

Compact spinning
EliTe

Suessen

EliTe


The Suessen compact spinning system



The world's most utilized and versatile compact spinning system



EliTe is designed to meet the most challenging demands that highend spinning mills make on a compact spinning system.



Higher Productivity

elite

A close-up photograph of a complex mechanical assembly, likely a part of a machine. The image features a prominent blue semi-transparent overlay in the upper half, which contains white text. The mechanical parts are made of metal and show various components like bolts, nuts, and a red cap. The lighting is bright, highlighting the metallic surfaces.

Better Quality
and Lower
Operating Cost

Elite



All EliTe components are of excellent manufacturing quality and designed for long service life. Suessen components are engineered and Made in Germany

EliTe processes effectively carded and combed cotton, man-made fibers and their blends. The pneumatic system arranges the fibers in a completely parallel and close position before twist is imparted and embeds all fibers into the yarn body. The air flow condenses the drafted fiber.





Elite Compact

Any Application
in Short Staple and
Worsted Spinning



OUTSTANDING

ADVANTAGES

EliTe

Optimum and Consistent Yarn Quality

The consistent precision of „made in Germany” EliTe guarantees consistent yarn quality, with minimum spindle-to-spindle variation.

No Restrictions in Regard to Raw Material and Yarn Count

The commercial count range of EliTe ranges from Ne 3 to Ne 340, no other system can claim an equal commercially spun count range. All known fibers from Aramid to wool can be spun successfully on EliTe.

Universal Application

All end products, woven, knitted and technical textiles are enhanced by using EliTe. Our customers prove this every day.

Option to Upgrade Existing Installations with New Components and Packages

It has been SUESSEN’s philosophy for many years, that new components may be retrofitted on existing EliTe installations, thus enhancing the value of the existing EliTe installation.

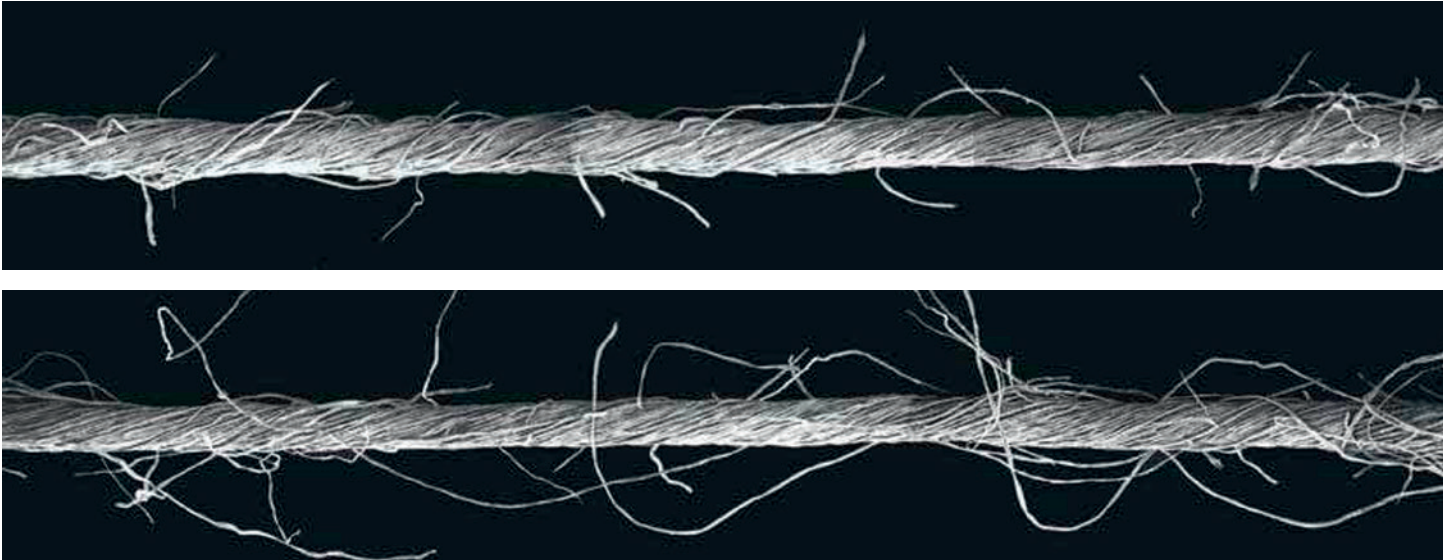
User Friendly

From its inception, easy operation and maintenance has been a hall mark of EliTe.

