

Oerlikon Barmag at the UTECH Asia / PU China

Pumps with magnetic coupling - when safety counts

Remscheid, 30 May 2024 - Polyurethane has become an integral part of our daily lives, whether in the construction industry, in leisure activities, in the manufacture of furniture or in numerous other applications. The precision gear pumps from Oerlikon Barmag, which will be presented at this year's UTECH Asia / PU China 2024 in Shanghai (booth 230), impress with customised solutions for demanding tasks in the chemical industry. They increase the productivity of the often complex manufacturing processes for this wide range of applications.

Components for all cases

Oerlikon Barmag pumps reliably handle demanding processes in PUR applications, in the chemical, plastics or paint and lacquers industries. One of the greatest challenges lies in the highly accurate and reliable metering of toxic or low-viscosity media. With the GM and GA series and the associated components, Oerlikon Barmag presents the optimum equipment for these applications.

"The magnetic couplings used specifically in the GM series fulfil the expectations of the manufacturing industry with their low maintenance requirements. In addition, they meet the high safety standards of the chemical industry, e.g. for compliance with clean air ("TA-Luft") regulations," explains Andreas Heitzer, Sales Director of the Pumps business unit at Oerlikon Barmag. "If personal maintenance of a standard sealing is not possible or only possible to a limited extent due to a critical medium, magnetic couplings are the method of choice," he continues. If the product chamber of the pump must be sealed airtight to prevent undesirable reactions, magnetic couplings are used. Magnetic couplings are also used in vacuum processes. They also improve the suction behaviour of the pump.

GM pump - a series for different operating conditions

Pumps in the GM series achieve precise dosing by feeding the flow with low pulsation. The multi-stage GM pump conveys low-viscosity media even under high pressure and the most difficult operating conditions (e.g. 250 bar, 100 mPas). The standard pump for many dosing tasks is the GM series in a square design. With the development of the multi-stage pump, the range of applications for the GM series has been significantly expanded. The round 2-stage GM pump has been specially developed for use in high-pressure technology. It fulfils the special challenge of pumping small flow rates with low viscosities. The pump serves flow rates from 0.05 to 20 ccm/rev and is therefore particularly suitable for the production of PUR moulded parts, block foam, refrigeration unit insulation or sandwich panels.

GA series for higher viscosity media

Making products and processes more efficient is a constant challenge for manufacturing companies. This is why Oerlikon Barmag has added the GA series to the GM series especially for the demanding conveying of high-viscosity media. The GA series is available in delivery volumes of 1.25 - 30 cm³/rev (0.6-144 l/h). It is designed for pressures up to 200 bar, for viscosities up to 1,500 Pas and for temperatures up to a maximum of 225°C. With this pump series, Oerlikon Barmag offers customised solutions for process engineering processes where highly accurate and uniform metering is required.

For highly viscous media - the drum pump

The drum pump from Oerlikon Barmag is specially designed for conveying and dosing highly viscous materials such as adhesives, silicones and other highly viscous materials from drums and other large

containers and for pressures of up to 250 bar. One of its special features is not only that it discharges highly viscous materials from the drum, but also that the medium can be dosed directly without an intermediate stop.

The gear pump and drum follower plate are synchronised so that the plate effortlessly reaches the bottom of the container, leaving behind only a very small residual quantity of < 1%. This reduces material costs and has a positive effect on the production process.

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Caption: The magnetically coupled GM pump is also available with a single drive.

About Oerlikon Polymer Processing Solutions Division

Oerlikon is a leading provider of comprehensive polymer processing plant solutions and high-precision flow control component equipment. The division provides polycondensation and extrusion lines, manmade fiber filament spinning solutions, texturing machines, BCF and staple fiber lines as well as nonwoven production systems. It also develops and produces advanced and innovative hot runner systems and multi-cavity solutions for the injection molding industry. Its hot runner solutions serve business sectors, including automotive, logistics, environmental, industrial applications, consumer goods, beauty and personal care and medical. Moreover, Oerlikon offers customized gear metering pumps for the textile, automotive, chemical, dyes and lacquers industries. Its engineering competence leads to sustainable and energy-efficient solutions for the entire polymer processing value chain with a circular economy approach.

Oerlikon Polymer Processing Solutions Division serves customers through its technology brands – Oerlikon Barmag, Oerlikon Neumag, Oerlikon Nonwoven and Oerlikon HRSflow – in around 120 countries with production, sales, distribution and service organizations.

The division is part of the publicly listed Oerlikon Group, headquartered in Switzerland, which has more than 12 600 employees and generated sales of CHF 2.7 billion in 2023.

For further information: www.oerlikon.com/polymer-processing

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