

Thermo Scientific Masterflex Pumps Improve Metal Working And Polishing Processes, Eliminates Downtime, Increases Profitability

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Key Words

- Masterflex
- Peristaltic Pumps
- Tubing Pumps
- Stamping
- Plating
- Finishing
- Alloy Processing
- Snap-On Tools

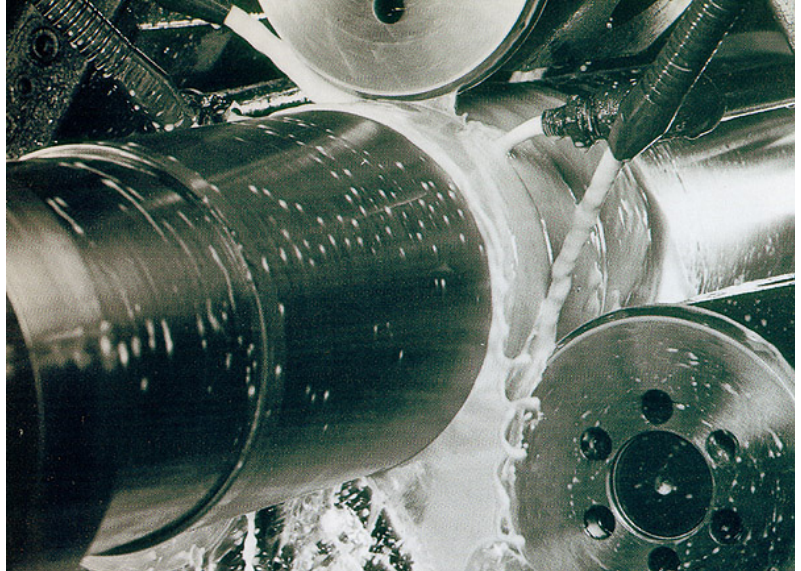
Lubricants, coolants, fluids and specialized coatings used in metal stamping, plating and finishing applications all have individual properties that can pose havoc to improperly selected pump systems. Greases, gels and lubricating pastes used in metal working are thick products that are often difficult to transfer. With lapping or polishing compounds, these highly abrasive slurries can bring missed schedules and costly downtime due to breakdowns from excessive pump wear. Moving highly corrosive fluids brings its own set of problems.

Precision control

Thermo Scientific Masterflex® peristaltic pumps are versatile, high-performance pumps designed to efficiently handle a wide range of fluids used in metal working, metal forming, and metal finishing, whether the application is stamping, fine blanking, roll forming or plating. From highly viscous gels or lubricating pastes to extremely abrasive polishing agents, Masterflex pumps provide the accuracy required for optimal point-of-use flow dispense, and their variable speed operation allows for precise control of flow and pressure over a wide operating range.

Benefits

Masterflex peristaltic pump systems are impervious to highly abrasive and corrosive fluids. Because of the pump's high suction lift capabilities, users can even pump straight from drums. The pump design provides a straight flow path with no dead flow areas for slurry to agglomerate, harden, or negatively impact the process. Flow rates are accurate up to $\pm 0.5\%$. Precise, stable fluid delivery not only ensures a constant flow, it also minimizes wasting expensive material, whether slurry, chemical, lubricants, or specialized coatings.



Highly versatile liquid feed & fluid handling solutions

Masterflex pumps are the ideal solution for efficiently carrying out the demanding bulk transfer and chemical metering applications for metal stamping, finishing, alloy processing, plating, and the manufacturing of stainless steel and die cast materials.

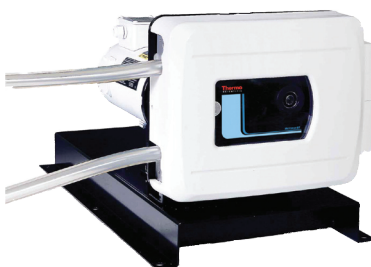
Aggressive and abrasive fluids can lead to valve failure and premature pump wear of other pump types. With Masterflex pumps, however, these materials remain inside the pump's hose or tubing at all times and cannot

contaminate and damage the pump or meter. With Masterflex pumps, a well-balanced range of capacities and flexibility combines with excellent repeatability and optimal chemical resistance to provide for precision, high reliability and long-term operation for handling virtually all liquid feed and fluid handling applications for the metal working industry.

Snap-on® tools nixes production downtime

Snap-on Tools manufactures some of the world's best wrenches at its Elizabethton, Tennessee, manufacturing facility. To make sure its newly-forged wrenches have that shiny look, the plant uses a citrus phosphate-based solution to brighten and polish the tools inside a drum polisher.

The plant operates the polishing drum only for short periods during each 8-hour cycle, therefore the diaphragm pumps serving the unit were frequently idle. During these idle periods, the citrus phosphate-based solution would quickly congeal and clog



User-friendly Masterflex systems are an invaluable piece of equipment for today's modern hatcheries

the pumps' ball check valves. Operators continually had to shut the entire operation down to clean the pumps.

The solution? The plant switched to a Masterflex digital washdown pump to serve the polishing drum — the peristaltic design means there are no valves, glands or seals to become clogged or worn out. If there's a rare clogging occurrence, the plant simply replaces the pump's tubing, which typically takes less than a minute.

The addition of the Masterflex digital washdown pump has helped improve productivity significantly. Also, the plant placed the pump's controller in a different environment, providing valuable added flexibility from a control standpoint.



Masterflex peristaltic pumps are versatile, high-performance pumps designed to efficiently handle a wide range of fluids used in metal working, metal forming, and metal finishing.

High performance solution with no lengthy downtime or clean up hassles

- The Masterflex pump lines offer pumping capacities from 0.001 mL per minute up to 175 gpm.
 - With adjustable 650:1 resolution, bidirectional flow and self-priming capabilities, Masterflex® pumps provide for smooth, seamless flow.
 - Peristaltic design means no valves, glands or seals to clean or wear out.
 - Requires very little maintenance to keep in peak operating condition.
- Pumps have an accuracy of ± 0.5 or better, manually adjustable speeds of 1-to-650 rpm, and flow rates from a few fluid ounces to multiple gallons per minute.
 - Pump acts as its own check valve – when the pump stops, the tube stays shut – no siphoning or dribbling!
 - Superior performance in corrosive, viscous and abrasive handling applications.
 - Maintenance-free brushless motor drive (rated for continuous duty) and roller and ball bearing pump head construction produce a robust, powerful pump ideal for long-term operation.
 - Self-priming for instant startup. And high suction lift provides for operating flexibility. The pump will also operate dry without damage!
 - From bulk storage system to point of delivery and back again, pumped slurries, polishing agents and other finishes remain safely contained within the pump's tubing, providing a high performance metering solution with no lengthy downtime or clean up hassles.
 - A wide range of superior tubing material is available for most any application.
 - High suction lift provides quick ramp up from no-flow condition to the desired set point.



In addition to these offices, Thermo Fisher Scientific maintains a network of representative organizations throughout the world.

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