Press release

Screw spindle replaces piston drive

Dürr’s EcoMeter SP, a continuous dosing system for uninterrupted application

Bietigheim-Bissingen, August 14, 2024 – Dürr expands its product line with the EcoMeter SP, a continuous dosing system designed for the seamless application of highly viscous media without interrupting material flow. This product is well-suited for large-volume applications that require substantial amounts of adhesives or sealants. A screw spindle pump drives the continuous dosing system, making it lighter and more compact, lower maintenance, and more cost-effective than previous alternatives.

Three screw spindles deliver uninterrupted and continuous material feed. An electric servo motor drives the middle spindle, initiating movement in the other two. The connected supply station holds the material. These spindles rotate in opposition to push the material into the endless dosing system’s applicator. In contrast, piston dosing systems rely on material pressure to fill the chamber before the piston’s action expels it. This repetitive piston movement interrupts the application process, potentially exceeding predefined cycle times. In addition, piston dosing systems’ maximum filling quantity limits their application range. Previously, users either purchased the biggest available model with a volume of 600 cubic centimeters or combined two smaller piston dosing systems with a volume of 150 or 300 cubic centimeters into a tandem dosing system to counter this disadvantage. This tandem solution was the only option for continuous material flow using the proven piston dosing technology.

Unlimited volume and shorter cycle times

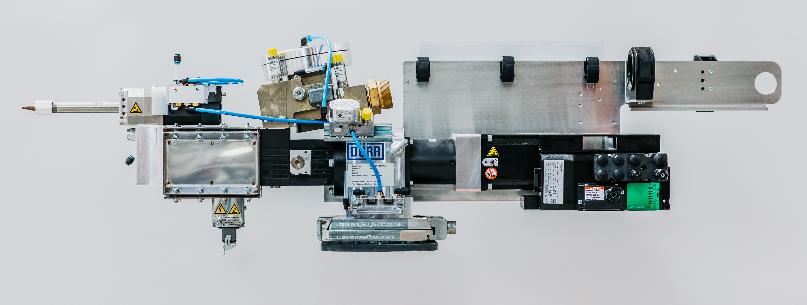
In contrast, the EcoMeter SP offers unlimited capacity making it versatile. It is suitable for countless application processes in car manufacturing, including body-in-white construction, final assembly, and battery manufacturing. It offers additional benefits besides endless dosing. The absence of a reverse piston stroke reduces cycle times, increasing production capacity. Compared to a tandem solution using two-piston dosing systems, employing a single spindle reduces the dosing system’s overall weight by up to 20 percent and its required installation space. This makes the EcoMeter SP more agile and dynamic, and it can connect to smaller robot arms. Moreover, the EcoMeter SP’s maintenance is less complicated with just one seal for material feed. The dosing system also uses less energy and is up to 40 percent cheaper than the comparable tandem version with piston dosing technology.

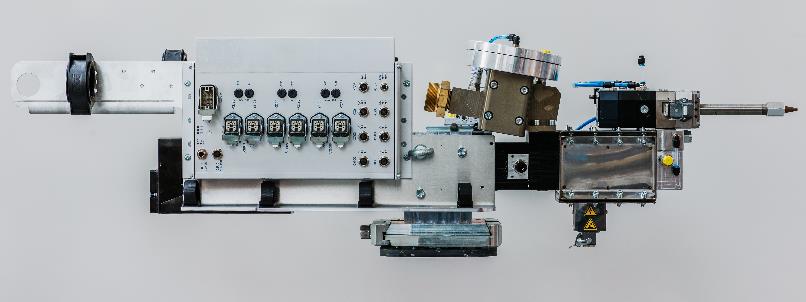
Versatile for large quantities of material

Dürr is offering the EcoMeter SP not as a replacement but as a complementary addition to the proven EcoShotMeter models with piston drive, which are ideal for applications that require high pressure, high volumetric flows, and utmost precision. The EcoMeter SP, on the other hand, is superior in its ability to adjust the pressure and volumetric flow rate thanks to its versatility and variability. The spindle speed meters the volumetric flow rate with extreme precision and can adapt to specific requirements. Therefore, the EcoMeter SP is suited for applications requiring consistent output pressure and continuous material flow, such as bonding and sealing panoramic glass roofs in final assembly or applying sealant for battery boxes and modules, which require significant quantities.

