digital Dispensing Modular

Precise digital control with modular flexibility



P/S Portable Water Sampler

Weather-resistant, battery operated pump systems



P/S Air Powered

Variable speed for hazardous locations with these air powered systems



P/S Hazardous Duty

Use in hazardous rated locations systems



P/S Pump Adapter Systems

Mount these adapters directly to your favorite motor

I/P Series Pumps and Systems



I/P Fixed Speed

Economical fixed flow solutions up to 19 LPM (4.5 GPM)



I/P Multichannel

Provide multiple flow channels from one motor drive.



I/P General Purpose Console

Variable speed washdown



I/P NEMA 4X Process Console

Corrosion protection and water proof pump systems



I/P General Purpose Modular

Place controller and drive in separate locations



I/P Digital Dispensing Modular

Precise digital control with modular flexibility



I/P Air Powered

Achieve variable speed for hazardous location with these air powered systems



I/P Hazardous Duty

Use in hazardous rated locations



I/P Pump Adapter Systems

Mount these adapters directly to your favorite motor

B/T Series Pumps and Systems



B/T Fixed Speed

Economical solutions for bulk transfer



B/T General Purpose

Variable speed systems provide precise control of flow



B/T Digital Dispensing

Digital metering control for high volume dosing and dispensing



B/T Air Powered

Air powered for special locations



B/T Pump Adapter Systems

Hose pumps for the high flow and pressure requirements.

Specialty Flow Applications



Microflex

Miniature pumps for microfluidic applications



Miniflex

Compact pumps for constrained spaces

Enviroflex Hose Pumps



L-Series

Hose pumps for the high flow and pressure requirements.

Masterflex

high-quality tubing and hose

The combination of Masterflex pumps and tubing provides the following benefits:

- Optimized tubing life with improved retention
- Improved flow, pressure and suction performance
- Dimensionally stable and high tolerance extrusions which provide improved repeatability and accuracy
- Lot traceability ensures highest quality ingredients and traceability to manufacturing standards
- Broad chemical resistance







Masterflex tubing is specially formulated and designed for performance with the Masterflex peristaltic pumps. Tubing is available in more than 22 different formulations and 18 different sizes. These can be classified in 4 material families of:





- Thermoplastic
- Single component formulation
- Thermo plastic elastomer
- Phthalate-free formulations
- Silicone and Viton formulations

These special formulations provide compatibility and performance where other materials will not suffice. For example:







- Specialty Viton formula has increased fluorine content which increases chemical compatibility beyond standard fluoroelastomer materials
- BioPharm Plus silicone is specifically blended to provide long performance with very low contamination and high repeatability for dispensing applications.

P/S Series Tubing Cross Sections



Masterflex P/S Precision Pump Tubing Sizes					
					
P/S 13	P/S 14	P/S 16	P/S 25	P/S 17	P/S 18

Masterflex P/S High-Performance Precision Pump Tubing Sizes			
			
P/S 15	P/S 24	P/S 35	P/S 36

I/P Series Tubing Cross Sections

Masterflex I/P Precision pump tubing sizes			Masterflex I/P High-performance precision pump tubing sizes		
					
I/P 26	I/P 73	I/P 82	I/P 70	I/P 88	I/P 89

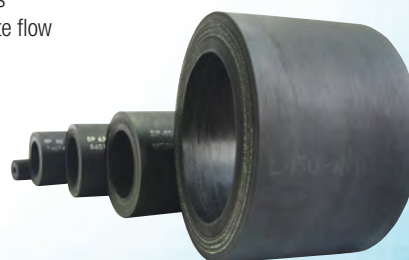
B/T Series Tubing Cross Sections

Masterflex B/T Performance precision pump tubing sizes	
	
B/T 87	B/T 87

Enviroflex Hose

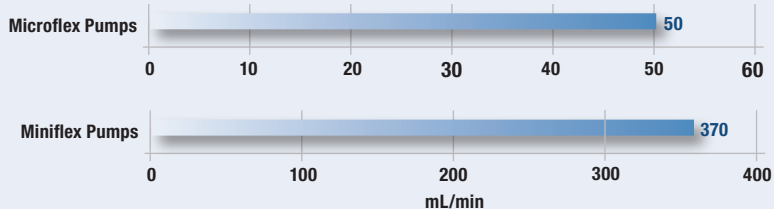
Precision ground hose ensures optimum hose life and accurate flow control

Broadest industrial range of hose materials- CSPE, EPDM, Natural Rubber, Nitrile

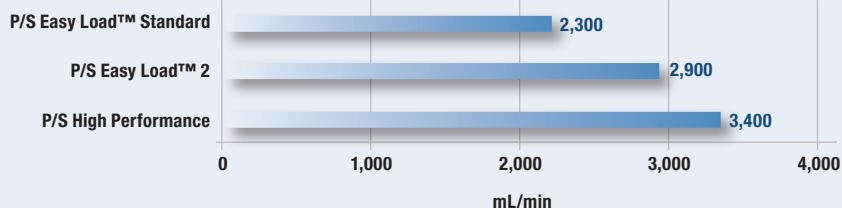


Peristaltic Pump Systems – Flow Rates

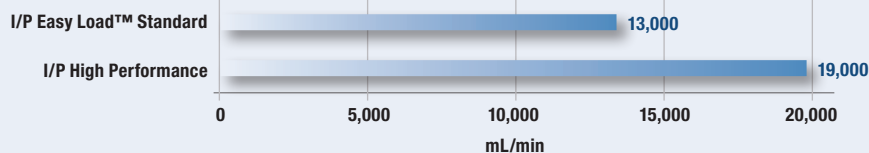
Microflex and MiniFlex Series Pumps



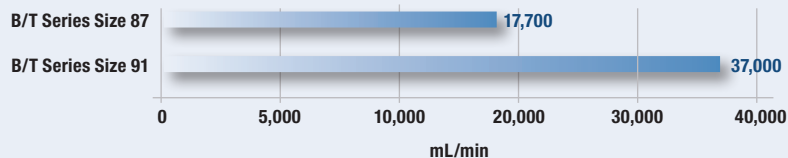
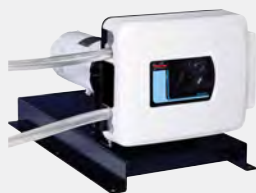
P/S Series Pumps



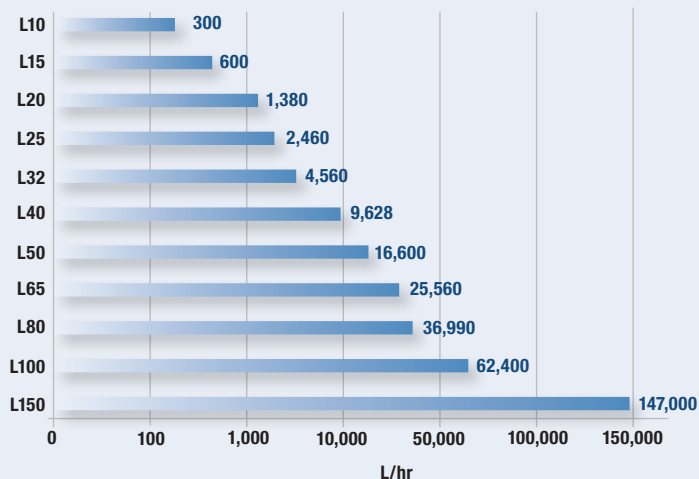
I/P Series Pumps



B/T Series Pumps



L Series Hose Pumps



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