

**Press Release**

Oerlikon Barmag makes its debut at the Polyurethanex 2019 in Moscow

## Promoting the golden future of PUR with high-speed pumps

Remscheid, March 20, 2019 – automobiles, furniture, white goods, footwear, medical technology, packaging – the multi-talented polyurethane (PUR) is conquering ever more areas of modern life. However, processing it is extremely complex and demands tailored solutions for the respective applications. Here, the Oerlikon Barmag precision metering pumps fulfill the very highest demands of the chemical industry – from highly-accurate metering all the way through to greater durability and superior efficiency. For the first time, visitors to the Polyurethanex trade fair (Pavilion 1, Stand 1D20), being held in Moscow April 23 and 25, 2019, will now also be able to convince themselves.

PUR appears, as soft foams, in car seats, furniture upholstery and footwear and, as rigid foams, in insulation materials for buildings and cooling units. Vehicle manufacturers use it to produce composite components, while virtually every industry deploys cast PUR elastomers to create cushioning elements, rollers and many other items. This flexible material has so much potential that 2 million metric tons are manufactured every year in the European Union alone. The Indian market researchers at Mordor Intelligence are forecasting a rise in the global demand for PUR to 24 million metric tons by 2020.

And industrial competition is correspondingly dynamic: in demand are tailored PUR processing solutions for highly-efficient, rapid-response and, above all, environmentally-friendly mass production. Therefore, there is rising investment in PUR technologies, currently above all in innovative application fields such as lightweight construction, surface technologies and bioplastics, according to reports. Furthermore, sustainability and recycling are important topics.

### Numerous PUR applications with the GM and GA series

Oerlikon Barmag has been catering to the growing requirements with its gear metering pumps for many decades now. At the Moscow trade fair, the Remscheid-based company will be presenting its GM and GA ranges, along with the corresponding components for the most diverse applications. These pumps also reliably master the most demanding processes in the chemicals, plastics and paints and lacquers industries. They are characterized by low-pulsation feeding of the conveying medium, which promotes more accurate metering.

### High-speed pumping despite poor lubrication

One of the greatest challenges here is the highly-accurate metering of poorly-lubricating and abrasive media. The high-speed metering pump was developed especially for this: "It is beneficial above all in cases of chemical manufacturing processes that focus on aggressive acids", emphasizes Thorsten Wagener, the sales expert responsible for industrial and chemical application pumps.

The main advantage of this high-speed pump is its 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. The compact pump ( $\varnothing 65\text{mm}$ ) also reduces the space required for installation and promises considerably less wear on the machine as a result of its low weight of 1.4 kg.

#### **GM pumps for challenging applications under high pressure**

The square design from the proven GM series is the standard pump for many metering tasks. The development of this multi-stage pump expands the applications range for the GM series considerably. In contrast, the round, two-stage GM pump was developed especially for use under high pressure and in the most challenging conditions. It is able to convey small throughputs with low viscosities (for instance, 250 bar, 100 mPas). Here, the pump caters to conveying volumes of between 0.05 and 20  $\text{cm}^3/\text{rev}$ . This permits higher volumetric degrees of efficiency or a greater usable speed range. Hence, the pump is superbly suited to manufacturing PUR molded parts, foam slab stock, refrigeration unit insulations and sandwich panels, for example.

#### **GA series for high viscosities**

Oerlikon Barmag developed the GA range for the challenging conveying of high-viscosity media. This range offers manufacturing companies the possibility of designing their products and processes more efficiently. The GA series pumps are available for conveying volumes of between 1.25 and 30  $\text{cm}^3/\text{rev}$  (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 these, Oerlikon Barmag offers its customers tailor-made solutions for many technical processes requiring high-precision and even metering.

#### **The drum pump – conveying and metering without interim stop**

With the drum pump, the Oerlikon Barmag experts have created a pump designed particularly 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. Not only can it remove high-viscosity materials from the drum, it can also meter 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 less than 1%. This lowers materials costs and 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, is merged in into a single unit in the case of the drum pump. This is always carried out in close agreement with the customer. "Our solutions are always precisely tailored to customers' requirements", emphasizes Thorsten Wagener.



**Caption:**

The range of metering pumps for chemical applications is available for conveying volumes of between 0.05 and 200 cm<sup>3</sup>/rev. Furthermore, it is characterized by its short flow channels.

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**About Oerlikon**

Oerlikon (SIX: OERL) develops modern materials, systems and surface technologies and provides specialized services aimed at securing high-performance products and systems with long lifespans for customers. Supported by its technological core competencies and its strong financial footing, the corporation continues its medium-term growth plan by implementing three strategic factors: focusing on attractive growth markets, ensuring structural growth and expanding through targeted M&A activities. Oerlikon is a globally-leading technology and engineering corporation, operating its business in two segments (Surface Solutions and Manmade Fibers) and employing around 10,500 members of staff at 175 sites in 37 countries worldwide. In 2018, Oerlikon generated sales of CHF 2.6 billion and invested around CHF 120 million in research & development.

For further information: [www.oerlikon.com](http://www.oerlikon.com)

### **About the Oerlikon Manmade Fibers Segment**

With its Oerlikon Barmag and Oerlikon Neumag brands, Oerlikon Manmade Fibers Segment is the world market leader for manmade fiber filament spinning systems, texturing machines, BCF systems, staple fiber systems, solutions for the production of nonwovens and – as a service provider – offers engineering solutions for the entire textile value added chain. As a future oriented company, the research and development at this division of the Oerlikon Group is driven by energy-efficiency and sustainable technologies (e-save). With the supply of continuous polycondensation and extrusion systems and their key components, the company caters to the entire process – from the monomer all the way through to the textured yarn. The product portfolio is rounded off by automation and industry 4.0 solutions. The primary markets for the products of Oerlikon Barmag are in Asia, especially in China, India and Turkey, and – for those of Oerlikon Neumag – in the USA, Asia, Turkey and Europe. Worldwide, the segment – with just under 3,000 employees – has a presence in 120 countries of production, sales and distribution and service organizations. At the R&D centers in Remscheid, Neumünster (Germany) and Suzhou (China), highly-qualified engineers, technologists and technicians develop innovative and technologically-leading products for tomorrow's world.

For further information: [www.oerlikon.com/manmade-fibers](http://www.oerlikon.com/manmade-fibers)