Can be Installed on Almost all Machine Types

Over 14 million installed EliTe spindles on over 100 different types of ring spinning machines attest to the fact that virtually all existing machines may successfully be upgraded to EliTe.

Benefit from EliTeYarn



The purpose of any compact spinning system is to arrange the fibres in a complete parallel and close position before twist is imparted. The compacting technology eliminates the weak point in ring spinning: the “spinning triangle”. Anyhow, the EliTeYarn is a true ring yarn with very low hairiness!

Maximised fibre utilization

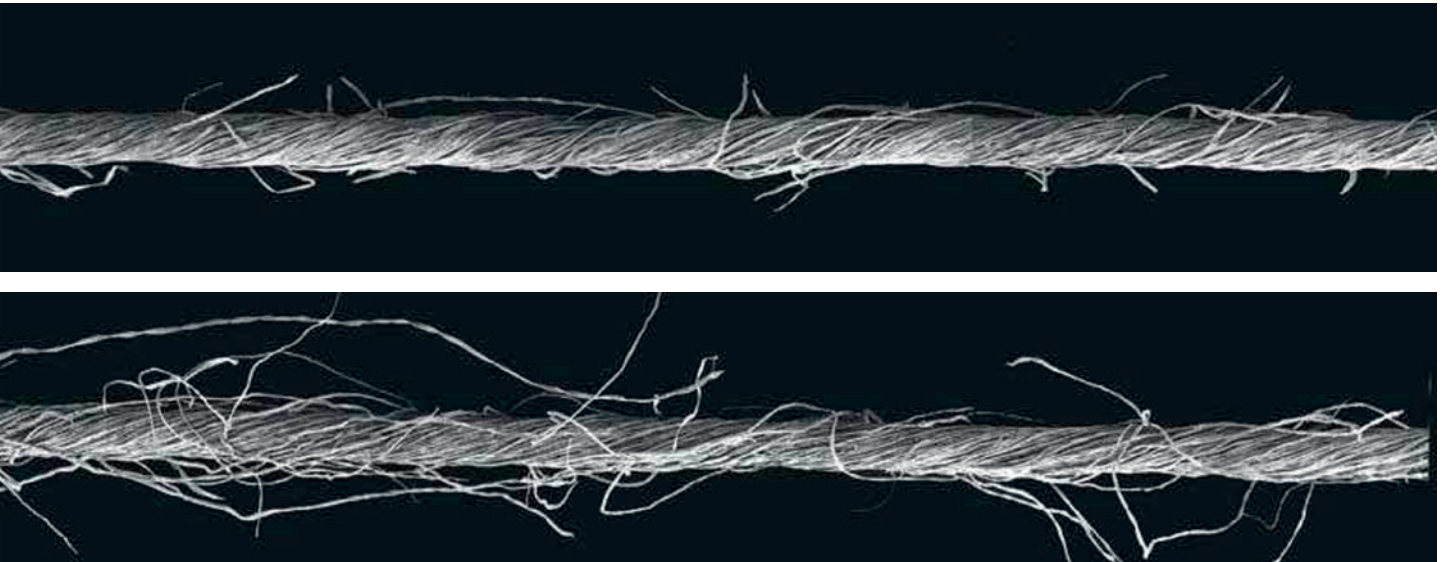
Due to the maximised fibre utilization customers produce yarns with improvements in yarn parameters:

- up to 20% higher yarn strength
- up to 20% better elongation
- up to 50% higher work capacity
- better yarn evenness (lower CV% value)
- up to 85% lower hairiness (Zweigle S3)
- up to 30% lower hairiness (Uster H)
- better yarn imperfection values

Better running behaviour in all following processing stages

Customers report on manifold benefits and opportunities:

- Spinning knitting yarn with reduced twist multiplier, a customer reached over 20% production increase while still reducing hairiness and ends-down rate with stable yarn tenacity.
- A fully integrated customer reports on massive increase in productivity spinning weaving yarn, together with a 5% increase in weaving efficiency.



