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Bubble-free filling of oil dampers

Save resources, improve ergonomics at manual workplace

Filling of oil dampers in low-volume and pilot production is mostly manual work. Employees are mainly supported by pressure-time-controlled systems, but in some cases simple glass syringes or measuring cups are used. There is a lot of potential for improvement because a compact, flexible dosing system is more efficient and precise.

"Some mechanical engineers ask me, why they should exchange their current system - as long as everything is going well. Maybe in order to save money and make it easier for the employees at the manual workplace," says Olaf Lang, who works for HNP Mikrosysteme in Technical Sales, and provides the following technical arguments.

His proposed dosing system includes a micro metering pump. This self-priming micro annular gear pump can work without an application of compressed air to the reservoir. On the one hand, this saves the cost of compressed air including the necessary devices and, on the other hand, avoids the introduction of compressed air into the silicone or hydraulic oil. The medium can be filled bubble-free, gently and without loss of quality.

Unwanted dripping of the medium is prevented by a programmed return effect. The workplace remains clean, raw materials are used effectively and the costs for cleaning workplaces and dampers as well as excessive media are saved. The pump meters a wide range of liquids and can be emptied and rinsed easily, without the need for a complex changeover of the system. This saves working time and makes the process much more effective.

The dosing system can contain various control and operating elements in addition to the pump and filter. The simplest version includes a control system with a potentiometer and a manual switch operated by foot or hand. But also control and input possibilities via PC or tablet can be implemented.

"Last but not least, the work becomes much easier. The employees are relieved physically. Many bosses will be happy together with their employees," says Lang with a twinkle in his eye and thinks of the wide range of manual workplaces.

Displacement rates and speed are variable and can be set independently of each other. A single system can handle flow volumes between some drops and several milliliters with highest precision. With priority, pumps of the modular series in various sizes are used to meet customer requirements. The best example is micro annular gear pump m zr-7245. For applications with smallest amounts of high-viscosity liquids, m zr-7245 has been further

developed and is now offered with reduction gear. Detailed information can be found at the website of HNP Mikrosysteme GmbH, www.hnp-mikrosysteme.de

HNP Mikrosysteme

German company HNP Mikrosysteme GmbH develops, manufactures and markets pumps worldwide which dose small amounts of liquids fast and accurately. Beside several applications in plant engineering, chemical processing and pharmaceutical industry, mzc-pumps are used in the field of life science and analytical instrumentation.

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Pumps are modular in regards to drives, fluid connections and materials.

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