

## Press Information

September 06, 2023

Henkel shows precise seal foaming with Smart dosing cell at Fakuma 2023 and Technomelt hotmelt adhesive for encapsulating electronics

### **New generation of dosing machines with many innovations for highest process stability**

Düsseldorf – At Fakuma 2023 in Friedrichshafen, the world's leading trade fair for industrial plastics processing, Henkel will present the Sonderhoff Smart-M dosing cell with the new DM 50x technology and the newly developed MK 825 PRO mixing head from October 17 to 21. The dosing cell will be operated LIVE at booth no. 5109 in hall A5.

With the Sonderhoff technology portfolio, Henkel offers customized sealing, bonding and potting solutions consisting of a wide variety of material systems, dispensing machines and process automation from a single source.

#### **Different automation of the Smart dosing cells**

The Sonderhoff Smart-M dosing cell exhibited at the trade show is the smallest compact class for seal foaming, bonding and potting. All essential components of the dosing machine are compactly arranged on the rear wall of the cell chassis. The material pressure vessels, which supply the mixing head with the components of the 2K material systems via recirculation lines, are located separately on a grid platform.

The dosing cells are available in two sizes: the Smart-M with a mixing head travel range of 500 x 600 x 250 mm (x/y/z) and the larger Smart-L with 1,000 x 800 x 250 mm (x/y/z).

The dosing cells can be configured differently. Both dosing cells are equipped with a lift door as standard. Optionally, a rotary indexing table with 180° pitch is also provided for the Smart-M. For the Smart-L, there is alternatively a sliding/shuttle table with two mounting plates for the workpieces or a transfer belt circulating through the cell for part feeding and unclocking.

### **Innovative mixing head for the highest demands**

The MK 825 PRO mixing head used in the Smart-M, with optional mixing head cooling and improved valve technology, has been consistently enhanced with innovative features and designed to be maintenance-friendly.

The sensors installed in the MK 825 PRO mixing head measure a wide range of data for seamless monitoring and compliance with critical process parameters, such as the degree of air loading, axial position of the agitator shaft in the mixing chamber, material pressure at the valve and the temperature in the mixing chamber, as well as the positioning of the dosing needle.

Another new feature is the automatic control of the stroke adjustment of the nozzle closure system DVS-3 on the mixing head.

### **Added value through detailed process monitoring and optimized process control**

The Smart-M dosing cell offers ongoing process monitoring and operator interfaces with a graphically clear and therefore informative visualization. A new, user-friendly menu layout with central navigation enables intuitive menu navigation. Most of the function key designations have been replaced by universally understandable symbols, making menu operation language independent.

Interactive remote maintenance together with the customer is also possible. For this purpose, Henkel's service technicians connect online to the customer's dispensing machine and use the alarm logs and the production data of the Smart dosing cell for error analysis.

The machine operator can analyze the production data quickly and accurately using the multifunctional 10.1-inch MP 2 mobile panel. Operation is even more convenient with visualization via the 21.5-inch touchscreen of the optionally available Control 2 operating panel.

The Smart dosing cell with DM 50x technology ensures an optimum application process for seal foaming, bonding and potting of the components and provides optimized process control. The advantages for the customer: high machine availability, process-stable production, and thus high product quality.

### **Equipment options to increase process and dosing accuracy**

The Smart-M dosing cell will be shown at the trade fair with additional equipment options that further increase process and dosing accuracy. These are the Nozzle-Control measuring unit for checking the dosing nozzle, the Dosing Weight-Control, and the Air-Clean pneumatic nozzle cleaning as well as high-pressure water rinsing of the mixing chamber.

The nozzle measuring unit uses two laser sensors positioned at right angles to check the presence and exact position of the dosing nozzle and for possible material buildup on the nozzle.

To check the dosing accuracy, using the Weight-Control unit, the calibrated electronic scale checks the compliance of the discharge quantity with the set value in the dosing program.

The pneumatic air jet cleaning ensures that the mixing head always has a spotlessly clean dosing nozzle. The interval of this cleaning function can be freely set in the control system of the mixing and dosing units.