Strategies to benefit best from the investment

Our customers use EliTeCompact Spinning in many different ways and have created innumerable strategies to benefit best from the investment. Here are their basic strategies (Chart 1):

- Strategy 1: They use the original fibre material and the unchanged machine setting. This way they benefit from putting the whole potential of EliTe into the improved yarn quality.
- Strategy 2: They use the original fibre material, but rise the production speed and/or reduce the twist multiplier. So they keep the given yarn quality with much improved hairiness values, but put the machine to a much higher production level.
- Strategy 3: They use much more economic fibre material running the machine with the given setting and benefit directly from the cost reduction while maintaining the yarn quality and production level.

No matter what strategy you choose, when commodity yarns are difficult to sell, compact yarn is still looked after in the markets.

In mass production for exports, “compact” and “EliTe” are the attributed “labels” for your benefit.

How customers use the EliTe technology

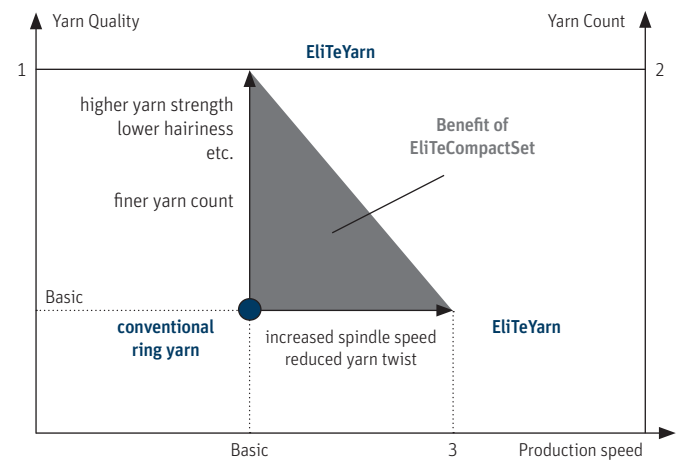


Chart 1: Strategies using EliTeCompact spinning system

EliTe – Technology and Market Leader

The newest version of EliTe is a superior version of our EliTeCompact spinning system. It distinguishes itself by the following exceptional features:

The EliTopAdvanced with EliSpring

Extensive test series and practical experience proved the concept of direct and independent loading of the two EliTop rollers for excellent running and process stability.

EliSpring is available for all modern top weighting arms series as HP, P3-1, PK (short-staple).

The EliTubesAdvanced

The EliTubesAdvanced have off-centre suction slots. Different slot types are available depending on fibre material and yarn count to be processed: G-slot, D-slot and S-slot.

The extended slots reach into the inserts of the EliTubes so that the compacting zone of the fibre strand only ends just before the nipping line of the EliTeRoller. This goes with an increased offset of the EliTop of 6 mm, resulting in further reduction of hairiness, high yarn tenacity and low yarn imperfection values.

EliTube Belly Shape

For certain types of machinery with lower drafting plane angles or long ring rail lifts we have developed the new EliTube Belly Shape – the adapted curvature of the surface compensates these deviations to assure the perfect running stability and quality performance of the EliTeSystem.

