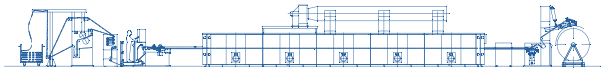
INTERSPARE
TEXTILMASCHINEN
ARTOS krantz

Krantz Syncro

automatic belt filter system

Shrink dryer



Still the peak in finishing machinery

Development of premium fabric qualities

1 **Safe pinning-on:** the overfeed and pinning device

The engineers of the overstretching zone for the Krantz Syncro had one goal above all: absolute precision. This is most realized in the overfeed and pinning device. The pneumatically liftable and lowerable overfeed device (also known as shrinkage unit) secures the accurate and constant deep and long pinning-on of the fabric because of its bristle belt.

The ideal cooperation between the support belt and the support scray assists the precise pin-on of the fabric selvedges into the pins of the fabric transport chain. And of course the shrinkage roller is exchangeable by a quick change equipment.

2 **Precise and low maintenance:** the overstretching zone

After the fabric had been pinned-on by the overfeed and pinning device it will be overstretched by a lubrication-free chain. This allows tracing back the fabric to its basic structure. For example the resilience of each mesh will be increased to achieve best residual shrinkage values.

3 **Proven:** the entry desk and implementation

The strong entry desk with the installed lath belt guides the fabric to the dryer with an individual selectable overfeed. Moreover it contains the gentle acting belt control of the main transport belt for the dryer. Tubular fabrics or more layers side by side can also be driven by the entry lath belt trough the shrink dryer.

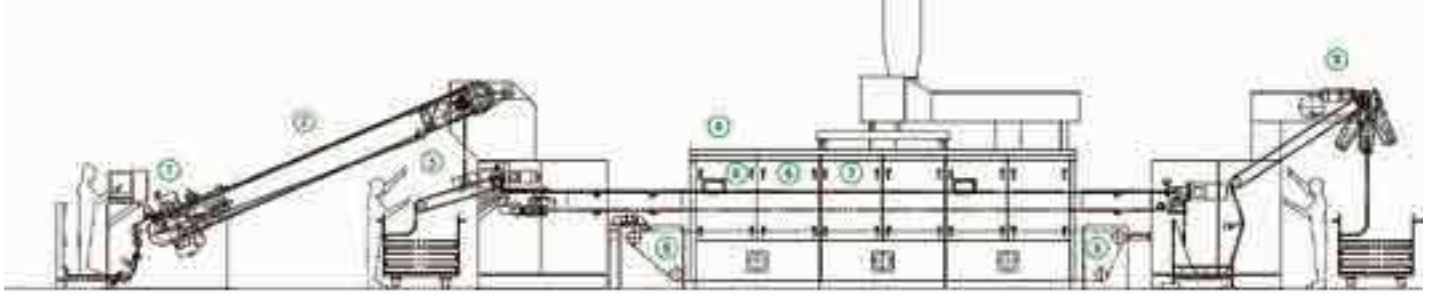
4 **Multifunctional, economic, outstanding:** the dryer

The Krantz Syncro is – as further development of the Hass Aerovar shrink dryer – an excellent example for German engineering creations. Its unbeatable performance can be admired especially during the drying of knitted goods in tubular or open width form and in all fabric weights. Also in drying of woven fabrics outstanding results will be achieved. Without problems it is possible to drive with one or more slim or wide fabric layers side by side. Additionally processes such as drying, shrinking, intermediate drying or drying for formation of fabric can be proceeded here on only one production line.

The shrink dryer allows long reaction times and high overfeeds up to 200 % on the screen belt. This causes a slowly and gentle drying with an optimal stress relieving in the fabric. The drying can be regulated exactly for each special requirement of the fabric because of different selection possibilities of many parameters.

Highest fabric qualities will be achieved very economically by controlled shrinkage, development of volume and improvement of the grip. You will reach this quality again and again because of the possibility to save all adjustments in a recipe management system. These recipes can be used later on and the same result will be produced.

Krantz Syncro



5 **Patented air guiding:** the Econ-Air air guiding system

The patented Econ-Air System fulfills the today's requirements for energy efficiency and sustainability already since many years. It utilizes the inserted thermal energy in an optimal way.

The fresh air will get centralized in the dryer via an entry slot and will be guided in parallel flow with the fabric through the dryer. A "blue competence process" which enriches also the quality of the fabric because the rising moisture content in the dryer supports the thermal transfer to the fabric and arranges the comfortable grip of each article.

