

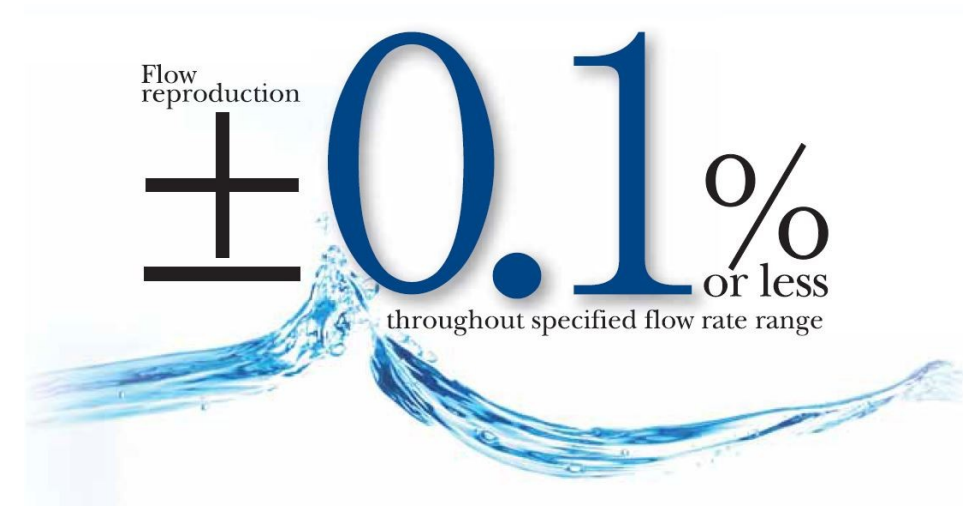


UK and European distributor for the
Fuji-Techno range of
Super-Metering-Pumps

Pumps, Pump Control Units, Skids,
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The most accurate metering pumps in
the world



HY Super Metering Pumps



The most accurate metering pumps in the world

Metering pumps are, in effect, high performance dosing pumps – precision instruments used to accurately transfer controlled volumes of liquids, at constant flow rates, with a wide range of discharge pressures, into a process or system.

Typically they offer accuracy in the region of $\pm 1\%$, but one company has been quietly manufacturing its own unique design of metering pumps that raises the bar to completely new levels of accuracy and control.

As long ago as 1983, after years of research and development, Fuji Techno Industries, of Japan, launched a range of innovative Super Metering Pumps (SMPs) that significantly improve performance, with astonishing pumping accuracy of $\pm 0.1\%$ or less!

Not only that, but because of their unique design, they produce no pulsations in the flow of liquid.

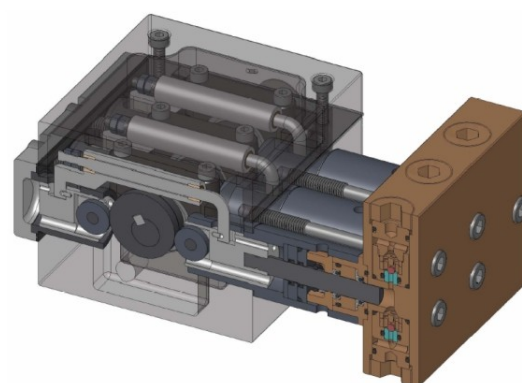
No other pump is able to match the accuracy and performance of the SMP. The pumps are most suited

to applications and processes that require this ultra-high level of accuracy and control, the SMPs are quite literally in a class of their own.

Fuji-Techno's Super Metering Pumps are made up of a pump head, an electric motor and a triple plunger system driven by a specially designed cam that controls the motion cycle of the plungers. The liquid being pumped enters and exits the pump head through suction and discharge valves, filling each of the three chambers with a precise volume of liquid as each piston, or plunger, withdraws on its suction stroke. The liquid is then discharged as each plunger re-enters its chamber.