New features	Short description	Customer benefit
EliTopAdvanced with flip-over concept	For flip-over concept, EliTop can be turned over within the top weighting arm. Turning over EliTop for double use of top roller cots.	<ul style="list-style-type: none"> • reduced maintenance effort • less consumable costs
EliSpring	Direct pressure loading on EliTeRoller and delivery roller	<ul style="list-style-type: none"> • less ends down rate • minimized spindle to spindle quality variations
EliTubeAdvanced	New slot types and extended slots, EliTube Belly Shape, possible offset up to 6 mm	<ul style="list-style-type: none"> • improved yarn quality • reduced hairiness
Micramics	Ceramic EliTube insert made for long service life	<ul style="list-style-type: none"> • reduced maintenance effort • less consumables • increased life time of lattice apron
Lattice apron 5starBL	Improved wear resistance up to 20%, special antistatic treatment	<ul style="list-style-type: none"> • longer life time, less consumables • less maintenance
Combi Bearing Slide, EliTube brackets	Fast, easy and precise handling and setting of the EliTube	<ul style="list-style-type: none"> • less maintenance effort • less consumables • minimized spindle to spindle quality variations
EliTube end caps	Longer shaft of caps for improved sealing and positioning of EliTube	<ul style="list-style-type: none"> • improved quality variation between spindles • easy handling
EliTube connector and grommet	Connection to EliVAC system adapted to the new EliTube setting	<ul style="list-style-type: none"> • easy handling in maintenance
Single suction tube type Pelican	New design with 3 individual parts for easy handling and cleaning	<ul style="list-style-type: none"> • much less clogging • easy maintenance in cleaning
Energy-optimized EliDuct solution	Different diameters of EliDucts over the length of the machine	<ul style="list-style-type: none"> • reduced energy consumption

Micramics insert

The insert Micramics is made of highly wear-resistant ceramic material with a specially designed micro structure surface to support spinning stability and reduced wear on lattice aprons by up to 15% on the inner surface. Expected lifetime of Micramics is over ten years.

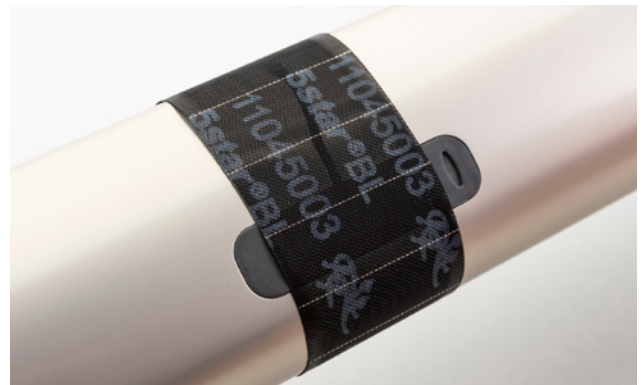


EliTubeAdvanced with off-centre suction slot and Micramics insert

Lattice apron type 5starBL

The new lattice apron type 5starBL improves wear resistance by up to 20% – hence leads to longer lifetime, improved workaday life in rough spinning mill conditions and excellent antistatic behaviour.

Our sales engineers together with our service technologists support the customers with recommendation and guideline to make the right choice for their specific applications.



Lattice apron type 5starBL



EliTubeAdvanced with extended suction slots "G – D – S" (Not feasible for Micramics Inserts)

Recommendation slot type EliTube

Count (Ne)		6	10	20	30	40	50	60	70	80	90	100	110	...
Carded	D-slot Delta	Recommendation	Possible	Possible	Possible	Possible	Possible							
	G-slot straight		Possible	Possible	Possible	Possible	Possible							
	S-slot curved													
	E-slot EliTwist	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation
Combed	D-slot Delta			Possible	Possible	Possible	Possible							
	G-slot straight			Possible	Possible	Possible	Possible	Possible	Possible	Possible	Possible			
	S-slot curved						Possible	Possible	Possible	Possible	Possible	Possible	Possible	
	E-slot EliTwist	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation	Recommendation

