

Efficient processing of denim in the weaving mill

Whether standard or fancy, denim fabrics are in demand – but they are a low-margin product. That's why Stäubli offers specialized equipment for high-efficiency denim production. The broad range of machinery and systems covers production stages from automated weaving preparation to shed formation. With ultra-high weaving speeds and short downtimes, Stäubli equipment excels when it comes to efficient production in the competitive denim market.

The demand for denim fabrics in every format persists even during economic slowdowns. Denim remains highly popular; it is present in the collections of virtually every global fashion brand, from low-cost labels to top designers. To survive in the competitive world of denim weaving, the mill must optimize its process steps to save time, enhance quality, and maximize production. That's why Stäubli has developed a range of high-performance equipment for denim production.

In the weaving-preparation department, the **SAFIR drawing-in machines** draw warps automatically and in one stroke into the reed, drop wires, and healds. The result is a **quickly and completely drawn-in weaving harness with perfectly aligned yarns, which streamlines the downstream weaving process.** This high-quality result is made possible by Stäubli's ingenious Active Warp Control (AWC) system, with standard features such as double-end detection and options such as S-Z detection. For easy start-up of drawing in, SAFIR features Initial Conditions Settings (ICS), options that adapt the machine's behavior to specific yarn characteristics such as coarseness or hairiness. Besides providing very high drawing-in performance, the broad SAFIR range allows maximum flexibility in terms of application and in the placement of the system within the existing space. It is easy to integrate into the mill because it can be optimally adapted to the material flows.

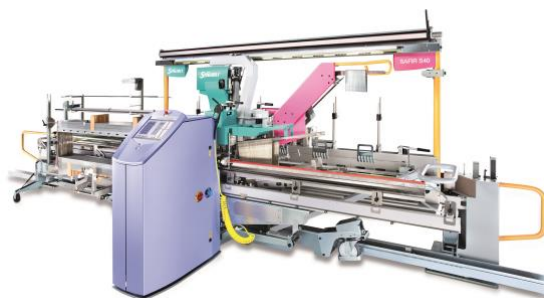
Once the prepared weaving harness has been linked to the weaving machine, the weaving process, based on the appropriate shed formation, can start. **Crucial aspects of this step are downtime, yarn treatment, and especially the speed of the weaving machine, which must be coordinated with all other operating components, such as the shed-formation machinery.** Here Stäubli shines again with its S1600/S1700 cam motion series and the dobby range S3000/S3200 versatility in terms of pattern complexity. Continued research and development make the

company offer ideally adapted and efficient solutions for continuous weaving – at a low total cost of ownership.

Cam motions are available with up to 8 (S1691 & S1692), and with up to 10 levers (S1781 & S1792), electronic rotary dobbies are available in 16-20-24 levers format. This broad range of shed-formation machinery offers multiple possibilities for any application. The multi lever formats allow to applying stroke forces acting on the warp yarns through multiple frames and offer additional flexibility in terms of bindings. Most versatile denim qualities can be woven and allow the weaver to approach a broad market. Technical improvements make for ingenious machinery movements and support the frames, which results in delicate handling of the warp yarns. The advanced operational concepts result in a greater reliability during high-speed weaving and allow achieving unprecedented weaving speeds. Minimum maintenance requirements for the machine and the high quality harness motion, the link to the weaving machine – enhance further the high-performance operation of these shed forming machinery.

In Indian and Bangladeshi weaving mills, there are some 50,000 (India 40,000/Bangladesh 10,000) Stäubli shed-formation solutions (cam motions and dobbies) in operation. This significant presence illustrates the strong reputation of Stäubli's machinery and services in the Indian and Bangladeshi market. Local teams cover the entire country to provide fast and dependable support whenever needed – and **the availability of original Stäubli spare parts is ensured even years after purchase.** Offering a full range of advantages, Stäubli is a proven partner for denim weavers.

SAFIR S40 automatic drawing-in machine



S1792 cam motion



S3260 electronic rotary dobby

