



Sustainable machinery and the recycling of post-consumer textiles

RIETER yarnexpo

The textile supply chain starts with raw materials, meaning green and sustainable fibres were hot topics that dominated Yarn Expo Autumn, alongside carbon neutrality and circular economy. With three quarters of the world's unwanted garments ending up in the landfill, Switzerland-based Rieter, a leading supplier of systems for short-staple fibre spinning, is committed to using less raw material and diverting waste away from the landfill. So how exactly is Rieter 'closing the loop' in the textile industry? We found out at Yarn Expo Autumn 2021.

"We shred waste garments and fabric scraps to make our recycled fibres, while our air-jet spun yarn series is sustainable and eco-friendly by using less slurry and dyes. Our customers use our recycled fibres and their end products have a longer lifespan," explained Ms Tina Tao, Marketing Supervisor at Rieter (China) Textile Instruments Co Ltd.

In fact, Rieter's rotor recycling system is able to spin yarn with an amount of up to 75% post-consumer material, and up to 60% post-consumer material on its ring recycling system. According to the Ellen MacArthur Foundation, only 12% of the global material for clothing was recycled into lower-value applications for other industries, including insulation material, wiping cloths and mattress stuffing. By recycling pre- and post-consumer goods into quality fibres and yarns, Rieter brings added value to textile products and broadens their application after being recycled –

socks, sweaters, chino pants and workwear are just some of the examples of Rieter's closed-loop recycling.

It's not just the life cycle of garments – Rieter is invested in developing modern technologies and sustainable machinery for processing recycled fibres as well. "Besides helping our customers improve the utilisation rate of raw and recycled materials, our machines also boast lower consumption of energy, water and chemicals. For machines that have been operating for a period of time or second-hand machines, we can upgrade their spare parts to improve production efficiency, which is another area of our sustainability efforts."



Photo: Rieter Holding AG

For example, Rieter's compact-spinning machine K 48 uses up to 25% less energy in comparison to other compact-spinning machines, and saves up to 80% of the compacting energy compared to other solutions. Meanwhile, after sales services including preventive maintenance, customer

trainings, upgrades and repair services are offered to ensure a longer lifetime of Rieter's machinery. In other words, more high-quality yarns can be produced with less machines and less waste to protect the environment.

And how is recycling post-consumer textiles being received in China?

"Yarn Expo and its concurrent fairs have always been major events that receive industry recognition. A lot of Yarn Expo's visitors are fabric manufacturers and customers of our customers, so we joined the fair to meet with downstream players and catch up with market needs. From our experience onsite, many visitors showed great interest in our recycled fibres, which tie in with our carbon-cutting national policies and our industry's sustainability goals," shared Ms Tao.

This view was echoed by Yarn Expo visitors who commented that eco-friendly, renewable and biodegradable products were the purchasing

trends for this season. Exhibitors also noticed that more domestic companies were inquiring about green materials and asking in-depth questions about product credibility. In addition, the fair's New Fibre New World – Textile Materials Innovation Forum offered insight into the latest R&D achievements in green and sustainable fibres made by international and domestic fibre suppliers, prompting the industry to take more action against climate change. [Read the final report](#) for more feedback from exhibitors, visitors and fringe programme participants.

Yarn Expo overview

Yarn Expo Autumn was held from 9 – 11 October. The fair is organised by Messe Frankfurt (HK) Ltd and the Sub-Council of Textile Industry, CCPIT. The next edition, Yarn Expo Spring, will take place from 9 – 11 March 2022 at the National Exhibition and Convention Center (Shanghai).

