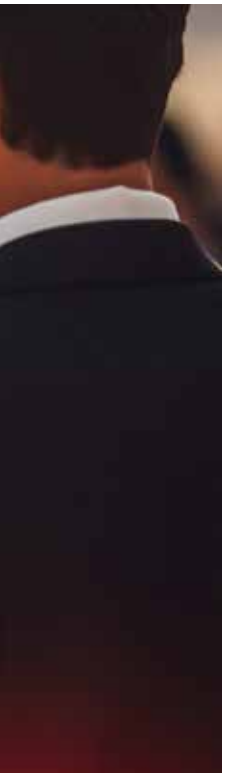
SAURER.

Be complete.

Zinser 51

EN


FEUERWEHR



Zinser Systems offer a wide range of specialised ring-spinning solutions from bale to yarn. Various solutions for all staple fibres; from recycled short fibres and cotton to wool and acrylic.

Saurer is a leading, globally active technology company with a focus on machines and components for yarn production. We support the textile industry in the areas of sustainability, digitalisation, and automation. For decades, sustainability has been an important part of our vision. The basis of our design philosophy, E^3, optimizes energy, economics and ergonomics of every new machine generation with added intelligence. Anticipating the need for circular economy, all of our end spinning machines are already optimised to process recycled or regenerated fibre materials.

Contents

Spotlight Sustainability.

Sustainability has been a focus at Saurer for decades. Saving resources is enormously important to us when developing new machines, technologies and upgrades. Our machines are optimised for the processing of sustainable fibre materials. Benefit from these features in the future when you use sustainable fibres to give textiles a second life.

E^3: our development philosophy
The needs of our customers are our top priority. With every new or further development, we pay attention to reducing energy consumption, increasing efficiency and improving ergonomics. The E^3 philosophy underlies all our designs and our smart solutions provide added value to customers.

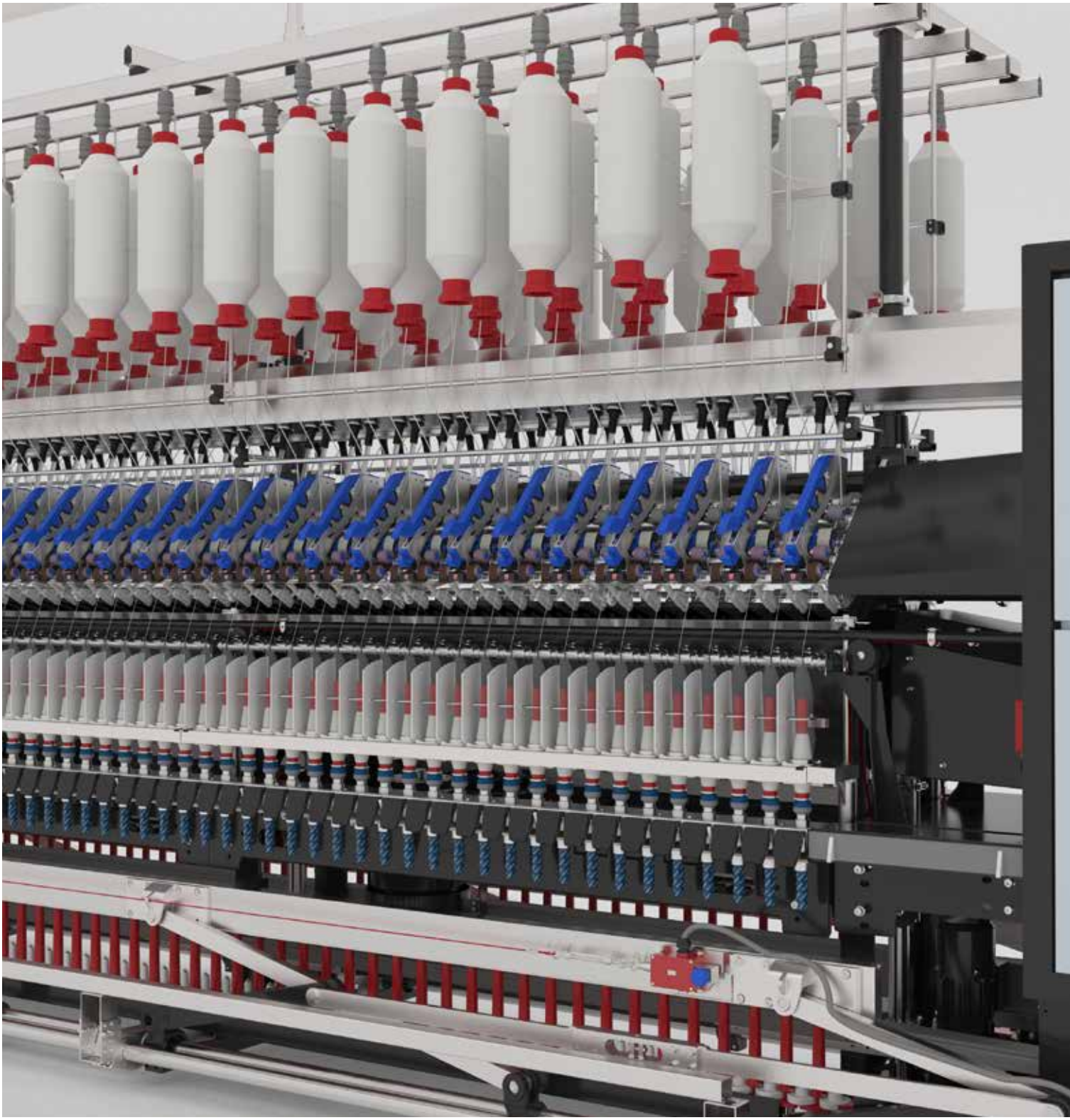
With the transformation of the textile industry for the Circular Economy, the processing of sustainable fibres is another important focus point in our developments.