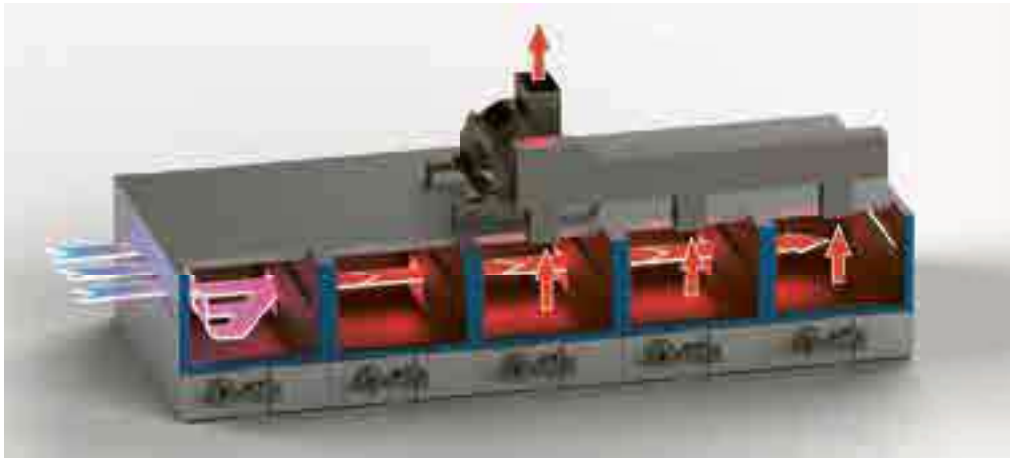
The exhaust air measuring device regulates the amount of exhaust air and secures hereby the desired moisture content in the exhaust air. Because of this process the volume of exhaust air will be reduced and makes sustainable energy saving and a reduction of production costs possible.

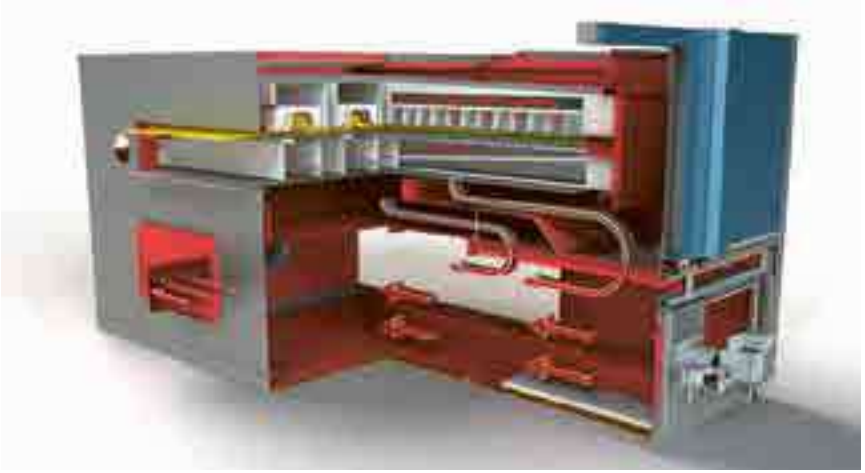
6 **State-of-the-art:** the combined stepped nozzles

The stepped nozzle system in the top and the supporting nozzle in the bottom secure a very balanced and harmonized ventilation, drying and shrinking of the fabric and allows high overfeeds next to an optimal performance adaption. Therefore there is only a transport belt necessary. Because of the stepless regulable ventilation various articles and weights of fabrics can be treated.

Furthermore the round nozzle system is also very efficient. It had been developed out of the experiences of the patented Star-Jet / Star-Line nozzle system of the Artos Unistar stenter frame and transfers up to 15% more power than a line nozzle system. During the production of fabrics in open width form it provides the uncurling of the selvedges and enables a homogenous residual shrinkage value as well as optimal drying performances.

The ventilation occurs by drying via ventilation through the fabric through-flow drying or via impact drying. This offers the possibility to treat difficult fabrics on the dryer which cannot be ventilated through the material without provoking an early wearing of the belt.





Long-lasting and sustainable

7 **Even greater fabric qualities:** the tumbler

Already in the beginning of the drying process very low residual shrinkage values and a high quality of the fabric can be achieved by intensive thermal treatment. In the next step the heated fabric with lowered moisture content will be moved dynamically and controlled in the combined tumbler compartment by a special circulation air regulation system. This process is a guarantee for the superior fabric quality which will be provided by the Krantz Syncro. The drying in combination with the tumbler equipment secures the optimal development of the volume and the lowest residual shrinkage values and improves the grip of the fabric essentially.

