

## VERMES Microdispensing unveils DST - Dynamic Shockwave Technology



VERMES Microdispensing  
"Powered by DST" - Dynamic Shockwave Technology

**Munich, Germany, April 08th, 2019 – VERMES Microdispensing**, a world leader in the design and manufacture of innovative microdispensing concepts and systems introduces the DST - Dynamic Shockwave Technology.

Dynamic Shockwave Technology (DST) stands for a revolutionary actuator principle. Through optimized channel guidance and configuration of the compression geometries, a shock wave is generated in the actuator, which is converted into a highly dynamic linear movement due to the special piston area. As a result, extraordinary power and precision can be achieved even at the smallest strokes.

These features make the DST principle perfectly suitable for its use in jet valves and the dispensing device achieves superior system performance, especially for highly viscous and difficult to dispense media.

"Powered by DST" provides the valve with new dimensions.

DST has already been patented worldwide by VERMES Microdispensing and will be integrated into the Micro Dispensing Systems - MDS 1500 series.

Even the most demanding processes, whether due to product or production complexity are easy to implement and thus enable maximum process reliability and reproducibility.

The new VERMES Microdispensing system MDS 1560 is the first system solution of the MDS 1500 series that is based on the new DST technology.

"DST significantly optimizes the valve's yield in order to achieve a most perfect dispensing result," states Juergen Staedtler, managing director and CEO of VERMES Microdispensing.

The MDS 1560 system with DST achieves a significantly higher clock frequency than conventional dispensing systems with electro-pneumatic actuators.

The MDS 1560 includes a specific pressure monitoring and in combination with a special, integrated sensor it ensures that the actual pressure value is continuously self-adjusted, pressure fluctuations are avoided and a perfectly to the medium adapted tappet speed is achieved.

The system can always be operated with the optimum tappet speed, adjusted to the chosen dispensing medium.

Power fluctuations are compensated even at very high frequencies.

The MDS 1560 micro dispensing system is therefore suitable for a very wide range of liquids of various viscosities, ranging from aqueous solutions to solder paste.



VERMES Microdispensing  
MDS 1560 Micro Dispensing System with  
Dynamic Shockwave Technology

Media can be jetted in amounts smaller than 1.0 nano-liters which is an important advantage in terms of decreasing component size in industries such as consumer electronics.

The new system addresses markets such as electronic production and can be used for sealing of LCD screens, solder paste dispensing onto printed circuit boards, for use in mobile phone adhesive applications, and more.

The system does not require any initial adjust activity. This means that dispensing pressure and other dispensing parameters can be modified to dispense the perfect line regardless of varying conditions.

An integrated cooling keeps the temperature of the valve below a critical value when in operation. This makes it possible to operate the dispensing system even at high outside temperatures and high clock frequencies compared to conventional dispensing systems.

The valve is mountable from three sides and with its rotatable fluid box construction with auto lock in three positions (0, -90°, +90°) it allows maximum dynamic performance.

The MDV 1560 valve's modular design with its user-friendly quick connect bayonet fluid box system allows fast and tool-less disassembly and simplifies nozzle insert and tappet cleaning and maintenance. The MDS 1560 is fully compatibility with all the tappets and nozzle inserts that are available at VERMES Microdispensing making it possible to quickly customize for specific application requirements.

The integrated heating system delivers permanently stable temperature and perfect viscosity conditions for the dispensing media and reduces the time during which a sensitive dispensing medium is exposed to elevated thermal conditions.

An exceptional service life and an optimized very low compressed air consumption turns the MDS 1560 system into a highly efficient and yet very economical solution.

#### About us

Headquartered in Germany, VERMES Microdispensing revolutionized microdispensing technology with the introduction of its contact free piezo-based MDS 3000 series in 2001. Today, the company is a world leader in the design and manufacture of innovative microdispensing concepts and systems for adhesives, silicones, greases, solvents and other fluids.



VERMES high precision MDS 3000 valves support modern manufacturing processes across the globe, e.g. for automotive, pharmacology, smart phones, TV sets, lamps, wafers, automated manufacture of LEDs, MEMS components, RFID tags, LC displays and many other electronic devices.

Our systems enable our customers to achieve contact free dispensing of highly viscous media droplets in the micro and nano-liter range at theoretical frequencies of more than 3000 Hz; a rate that is unique in our industry.

VERMES Microdispensing employees are dedicated to providing the best technologies and services to its customers around the world with the ultimate aim of contributing to increased throughput, improved quality and lower production costs. More information about VERMES Microdispensing can be found at [www.vermes.com](http://www.vermes.com).

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