

Oerlikon Barmag at the UTECH Europe

Gear metering pumps for complex processes

Remscheid, February 8, 2024 - Polyurethane (PUR) has become indispensable in many areas of modern life - automobiles, furniture, shoes, medical technology and insulation. However, its processing is extremely complex and requires customized solutions for the respective application. This is where precision gear pumps from Oerlikon Barmag come in to meet the highest demands in the chemical industry - from extremely precise metering to increased service life and efficiency. At UTECH Europe from April 23 to 25 in Maastricht, trade visitors can find out more about Oerlikon Barmag's pump portfolio (booth G19).

The gear metering pumps of the GM and GA series are mainly used for high-precision metering of demanding fluids under difficult conditions.

Focus on gear metering pumps

The high-speed metering pump of the GM series has been specially developed for metering poorly-lubricating and abrasive media. The main advantage of the pump is the sealed product chamber. The space touched by the media is limited to the area around the gears. The external, ball-bearing support points in the high-speed pump are externally lubricated and thus prevent the product to be metered from causing damage due to insufficient lubrication. This considerably extends the service life of the pump.

In addition, the increased speed range (30 - 500 rpm) allows an extended application range, for which several pumps of different sizes had to be used previously. This saves on production changeovers and significantly reduces the number of spare parts required. With its low weight of 1.4 kg, the compact pump (ø65 mm) promises significant space savings as well as less strain on the machine.

In addition to the proven GM pump in a square design for standard metering tasks, the GM pump in a multi-stage design conveys low-viscosity media (e.g. 250 bar, 100 mPas) under high pressure and the most difficult operating conditions. The round 2-stage GM pump has been specially developed for use in high-pressure technology. It masters the special challenge of pumping small flow rates with low viscosities. The pump is perfect for 0.05 to 20 ccm/rev feed sizes and is ideally suited for the production of PUR molded parts, block foam, refrigeration unit insulation or sandwich panels.

GA series for higher viscosity media

Manufacturing companies are constantly faced with the challenge of making their products and processes more efficient. Oerlikon Barmag supplements the proven GM series with the GA series, which has been specially developed for the demanding conveying of higher viscosity media. The GA series is available for conveying 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 customized solutions for process engineering processes where highly accurate and uniform metering is required.

Eccentric screw pump - robust and durable

High wear resistance, increased durability and robust appearance - the pump with a viscosity range from 1mPas to 1,000 Pas is tailor-made for pumping highly filled, highly viscous or abrasive media, such as filled adhesives, filled silicones or filled potting compounds. Eccentric screw pumps are used in sectors as diverse as the plastics industry, the automotive industry, the paint and coatings industry, the pharmaceutical industry and food technology. Customers benefit from a significant increase in productivity, as the maintenance intervals of the pumps are shortened and machine downtimes are significantly reduced.

The highlight of the eccentric screw pump is the multi-stage sealing system, which significantly extends the service life of the pump. The upstream shaft seal ring protects the slide ring seal from rapid wear caused by difficult media. The optimized alignment of the ball-bearing drive shaft, which runs centrally through the shaft seal ring, prevents any metal abrasion and thus ensures a significantly longer service life.

The drum pump - pumping and dosing in one

With the drum pump, the pump experts at Oerlikon Barmag are presenting a pump that is specially designed for conveying and metering 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 that it discharges highly viscous materials from the drum and meters them directly without an intermediate stop.

The gear pump and drum follower plate are coordinated in such a way that the plate effortlessly reaches the bottom of the container, leaving behind only a very small residual quantity of < 1%. This in turn reduces material costs and has a positive impact on the production process. The dosing process, which was previously carried out in two steps and required scoop piston and metering pumps, can now be combined with the drum pump in a single unit.

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Caption: The eccentric pump series covers a throughput range from 1 ml/min. to 30 l/h and, with a viscosity range from 1 mPas to 1,000 Pas, also conveys highly filled, highly viscous or abrasive media.

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 13 000 employees and generated sales of CHF 2.9 billion in 2022.

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

Contact:

André Wissenberg
Marketing, Corporate Communications
& Public Affairs
Tel. +49 2191 67 2331
Fax +49 2191 67 1313
andre.wissenberg@oerlikon.com

Ute Watermann
Marketing, Corporate Communications
& Public Affairs
Tel. +49 2191 67 1634
Fax +49 2191 67 1313
ute.watermann@oerlikon.com