Our partner, **VERMES Microdispensing**, a world leader in the design and manufacture of innovative microdispensing concepts and systems, has introduced **DST – Dynamic Shockwave Technology**. Applied to jetting valve technology for the application of fluids and pastes, **DST** is an enabling move forward.



Dynamic Shockwave Technology stands for a revolutionary actuator

principle. Through optimised 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 on the smallest dispense strokes. These features make the DST principle perfectly suitable for its use in jetting valves achieving superior performance, especially for highly viscous and difficult-to-dispense media. *"Powered by DST"* provides the valve with new capabilities.

DST has been patented worldwide by VERMES Microdispensing and will be integrated into our latest **Microdispensing Jetting Valve System – the MDS 1560**.

"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 Microdispensing Jetting Valve System with DST achieves a significantly higher clock frequency than conventional dispensing systems with electro-pneumatic actuators. The MDS 1560 includes specific pressure monitoring and in combination with a special, integrated sensor it ensures that the actual pressure value is continuously self-adjusted, and pressure fluctuations are avoided. The system is 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 Microdispensing Jetting Valve System is therefore suitable for a very wide range of liquids of various viscosities, ranging from aqueous solutions to solder paste. Media can be jetted in amounts smaller than 1.0 nanoliters, which is an 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. 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 ambient temperatures and high clock frequencies compared to conventional dispensing systems.

The jetting 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 jetting

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 currently available at VERMES Microdispensing making it possible to quickly customise 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 optimised very low compressed air consumption turns the MDS 1560 Microdispensing Jetting Valve System into a highly efficient and yet very economical solution. Come and talk to us about your application.

Supplied by:



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Last updated: November 2019

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