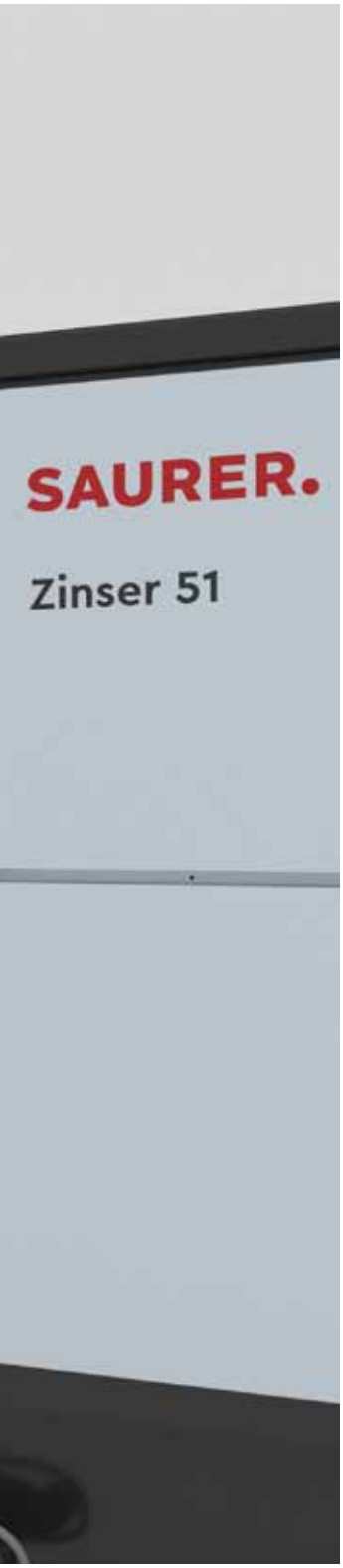
Energy
Save up to 10% energy
→ Powerful and Electronic drafting drive technology
→ Low friction Tangential drive combined with Eshape spindles
→ Low energy consumption thanks to Twinsuction and Optisuction
→ Innovative self-cleaning compact waste chamber
→ Energy monitoring for maximum cost transparency

Economics
More productivity with 2056 spindles
→ Consistent yarn quality thanks to NF²D middle drive
→ Considerably reduced maintenance cost due to innovative systems
→ Maximum productivity for commodity and special applications
→ Full range of applications with Spinnfinity
→ Roughly 13% more productivity per m²
→ Higher production thanks to self-cleaning compact technology

Ergonomics
Reduced handling and maintenance input
→ Flexible adaptation of Easyspin with remote access.
→ Maintenance free drafting drive
→ Hands free spindle brake application
→ Made-to-measure automation