Dürr’s EcoMeter SP is available immediately in two versions: one for direct applicator mounting on the dosing unit and one for mounting the applicator using a hose so it is decoupled from the dosing unit. The endless dosing system is also suitable for large-volume industrial bonding applications using both 1C and 2C materials.

Pictures  
The following pictures are available for download [here](https://www.durr.com/fileadmin/durr.com/06_Media/01_News/2023/Files/duerr-ecoprowet-pt-en.zip).

Image 1: The EcoMeter SP a continuous dosing system (shown here with the EcoGun PVA04 applicator) is designed for the seamless application of highly viscous media without interrupting material flow.

Image 2: Three screw spindles deliver uninterrupted and continuous material feed. So the EcoMeter SP is well-suited for large-volume applications that require substantial amounts of adhesives or sealants.

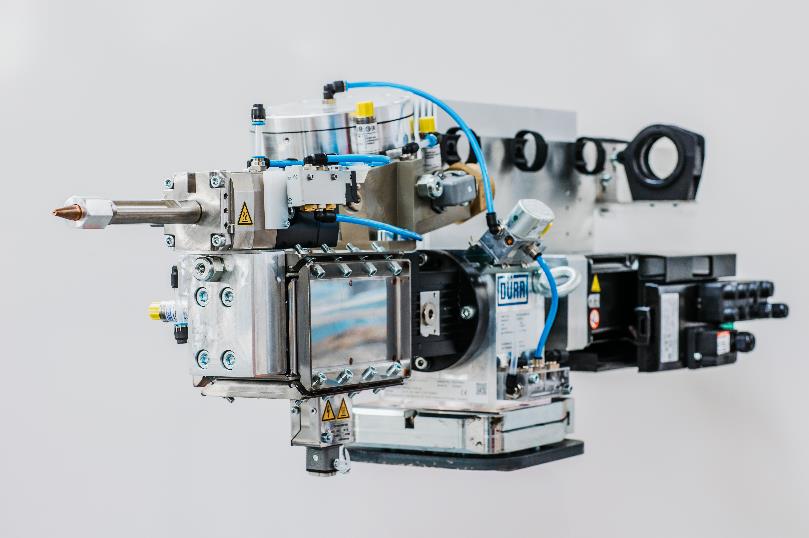


Image 3: Dürr’s new continuous dosing system is suitable for countless application processes in car manufacturing, including body-in-white construction, final assembly, and battery manufacturing.

The Dürr Group is one of the world's leading mechanical and plant engineering firms with particular expertise in the technology fields of automation, digitalization, and energy efficiency. Its products, systems, and services enable highly efficient and sustainable manufacturing processes – mainly in the automotive industry and for producers of furniture and timber houses, but also in sectors such as the chemical and pharmaceutical industries, medical devices, electrical engineering, and battery production. In 2023, the company generated sales of €4.6 billion. The Dürr Group has around 20,000 employees and 141 business locations in 33 countries, and it operates in the market with five divisions:

* **Paint and Final Assembly Systems**: paint shops as well as final assembly, testing, and filling technology for the automotive industry
* **Application Technology**: robots and products for the automated application of paint, sealants, and adhesives
* **Clean Technology Systems**: air pollution control, coating systems for battery electrodes, and noise abatement systems
* **Industrial Automation Systems**: automated assembly and test systems for automotive components, medical devices, and consumer goods as well as balancing technology
* **Woodworking Machinery and Systems**: machinery and equipment for the woodworking industry

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