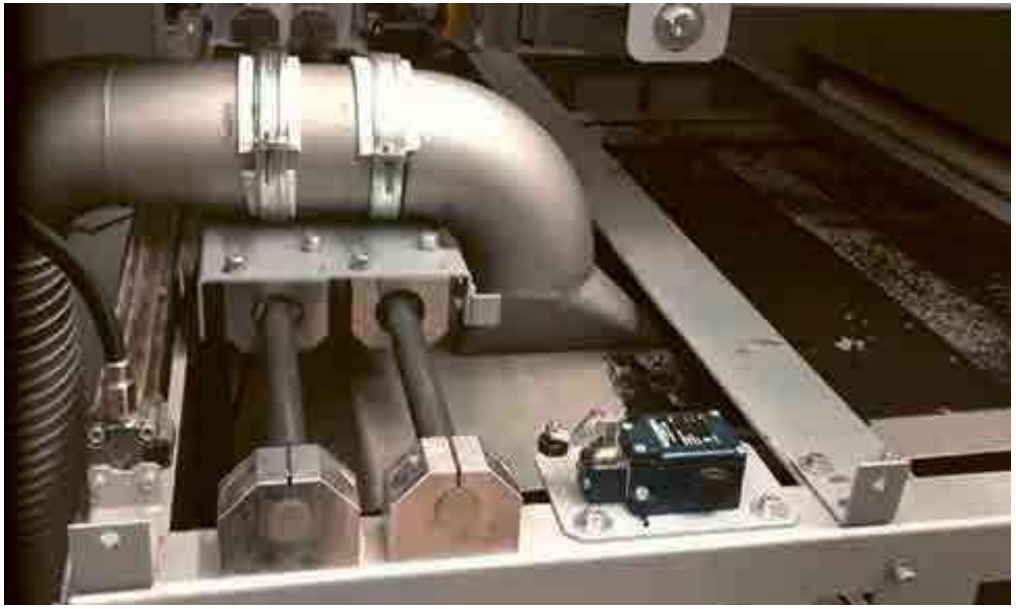
Moreover of course the speed of the tumbler process is regulable so that the outstanding fabric quality can be achieved without problems for every individual production.

8 **Efficiency:** the automated filter belt

The sophisticated design of the Krantz Syncro is also evident during cleaning. Instead of screen inserts, the lint produced is automatically cleaned by the innovative new filter belt. This prevents the plant from getting dirty and also has the advantage that individual screens no longer have to be cleaned by employees, rather the continuous filter belt is automatically cleaned by a traversing suction nozzle. This reduces the employee labour and provides central cleaning. A loss of system performance due to excessive lint build-up on the filter belt is largely prevented. This ensures the high efficiency of the system is permanently maintained.

9 **Safe and strong:** the exit

The complete exit of the machine is constructively well elaborated and secures permanently the low-tension running-out of the fabrics. Load cell, lath belt and plaiter are harmonized with each other in an optimal way and are integrated in the exit desk.



Reliable and economic

Best quality and low costs: the aims

In this industry a high quality of finishing in combination of low production costs are of great importance. The quality of shrink dryers can be observed during the low-tension drying of knitted and woven goods in the uniformity of the shrinkage capability, the development of the volume and inner softness of the fabric, the improvement of the grip, the improved visual appearance, the development of tridimensional structures and above all in the fixed defined shrinkage. Here only best qualities will achieve a high value of goods.

The key to reach all these quality advantages is obviously the Krantz Syncro. It is predestinated for large production volumes and does anyway always fulfill highest requirements concerning the quality of finishing. Via the controlled process guiding and the extraordinary flexibility of the Syncro best results can be achieved always and for all fabrics and requirements because all parameters can be adjusted individually for each fabric. Additionally the exactly reproducible results and the high production performances provide that these premium qualities can be achieved with lowest production costs. And exactly these aims of highest fabric qualities in combination with lowest costs – which the Krantz Syncro stands for – make it become the technical and economical superior machine which is appreciated by operators all over the world.

Regulated, reproducible air distribution: the circulation fans

Each compartment contains one fan. The motor is efficiency class 1, provides lowest electric power consumption and will be operated by a frequency inverter. These are the basics for the involvement of the circulation fans in the recipe management.

Energy efficiency to the finest detail: the drive unit

The digital individual drive concept provides the harmonic transport of the fabric through the complete line.

Energy efficient motors by Lenze or Siemens are regulated by frequency converters so that all gears drive automatically synchronous with the speed of the main drive.

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