

Groz-Beckert develops innovative slider needle for circular knitting machines together with Vanguard Pailung

In collaboration with Vanguard Pailung, a manufacturer of ultra-high-speed knitting machines for body-size products, Groz-Beckert has developed an innovative slider needle for a new generation of machines. The new needle technology was presented for the first time at the ITMA in June 2023.

Groz-Beckert offers interested machine builders various cooperation opportunities to jointly develop new products or improve existing ones. Groz-Beckert's Technology and Development Center (TEZ) provides the appropriate framework for so-called co-development projects. One successful example of a successful cooperation is the development of a new slider needle for circular knitting machines with Vanguard Pailung.

New slide needle technology for higher productivity

In June 2022, Vanguard Pailung approached Groz-Beckert with a cooperation request. Together with Groz-Beckert, the company wanted to develop a new needle solution for an innovative ultra-high-speed machine. Together with an innovative slide needle, the new machine was to exceed the speed and productivity of known knitting systems of large circular knitting machines.

Machine and needle development ran in parallel and were closely coordinated. The first field tests took place in the Vanguard Pailung laboratory in Monroe/NC, USA in February 2023. The successful development was presented to a wide audience for the first time at ITMA 2023 in June.

Unlike latch needles, slide needles do not form the stitch via a needle latch, but via a slide that is controlled by its own channel. The advantage of this is that the needle can withstand high speeds, as there is no latch impact, which in turn increases productivity.

The use of the new slide needle in ultra-high-speed machines ensures a particularly high level of process reliability. With the new needle variant, the closer is guided safely and precisely in the groove in the needle shank. At the same time, the base of the needle shank is closed, which ensures maximum stability. The slider needle reliably prevents the

so-called latch impact and thus makes a decisive contribution to process reliability. Its use ensures a uniform and speed-independent loop structure, even at maximum speeds.

Transparent and open communication, including the shared use of data and design specifications, helped to ensure that the project was a success right from the start.