



# Aeris™ at work for you

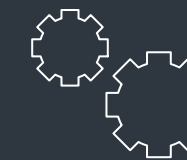
PUMPING SYSTEM HAS NO MOVING PARTS AND IT IS 100-200 TIMES MORE PRECISE

The Aeris™ Precision Chemical Delivery and Metering systems offer a new level of chemical delivery and metering without compromises.

All Aeris™ systems have no-moving parts in their pumping paths and are accurate to <1 ml with a <10 ml minimum delivery, regardless of system size and throughput.

There is no need any more to decide between accuracy and precision and flow rates. The Aeris™ systems offer the same performance when delivering 1 lpm or 100 lpm; when delivering from 55 gal drums or 1 pint bottles.

The systems equally prepare, store, condition, and heat a 1 gal tank or a 55 gal tank. The secret is in our patented positive displacement piston-less technology and proprietary mass metering systems.



## OEM SOLUTIONS

We offer the OEM Aeris™ Precision engine and peripherals for OEMs to integrate into their systems. From chemical hoods, to etching tools, to plating systems; if it handles chemicals we can provide an Aeris™ Precision system that works for you. In this way, you can concentrate on your core technology and leave the chemical handling, delivering, metering, and heating to us.

## ULTRA HIGH PURITY

Since there are no moving parts in the pumping path, there is nothing to wear and generate particles. Also, the entire system's wetted path is made of either PTFE or PFA and can operate normally at temperatures of up to 200 °C. The entire path is compatible with virtually all high purity chemicals used in the semiconductor, MEMS, medical, and pharmaceutical industries.

## REDUCED WORKER RISK

Precise automated chemical delivery and metering reduces worker's exposure and handling risk.

# No moving parts 100X more precise

## NO MOVING PARTS

The Aeris™ Precision Chemical Delivery and Metering System (CDMS) pump has no moving parts. It moves fluids using MATECH's patented positive displacement piston-less pumping (P3) technology. In many ways the operation of the Aeris™ Precision pump resembles the pumping of our own heart.

- Increased reliability and uptime
- Ultra-low particle generation
- Intrinsically high purity
- Lower cost of ownership
- Suitable for delicate or sensitive fluids

Aeris™ technology does not use pistons, seals, impellers, diaphragms, or any other moving part in contact with the liquid being pumped. As a direct consequence, the uptime and reliability increase, and the cost of ownership is reduced.

Given the absence of impellers, pistons, diaphragms, or other fast moving components, the Aeris pump is gentle on the fluids being pumped. This is important in some pharmaceutical or biological applications. It is also relevant in the pumping of some non-Newtonian fluids.

*"FINALLY, A PRECISION CHEMICAL DELIVERY SYSTEM THAT VIRTUALLY FULFILLS THE PROCESS ENGINEER'S WISH LIST"*

## OUTSTANDING PRECISION

A sophisticated proprietary mass metering system assures a metering resolution of <1 ml and a minimum spiking volume of 10 ± 1 ml. This figure is generally independent of the system's flow rate and

you get the same precision and accuracy if you are dispensing from 55 gal drums at 100 lpm or from bottles at 5 lpm. All metering parameters, including pumping speed, metering ramp-down, and metering valve frequency are under program control

allowing the user to tailor the system's performance to its specific needs.

## SELF PRIMING

The Aeris™ Precision system can prime from a height of over 25 ft without any assistance and it senses automatically when the fluid is ready to be pumped. It never misses any of the fluid, even during mixed gas-fluid flow.



## TURNKEY SOLUTIONS

The Aeris™ Precision bench top unit works right out of the box. It is even self-calibrating. Its default configuration includes three independent channels and can measure < 1ml and deliver any volume mix of the three channels, up to a gallon with accuracy of 0.25-0.50 ml.

## INDUSTRIAL SOLUTIONS

Bulk Aeris™ Precision Systems take their chemicals from external "delivery" bays or cabinets. Depending on the user's needs, the bays can accommodate 55 gal drums, 5 gal carboys, or "1 gal" bottle (or smaller) size. The user can mix and match the bay sizes according to his or her needs and expand or exchange them as the requirements change. The control console can handle up to 12 individual chemical channels in any combination, thus making expansion extremely cost effective.