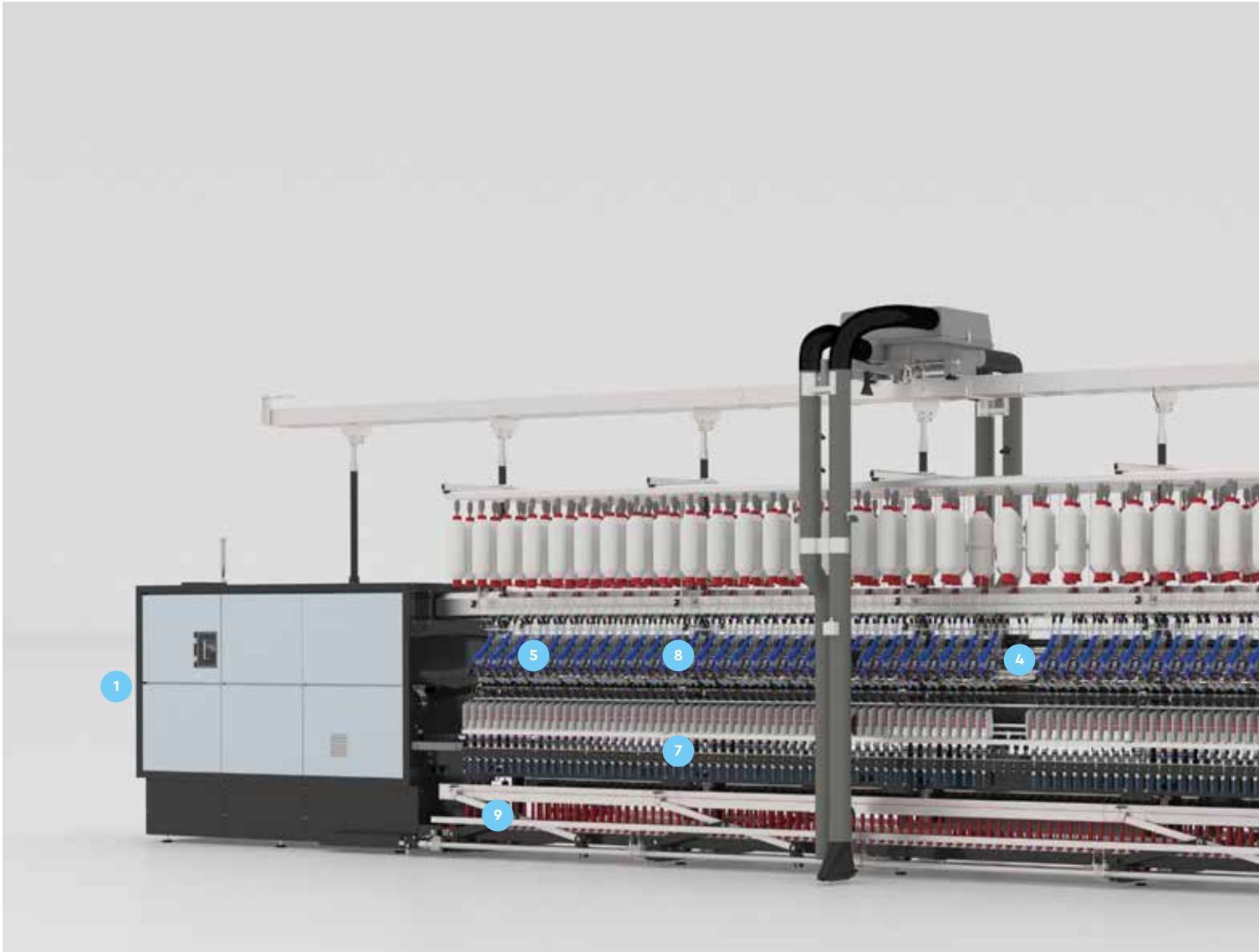
Always a yarn length ahead.





- → High speed, lower energy consumption with special components
- → Full range of flexible electronic drafting for easy adjustment
- → Maintenance free middle drive even for superlong spinning machines
- → Pioneering in all kinds of special yarn applications including recycled fibres
- → Premium component package for best quality and flexibility

Zinser 51 – Excellent customer benefit.



