Oerlikon Barmag at the PU TECH India 2023

Oerlikon Barmag pumps – metering with superlative precision

Greater productivity, increased lifespan and tailored solutions for the most demanding technical tasks in PUR applications and in the paints and lacquers industry **–** these are the convincing arguments with which Oerlikon Barmag is presenting its precision metering pumps at this year**'**s PU TECH India, the international polyurethane industry trade fair being held in New Delhi, India between April 12 and 14 (Hall North 1, Stand NA10).

High-tech components for high-performance compound materials

Polyurethane is conquering ever more areas of modern life – automobiles, furniture, footwear, medical technology and packaging. However, processing it is extremely complex and demands tailored solutions for the respective applications. Here, the precisely-defined mixing ratio of the various elements during manufacture is decisive for the quality of the end product. Oerlikon Barmag metering pumps are responsible for the precise metering of the various liquid materials in the numerous chemical processes carried out during the production of the components. In addition to the high quality of the end products, they ensure that production is highly-efficient – something that is reflected in shorter product conversion times and lower waste rates.

The GA range of pumps has been designed for conveying media with higher viscosities of up to 1,500 Pas and temperatures of up to a maximum of 225 °C. Furthermore, it is characterized by its short flow channels and the utilization of highly wear-resistant tool steels. With the new range of pumps, Oerlikon Barmag now offers tailor-made solutions for applications requiring accurately-defined, even metering.

Eccentric screw pumps – robust all-rounders convey any medium

The requirements for pumps are considerable, as the demand for customized solutions for increasingly complex processes is rising. This is particularly true for Oerlikon Barmag's new eccentric screw pump range. High wear-resistance, increased durability and robust operation – the new pump is tailor-made for conveying highly-filled, high-viscosity and abrasive media, such as filled adhesives, filled silicones and filled casting compounds, for example. The highlight is the multi-stage seal system, which considerably increases the pump's lifespan. The upstream shaft sealing ring protects the slide ring seal against excessively-fast wear caused by challenging media. In turn, the optimum alignment of the drive shaft – ball bearing-supported and centrally-guided through the shaft sealing ring – prevents any metal debris caused by friction and hence ensures considerably greater durability. Producers benefit from considerably greater productivity, as the pumps' maintenance intervals and hence machine downtimes are significantly reduced.

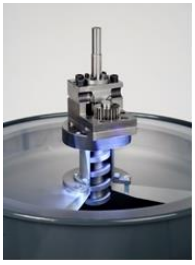
Drum pumps – conveying and metering in a single unit

Oerlikon Barmag's drum pump has been designed specifically for conveying and metering high-viscosity materials, such as adhesives, silicones, etc., from drums. Karl-Peter Warda, responsible for pumps used in industrial and chemical applications: "The drum pump not only removes high-viscosity materials from the drum, it also meters the medium to the mixer head without any additional interim stops and with the customarily-high volumetric degree of efficiency. The advantage here lies in the fact that the scoop-piston pumps used to date can be dispensed with."

Specialists for chemical applications with pressures of up to 80 bar …
Especially tailored to customer-specific processes, the company supplies magnetically-coupled GM metering pumps for high-precision metering of, for example, toxic materials in hermetically-sealed environments. Shaft seals with stuffing box, shaft sealing ring or slide ring seals are possible for standard applications as well. In addition to the design in rust- and acid-resistant, hardened steel, a wear-protection layer (DLC) for abrasive or poorly-lubricating media protects the pump and therefore increases its lifespan.

… **and under high pressure**
The GM series with the round plate package has been expanded to include an option for the pressure build-up capacity especially for use in high-pressure technology with small throughputs and low viscosities. It is available in 0.05 through 20 cm^2/rev feed sizes and guarantees the build-up of the required high operating pressures. The improved pressure build-up capacity at low viscosities (e.g. 250 bar, 100 mPas) permits higher volumetric degrees of efficiency or a greater useable speed range. For manufacturers of PUR molded parts, foam slab stock, refrigeration unit insulations and sandwich panels, this means constant process stability at lower investment costs.

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Caption 1: Specialist for conveying and metering high-viscosity materials: the Oerlikon Barmag drum pump.



Caption 2: Oerlikon Barmag's eccentric screw pump is tailor-made for conveying high-viscosity, abrasive and highly-filled media