

Press release

World premiere: Innovative POY 2.0 spinning concept impresses at ITMA Asia + CITME 2025

Barmag presents the next generation of POY production – energy-efficient and partial-automated

Remscheid, March 5, 2026 – With POY 2.0, Barmag is introducing a completely redesigned spinning concept that takes the production of partially oriented yarn (POY) to a new level in terms of technology and economy. The solution, which was presented to a selected audience of experts for the first time at ITMA Asia + CITME 2025, was met with great enthusiasm: several yarn producers worldwide immediately expressed their interest in a pilot plant.

At the heart of the development of the new POY 2.0 spinning concept was a comprehensive analysis of the entire process chain – from spinning to winding – by Barmag engineers. The result: optimized core components, improved energy efficiency, and significantly simplified operating processes. The highlights along the production process:

Optimized DIO spin pack: more compact, more sustainable, more powerful

The new generation of the DIO spin pack has been further optimized in terms of its rheological properties and ensures even more homogeneous filament quality. The more compact design reduces the need for filter sand by around a third and the weight of the component by more than 30 percent. This lowers material consumption and makes handling easier. The spinning beam also benefits: the modified design reduces the surface area, resulting in energy savings of up to ten percent.

EvoQuench 2.0: higher process stability and easier operation

The EvoQuench radial quenching unit remains a central component of the process for uniform cooling of the filaments. The new EvoQuench 2.0 version makes it much easier to adjust the convergence length. More accessible controls shorten setup times and reduce the amount of waste material.

WINGS POY 2.0: automated string-up and lower waste rate

The heart of the new spinning line is the WINGS POY 2.0 winding machine. For the first time, the machine features an automatic string-up function – a long-awaited feature in the market that keeps string-up times consistently short and reduces waste in the long term. At the same time, the number of personnel required at the take-up level is reduced, which is a considerable advantage for many spinning companies given the increasing shortage of skilled personnel.

The new active quick returns facilitate the adjustment of product-specific parameters, especially for frequently changing yarn products and demanding qualities. They also ensure improved bobbin formation without overthrown yarn ends. Additional shielding of the chuck and bobbins permanently prevents the formation of fluffs. It stabilizes the yarn path and supports trouble-free production.

The new yarn end fixation also ensures greater process reliability: loose yarn ends are a thing of the past, which avoids unplanned machine downtime due to faulty sensor signals in subsequent automated logistics processes. The optimized XPT housing with a larger rotor stroke extends the parking time and increases flexibility during the doffing process. Overall, the system runs more stably and productively.

Digitally networked with atmos.io

POY 2.0 is fully integrated into the digital system world of atmos.io. Various apps give the operator a complete overview of the production process – from the polymer to the finished yarn. Quality parameters are continuously monitored so that operating personnel can intervene quickly if necessary. The result: reduced waste quantities, higher product quality, and improved margins thanks to fully networked production.

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Caption:

Barmag presented its innovative POY 2.0 spinning concept at ITMA Asia + CITME 2025. The new WINGS POY 2.0 winder integrated into this concept features an automatic string-up function for the first time. The new generation of the DIO spin pack (right) is significantly more compact.

About Barmag

Since 2026, the Swiss Rieter Group has been operating its man-made fibers business as subsidiary under the traditional name Barmag. This includes the established product brands Barmag and Neumag. As a future-oriented company, the research and development of Barmag is driven by energy-efficiency and sustainable technologies (e-save).

Barmag is one of the leading providers of manmade fibers filament spinning systems, texturing machines, BCF systems, staple fibers systems and solutions for the production of nonwovens. Together with its range of polycondensation and extrusion systems and their key components, Barmag caters to the entire manufacturing process – from the monomer all the way through to the textured yarn – and supports it with customer-oriented engineering services. The product portfolio is rounded off with automation and digital solutions. In addition, Barmag offers high-precision gear metering pumps for the textile industry and other sectors, including the automotive, chemical and paint industries.

The main markets for the Barmag product portfolio are in Asia, particularly in China, India, Türkiye and the USA. Worldwide, Barmag – with round about 2,500 employees – has a presence in 120 countries with production, sales and distribution and service organizations. At the Research and Development centers in Remscheid, Neumünster (Germany), and Suzhou (China), highly qualified engineers, technologists and technicians develop innovative and technologically leading products for tomorrow's world.

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