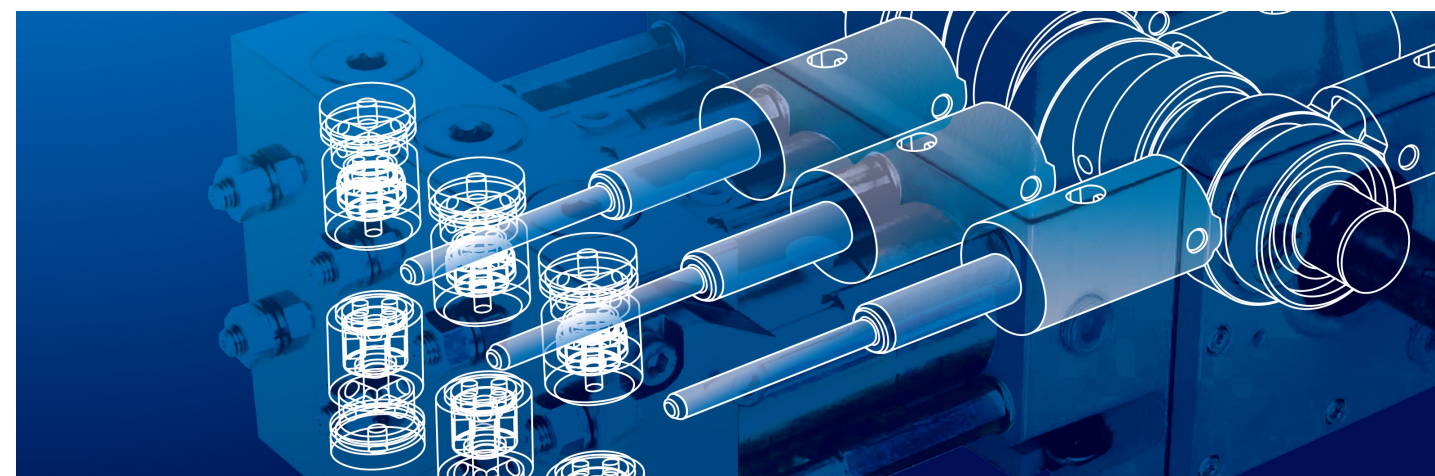
The three plungers work in perfect equilibrium with each other. The timing of each plunger's suction and discharge cycle being precisely controlled by the cam, so that the total liquid discharged from the pump is highly accurate and constant with no pulsations in the flow. The plungers are

designed to make different motions in six stages within one revolution of the cam and in harmony with each other. For example, the first plunger starts its discharge stroke with the cam at 0° , the second plunger starts at 120° , and the third at 240° . It is this unique operation that ensures constant flow with no pulsations.

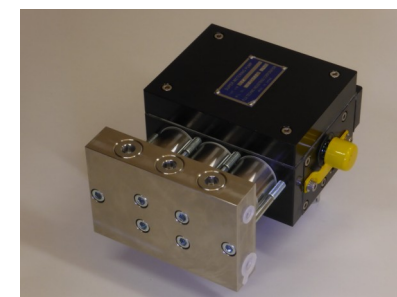


Specially designed suction and discharge valves result in smooth movement of the check balls minimising wear to the valve seats.

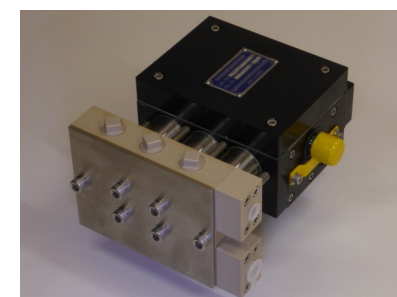
This ensures high accuracy is maintained over long periods of operation, and eliminates the possibility of the valves themselves causing pulsations or leakage. A variety of Pump Head materials offer additional flexibility.



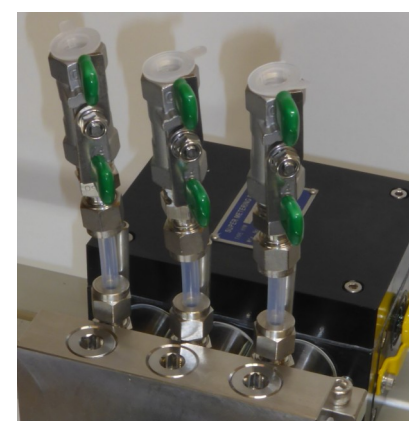
These range from Stainless Steel, Hastelloy and also Titanium to metal-free heads



in PTFE and PEEK.



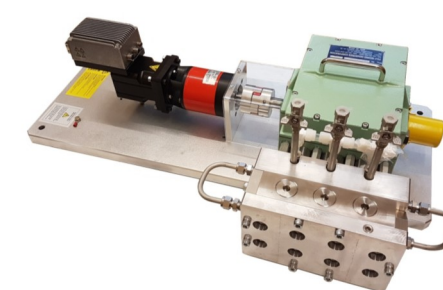
The pumps can be fitted with liquid and gas purge fittings to enable piston back-flushing, extending their flexibility.



An air-free barrier for air or moisture reactant liquids, such as BuLi can be achieved.



Heating and cooling jackets to facilitate maintaining constant temperature in the pumped medium are also available.



Fuji-Techno have recently launched a cost reduced version of their portable unit for HPLC applications.

The new portable unit is fitted, as standard, with a Hastelloy pump head, Kalrez O-rings and DLC coated Hastelloy plungers.

The unit, with the size 08 plungers, is capable of delivering up to 108.6ml/min

(217.2ml/min with double head) at pressures up to 98Bar.

The combination of Hastelloy wetted parts and Kalrez gaskets makes this pump unit suitable for a wide range of applications where aggressive chemicals are used.



Also available are our Pump Drive Assemblies (PDA) and Pump Turn-Key Systems (PTS) providing additional flexibility for integration to customer specific requirements.



Typical applications include:

- pharmaceutical and chemical processing
- urethane and other resins
- chromatography
- explosives,
- food processing
- film
- spraying and coating applications
- cosmetics
- line mixing for liquids
- in-feed for extruders
- water treatment