With the ecological high-pressure water rinsing system installed in the dosing cell, the mixing chamber is cleaned quasi-mechanically from material residues of the reaction materials used. The use of tap water saves costs. In contrast, conventional solvent-based cleaning of the mixing chamber incurs disposal costs.

In the case of very reactive material systems, the Peltier cooling unit provides mixing head cooling and thus longer service lives.

The LBM 3 measuring and control unit provides the exact air loading, which varies depending on the application, to form the mixed-cell structure of the foam seal. The degree of softness of a sealing and its compression also depends on this.

### **Cost-effective and simple process for encapsulating electronics**

In addition to Henkel's polyurethane or silicone-based 2K material systems, the product and processing of Technomelt will be presented at the booth. This solvent-free hotmelt adhesive, produced mainly from naturally renewable raw materials, is used for the low-pressure molding process. In this process, an insert is overfolded in a mold with the hotmelt adhesive while hot and at low pressure, an innovative process similar to injection molding. When cooling at room temperature, the adhesive solidifies with the substrate of the component. Typical examples of applications include electronic components, printed circuit boards, sensors, control systems or grommets and connectors for solar technology terminals, which are thus protected against weather and UV radiation.

### **Conclusion**

The Smart-M and Smart-L dosing cells with DM 50x technology, which are used for a wide range of applications, enable precise processing of 2K material systems and very high process and dispensing accuracy. The sensors installed in the MK 825 PRO mixing head provide the user with data on the formed-in-place (foam gasket) application process. They are used for precise analysis, evaluation and control of the material application processes and are also used for predictive monitoring and maintenance of wear parts.

## About Henkel

With its brands, innovations and technologies, Henkel holds leading market positions worldwide in the industrial and consumer businesses. With its Adhesive Technologies business sector, Henkel is the global market leader in adhesives, sealants and functional coatings. With its Consumer Brands business sector, Henkel is the global leader in many markets and categories, particularly in laundry detergents, household cleaners and hair care. The company's three biggest brands are Loctite, Persil and Schwarzkopf. In fiscal 2022, Henkel generated sales of more than 22 billion euros and adjusted operating profit of around 2.3 billion euros. Henkel's preferred shares are listed on the DAX. Sustainable action has a long tradition at Henkel, and the company pursues a clear sustainability strategy with specific targets. Henkel, founded in 1876, looks back on a success story of more than 146 years and today employs a diverse team of more than 50,000 people worldwide – united by a strong corporate culture, shared values and the corporate purpose: "Pioneers at heart for the good of generations." More information at [www.henkel.com](http://www.henkel.com)

**Photo material can be found on the Internet at** [www.henkel.de/presse](http://www.henkel.de/presse)

Contact	Florian Kampf	Sebastian Hinz
Phone	+49 221 95 685-285	+49 211 797-85 94
E-Mail	<a href="mailto:florian.kampf@henkel.com">florian.kampf@henkel.com</a>	<a href="mailto:sebastian.hinz@henkel.com">sebastian.hinz@henkel.com</a>

**The following photo material is available:**



Smart-M Dosing Cell with lifting door and MK 825 PRO mixing head in the version for two material components. Shown with optional Control 2 multi-touch operating panel.



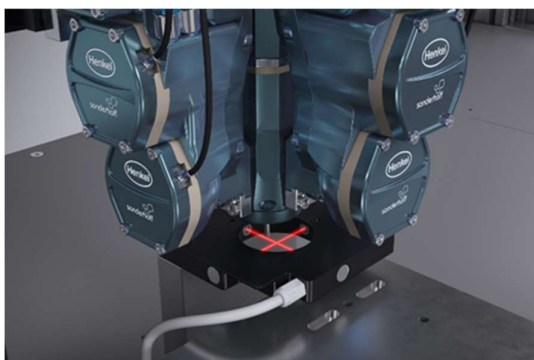
The MK 825 PRO mixing head with many innovations for highest process stability.



Low Pressure Molding: grommets with Technomelt hotmelt adhesive.



Smart-M Dosing Cell with rotary indexing table, the insertion area is protected by a light grid.



The nozzle measuring unit checks whether the dosing nozzle of the MK 825 PRO mixing head is in the correct position and no material is adhering.