Oerlikon Barmag at the UTECH Europe

New eccentric screw pump series conveys any medium

Remscheid, September 16, 2021 – across the globe, Oerlikon Barmag gear metering pumps are deployed as technical components in chemical, plastic, paint, lacquer and PUR applications. Due to rising demands and requirements, customer-specific process solutions are becoming increasingly complex. Oerlikon Barmag has taken on this challenge with its new eccentric screw pump series, which covers a throughput range of between 1 ml/min. and 30 l/h. They will be premiering at the UTECH Europe in Maastricht (Stand H32), which takes place between November 16 and 18.

Robust multi-talent: eccentric screw pump

High wear-resistance, increased durability and robust operation – the new pump, with its viscosity range of between 1 mPas and 1,000 Pas, is tailor-made for conveying highly-filled, high-viscosity or abrasive media, such as filled adhesives, filled silicones and filled casting compounds, for example. The highlight of the eccentric screw pump is the multi-stage seal system, which considerably extends 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.

Furthermore, the sealing medium used between the shaft sealing ring and the slide ring seal provides an optimum environment for the seal system. Customers benefit from considerably greater productivity, as the pumps' maintenance intervals and hence machine downtimes are significantly reduced. Oerlikon Barmag eccentric screw pumps are deployed in such disparate areas as the plastics industry, the automobile industry, the dyes and paints industry and the pharmaceuticals industry as well as in new energies and food technology.

Focus on gear metering pumps

And the GM and GA series gear metering pumps and the high-speed pump and associated components are also information focuses at this year's UTECH Europe.

The high-speed metering pump has been especially developed for metering poorly-lubricating media. The main advantage of the pump is the sealed product space. The space that comes into contact with the media is therefore limited to the area around the gears. The external, ball-bearing support points in the high-speed pump are externally lubricated, hence ensuring that the product to be metered does not cause damage as a result of poor lubrication. This extends the lifespan of the pump considerably.

Furthermore, the enlarged speed range (30-500 rpm) permits a large application range for which several pumps of varying sizes have had to be used to date. This cuts back on conversion times, while simultaneously reducing spare parts inventories. With its low weight of 1.4 kg, the compact pump (ø65mm) promises both considerable space savings and less wear on the machine.

GM range under the most challenging conditions

The pumps in the GM and GA series provide precision metering with low-pulsation feeding of the conveying medium. The multi-stage GM pump conveys low-viscosity media (i.e. 250 bar, 100 mPas) even under high pressure and in the most challenging conditions. The square design from the proven GM series is the standard pump for many metering tasks. The development of the multi-stage pump expands the applications range for the GM series considerably. The round 2-stage GM pump has been developed especially for use in high-pressure technology. It masters the particular challenge of conveying small throughputs with low viscosities. The pump is perfect for 0.05 through 20 cm³/rev feed sizes and is excellently suited for use in high-pressure machines for PUR molded parts, foam slab stock, refrigeration unit insulations and sandwich panels, for example.

GA series pumps for high-viscosity media

Manufacturing companies are constantly facing the challenge of making their products and processes more efficient. Oerlikon Barmag has supplemented the tried-and-tested GM range with the GA series, developed especially for the challenging conveying of high-viscosity media. The GA series pumps are available for conveying volumes of between 1.25 and 30 cm³/rev (0.6-144 l/h). They have been designed for pressures of up to 200 bar, for viscosities of up to 1.500 Pas as well as for temperatures of up to max. 225 °C. With this range of pumps, Oerlikon Barmag offers its customers tailor-made solutions for many technical processes in which high-precision and even metering is of paramount importance.

The drum pump – conveying and metering using a single unit

With the drum pump, the Oerlikon Barmag pump specialists have created a pump designed specifically for conveying and metering high-viscosity materials such as adhesives, silicones and other high-viscosity materials from drums and other large containers and for pressures of up to 250 bar. Its spe-

cial features not only include the fact that it removes high-viscosity materials from the drum, but that it also meters the medium directly without any additional interim stops.

Gear pump and drum follower plate are aligned to each other so that the plate can effortlessly reach the bottom of the container, hence leaving a very low residue of <1%. This in turn lowers materials costs and simultaneously has a positive impact of the manufacturing process. The metering, which to date has been carried out in two steps requiring scoop-piston and metering pumps, can now be merged in into a single unit with the drum pump.



Caption:
The series of eccentric screw pumps covers a throughput range of between 1 ml/min. and 30 l/h, also conveying – with viscosity range of between 1 mPas and 1,000 Pas – highly-filled, high-viscosity or even abrasive media.