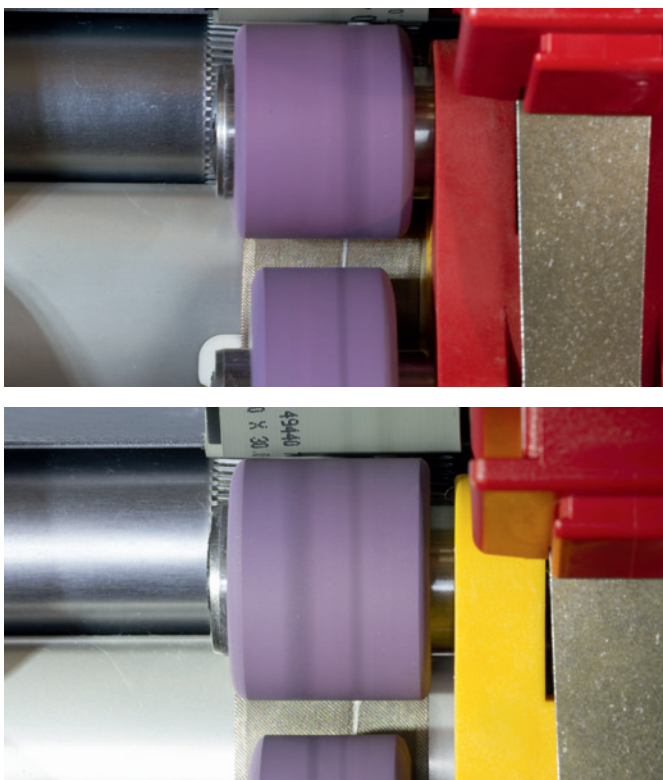
Recommendation
 Possible

The flip-over concept

The flip-over concept is an interaction of the EliTopAdvanced with the EliTubeAdvanced with off-centre suction slots: the EliTop housing can be used “upside-down“ as the top and bottom part of the housing are technologically identical – indicated by red and yellow colour. The EliTopAdvanced is turned after use (flip-over) directly in the top weighting arm position – the other part of the top roller cots, so far not used, takes action – no further logistic effort is necessary.

As the fibre path is shifted to the right in the whole drafting system, the same action of flip-over may also be used for top aprons and lattice aprons.

The flip-over concept doubles the lifetime of the EliTop top roller cots, reducing consumable costs and handling, buffing and grinding efforts in the workshop by 50%.

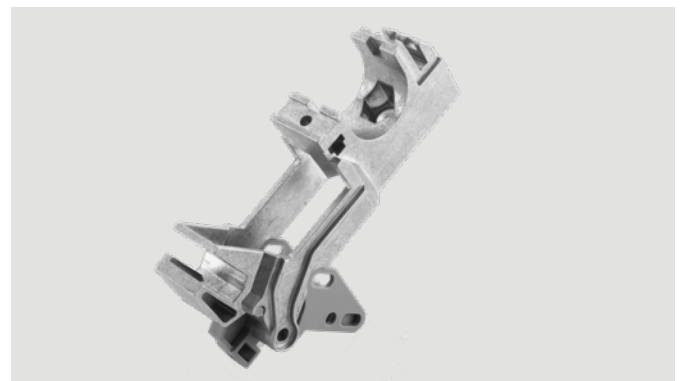


The Combi Bearing Slide/EliTube brackets

The Combi Bearing Slide is used in all ring spinning machines of Lakshmi/Rieter and Toyota/KTTM RX series and is fitted on the roller stands to secure a steady and solid support for the EliTube right in front of the front bottom roller.

- Easy handling in maintenance
- Easy mounting, no drilling work and gauges, quick installation – faster erection of EliTe (less down time of machine)
- Reliable and precise positioning and perfect alignment of all EliTubes – less lapping on front bottom roller

Where Combi Bearing Slide is not applicable, the EliTubes are positioned in the EliTube positioning brackets that fullfil the same benefits as the Combi Bearing Slide, but are somewhat more time consuming in the first installation.



New EliTube end caps

The new EliTube end caps are for precise positioning of the EliTube in the new Combi Bearing Slide or new positioning bracket. The integrated rubber sealing assures zero leakage and easy removing for cleaning. The longer fitting reaches deeper into the EliTube and supports steady setting. The new end caps ensure easy handling and fast maintenance.

