

PRESSRELEASE

**ELMET at K 2022:
Innovative production cell**

SMARTcap: Clear the stage for an innovative production cell for food & beverage can lids

At K 2022 in Düsseldorf, Elmet is presenting a production cell that combines many of the company's technological flagships.



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ELMET will be presenting its new SMARTmix TOP 7000 Pro LSR dosing system at K 2022. Together with its project partners, Upper Austrian company Elmet has developed an innovative production cell. The system manufactures four different covers for beverage and food cans, which have been dubbed as „SMARTcaps“. SMARTcap is a collaborative project by Elmet, Sumitomo (SHI) Demag, Shin-Etsu, and Mettler Toledo. In the form of Elmet's SMARTshot E and SMARTmix TOP 7000 Pro systems, two of the company's technological flagships are used in the production cell. The system will be presented for the first time at K 2022 at the exhibition booth of Elmet's partner Sumitomo (Hall 15, Booth D22). The leading business platform for the plastics and rubber industry takes place in Düsseldorf from October 19 to 26, 2022.

Offering, September 12th, 2022 – In the 26 years since it was founded, Elmet has become a global player in the development and production of high-quality equipment for manufacturing silicone parts. Partners from all over the world utilize the know-how from Upper Austria for developing innovative systems. Most recently, Elmet has collaborated with three project partners to develop a production cell that manufactures four different lids for beverage and food cans. The accuracy of the injection process is ensured and documented by a weighing cell. A laser marks the finished SMARTcaps to ensure optimal traceability.

Leading Elmet technology twice over

Lids for food & beverage cans are manufactured by an Elmet injection mold, featuring an all-electric SMARTshot E valve-gate cold-runner system. Its technological high-end counterpart in material provision is the Elmet SMARTmix Top 7000 Pro dosing system, responsible for precise and reliable dosing of material to the Elmet injection mold. A Sumitomo linear handling device removes the parts from the mold and transfers them to the weighing cell made by Mettler Toledo. Every single part is weighed there. The result is stored in a database and also displayed graphically to demonstrate the process accuracy of the system. After the weighing pro-

cess, the silicone parts are marked by laser to ensure highest possible traceability. After lasering, the parts are placed on a conveyor belt.

The interaction provides the magic

The new system is not only innovative in terms of the perfect symbiosis of technology-leading Elmet elements. The magic of this innovation unfolds in the interaction between the high-tech contributions from the four partner companies. The combination of high-precision dosing (Elmet SMARTmix Top 7000 Pro), the all-electric injection-molding machine (Sumitomo IntElect), and the electric valve-gate cold runner (Elmet SMARTshot E) enables a previously unachievable level of accuracy in the reproduction of part weights. The special four-cavity injection mold from Elmet injects four different can lids made of liquid silicone (LSR) from partner company Shin-Etsu. The silicone lids produced serve as coverings for customary beverage cans that have been in use for decades, such as those for soft drinks, energy drinks and various alcoholic beverages. A separate cavity also produces covers for customary food cans made of sheet steel, which protect the contents from insects, for example, and keep the opened cans fresh in the refrigerator.

Elmet SMARTmix TOP 7000 Pro

The dosing system is a new development from the Austrian company. Development work focused on reducing the unit's footprint to 1,150 x 790 millimeters. This makes the system the smallest liquid-silicone dosing system for 200-liter container units on the market. Compared to its predecessor, the SMARTmix TOP 5000 P, the SMARTmix TOP 7000 Pro features a completely new pump system, which now only contains approximately one third of the liquid silicone in the system, making it much easier to clean. This characteristic is very important, particularly for use in the medical and pharmaceutical fields, where the pump unit is dismantled and cleaned each time the material changes, in order to prevent mixing of different types of liquid silicone. Apart from the new pump unit, an optimized follower plate geometry also helps reduce the amount of residual material. The new system boasts a material utilization level of up to 99.6%. Drums are changed fully automatically to increase ease of use and keep the amount of training to a minimum. Use of special seals made of FDA-compliant materials also predestines the SMARTmix TOP 7000 Pro for medical applications.

Teamwork at the global player

Not only know-how from Elmet can be found in the sophisticated system. „Only when combined with the all-electric injection-molding machine from Sumitomo, the weighing system from Mettler Toledo, and the liquid silicone (LSR) from Shin-Etsu does the unique system become a total work of art that we are all really proud of,“ says a delighted Harald Wallner, CEO at Elmet. The system can be seen for the first time at the Sumitomo booth at K 2022 in Düsseldorf, Hall 15, Booth D22.

Elmet SMARTshot E with SMARTcontrol

The all-electric Elmet SMARTshot E valve-gate cold-runner system guarantees precise filling of every single cavity in a reliable process. Settings for the cold runner are entered on an 18.5“ display of the external SMARTcontrol unit. Thanks to servomotors, it allows needle adjustments in increments of two thousandths of a millimeter. Needle regulation is carried out in real time and monitored continuously by the system. The innovative

arrangement of the mini servomotors enables nozzle spacings of 44 millimeters. Pneumatic components, on the other hand, are a thing of the past. This saves energy and facilitates ingenious cable management with industrial plug connections, which allows cleaning work to be performed on the cold runner without any qualified electrical personnel.

Corporate Data

Molds. Dosing technology. Part production. Jobs. Elmet inspires with smart silicone solutions. This is Elmet's guiding principle. The innovative company was founded in 1996. A powerful, dedicated team with a wealth of experience in moldmaking, dosing technology, and liquid-silicone injection molding has since developed into an internationally successful systems builder. Today Elmet is a global player in designing and manufacturing high-quality equipment for the production of silicone parts.

Further information can be found at www.elmet.com

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