The connector and grommet

The connector and grommet are the connection parts from the suction system EliVAC to the EliTube. The long connector fits into the grommet before end caps of the EliTube thread into the Combi Bearing Slide/brackets and supports the easy setting of the EliTube.

Single suction tube type Pelican

All EliTe installations are equipped with our single suction tube type Pelican. It consists of 3 components – tube/head/nozzle. Two different nozzle diameters adjust the suction pressure over the length of the machine. The new type reduces the risk of choking/ lappings what saves maintenance and consumables like lattice aprons and cots. Pelican is easy to clean and allows long cleaning cycles.



Energy-optimized EliDuct solution

The vacuum suction system EliVAC is basically energy optimized and all individual components like fan wheel and air guide nozzle are finely tuned to each other using the laws of fluid mechanics.

The entire system of EliVAC and suction/filter box has a modular and flexible design. Motor and inverter size, positioning of suction ducts as well as waste treatment station and filter types are adjusted to the individual requirements of the customer.

Larger duct diameters for longer machines reduce the energy consumption. Different duct diameters decreasing over the length of the machine further stabilize the homogeneous airflow at the suction slots of the EliTubes.

	EliTeAdvanced EliDuct Ø	New EliTe EliDuct Ø
Machine with 1008 spindles	160 mm	200 – 160 mm Saving 0.5 kW/machine
Super long machine (1824 spindles)	250 mm	315 – 250 – 200 mm Savings up to 3 kW/ machine

- + EliTopAdvanced with EliSpring
- + EliTubeAdvanced
with new slots, end caps, connector, grommet
- + flip-over Concept
- + Combi Bearing Slide/positioning bracket
- + EliVAC CDS system
with energy optimized EliDuct solution
- innovative components
- + like single suction tube type Pelican, Micramics,
5starBL lattice apron

= the best EliTe ever

For existing EliTe installations

EliTe components are available as retrofit on existing EliTe installations. Depending on the different versions of EliTe installations over the last 20 years, we offer tailor-made retrofit packages according to the requirements of the customers. They can comprise new EliTubes and EliTops or be reduced to single components as the Pelican type single suction tube.

These packages are available:

- Performance packages
- Quality packages
- Combi packages
- Individual upgrades

The SUESSEN sales engineers and our local agents will contact customers to present the suitable package options and improved potential and are ready for the individual support of our customers.

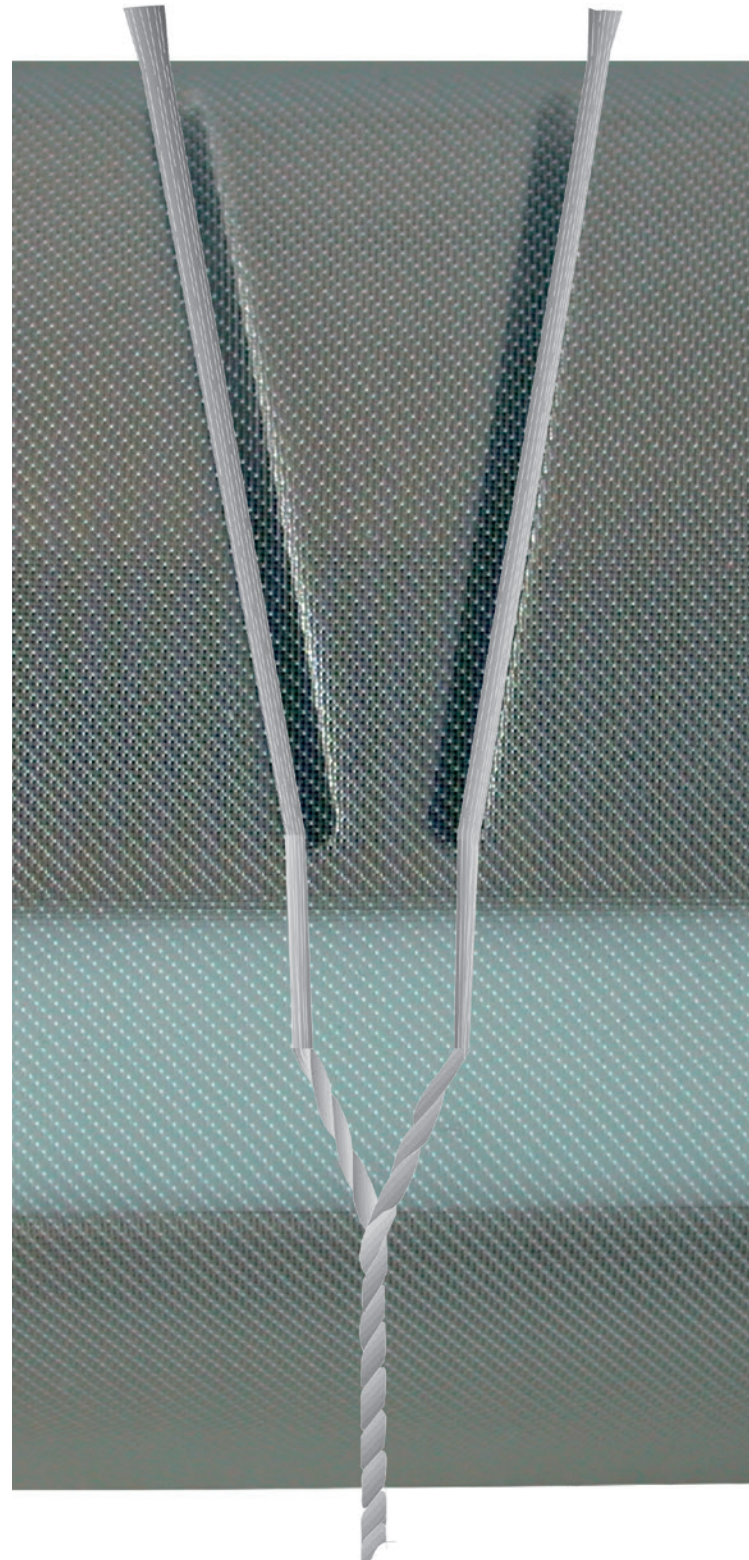
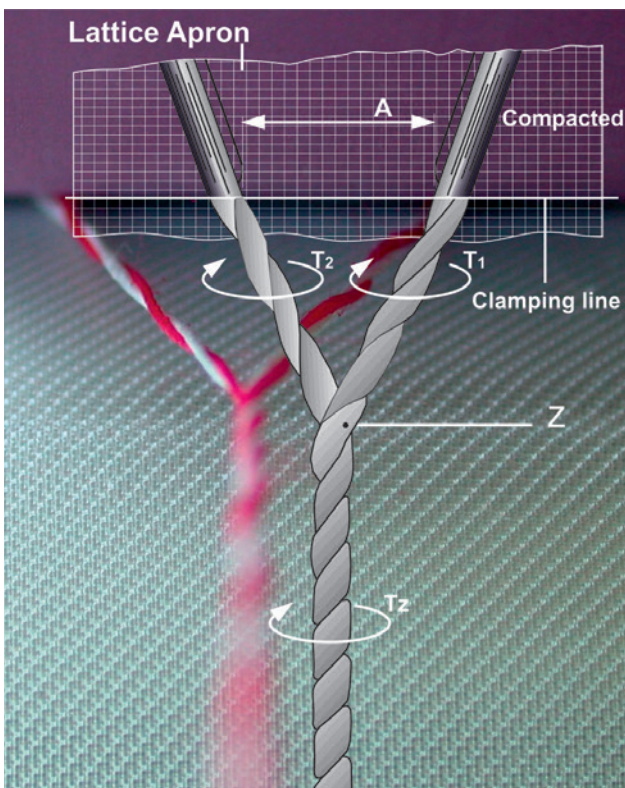
EliTe spindles are installed worldwide on over 14 million ring spindles of many different kind of basic ring spinning machine.

Special Application: EliTwist – Two-Plied Compact Yarn Directly from Your Ring Spinning Machine

EliTwistYarn is a spin-twisted two-ply yarn with identical twist direction in the two fibre strands directly from your ring spinning machine. Two rovings are fed into one spinning position, drafted and compacted separately. After the compacting zone, the individual strands are joined by twisting.

EliTwist uses a principle similar to what is known as SIRO in worsted spinning and was not usable in short-staple spinning before compact spinning technology.

It is very easy to switch from spinning single compact yarn to EliTwistYarn and back when you have prepared the ring spinning machine for it.



EliTe – Technology and Market Leader



Mr. S. K. Sharma, President, Sportking/India

“We at Sportking had 110 000 spindles converted with SUESSEN EliTeCompactSet in our mill. Recently we have again added about 25 000 more spindles. We compact the cotton yarn from Ne 20 to Ne 40 and supply to prestigious customers all over the world.

We are very much satisfied with the quality of the yarn produced. We shall opt for SUESSEN EliTeCompactSet in future, too.”



Mr. Renzo Rampinini, R&D Technical Manager “I Cotoni di Albini”– Albini Group/ Italy

“Cotonificio Albini is known for creating the most beautiful fabrics in the world. I work in the development of new blends and yarns. In my work experience I had the opportunity to compare all existing compact devices, both with medium count and with extremely fine count. Of all the devices that gave me the most satisfaction is certainly the EliTe of SUESSEN – the quality level produced is very high and grows as the count is refined! For the production of these high quality fabrics in Albini, the EliTeCompact system is essential for us.”



Mr. Paul Jäckle, Manufacturas KALTEX S.A. de C.V. /Mexico

“We at Kaltex started with the production of EliTeYarns in 2016; today we have more than 120 000 EliTe spindles installed. Daily we take benefits from the flexibility and high productivity of the EliTeCompact system and yarns.

Due to the excellent results in spinning and weaving we want to increase in a short time the production of EliTeYarns.”



Mr. Do Van Ve, General Director, Huong Sen Comfor Yarn Spinning Company Ltd./ Vietnam

“I want my mill to meet and exceed all international standards of quality and productivity. This is why I only selected the best and most well-known names for all the equipment. For this reason my choice for compacting could only be SUESSEN EliTe. It is known worldwide and in Vietnam that it gives the best quality and the highest production.”



**Mr. Mohammad Ali Khokon, Managing Director,
Maksons Spinning Mills Ltd./Bangladesh**

“Both we and our customers are very satisfied with SUESSEN EliTeCompact system as we are able to provide quality yarns to our customers. This is boosting our demand for yarn from our valued customers.”



Mr. Özgür Bal, Spinning Mill Manager, Kıvanç Tekstil Sanayi ve Ticaret A.Ş./Turkey

“As Kıvanç Textile company, we started projects for the production of compact yarns in different blends and yarn types in 2017. Based on the improvements we observed with EliTeCompactSet in yarn quality, performance and fabric appearance, we made an investment of 27 500 spindles in 2019.

Upon this investments, Kıvanç Textile company, which was already well-known with its high-quality fabrics, has succeeded to bring its quality to a new level. We are planning to continue investments in the forthcoming period.”



Mr. Phansak, Phiphatanakit/Thailand

“We at Phiphatanakit Textile started to upgrade our ring spinning machines with EliTe approximately five years ago. They are producing yarns to our satisfaction without any problems.”



**Mr. M. Kalaichelvan, Technical Director, Borg El Arab For Cotton Spinning (Eshratex),
Alexandria/Egypt**

“Eshratex is a leader in Egyptian Textile Industry producing premium quality fine and superfine cotton yarns Ne 50 – Ne 160, single, double and gassed yarn from finest cottons US Supima and Egyptian Giza varieties. We evaluated all the compacting systems and decided to go with SUESSEN Compact. Since, we have upgraded many machines with EliTeAdvanced, the last batch only in 2019. The quality values are improved significantly as well as production advantages fully satisfy our customers.”



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