1	Energy saving with direct drive IE4 motors & Twinsuction
2	Fast lot changes thanks to central setting of the yarn parameters at Easyspin
3	Personnel cost & maintenance cost savings with the innovative drafting system NSD-i
4	Modular design of NF²D for super long machine and for wide range of applications
5	Higher production with the self-cleaning Impact FX pro
6	Self cleaning compact chamber for low energy consumption & uniform suction in all spindles
7	Halo rings & Eshape spindles
8	Constant yarn quality with mechanical loading drafting
9	Maximum efficiency & less maintenance with the reliable Cowemat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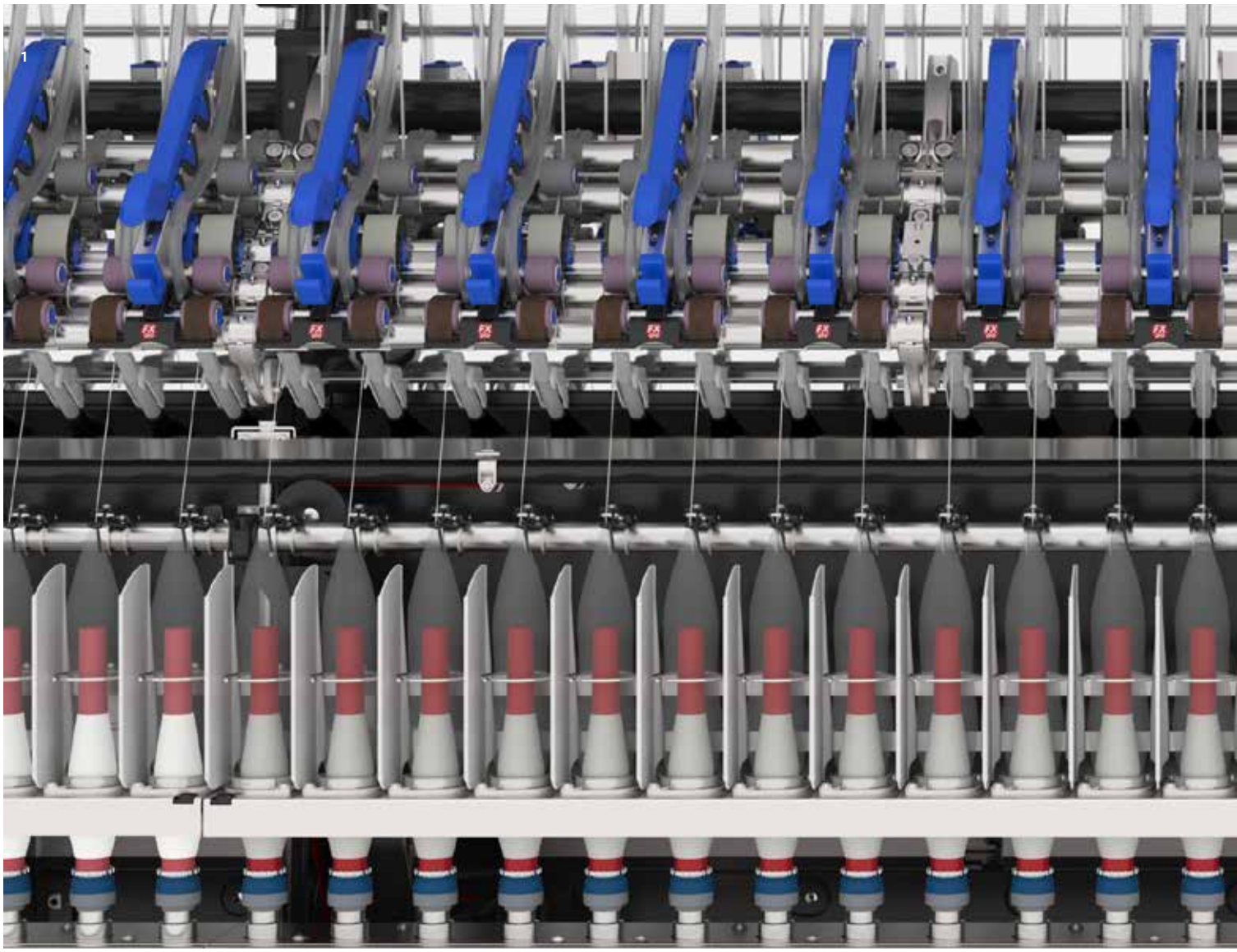
High speed, lower energy consumption with special components

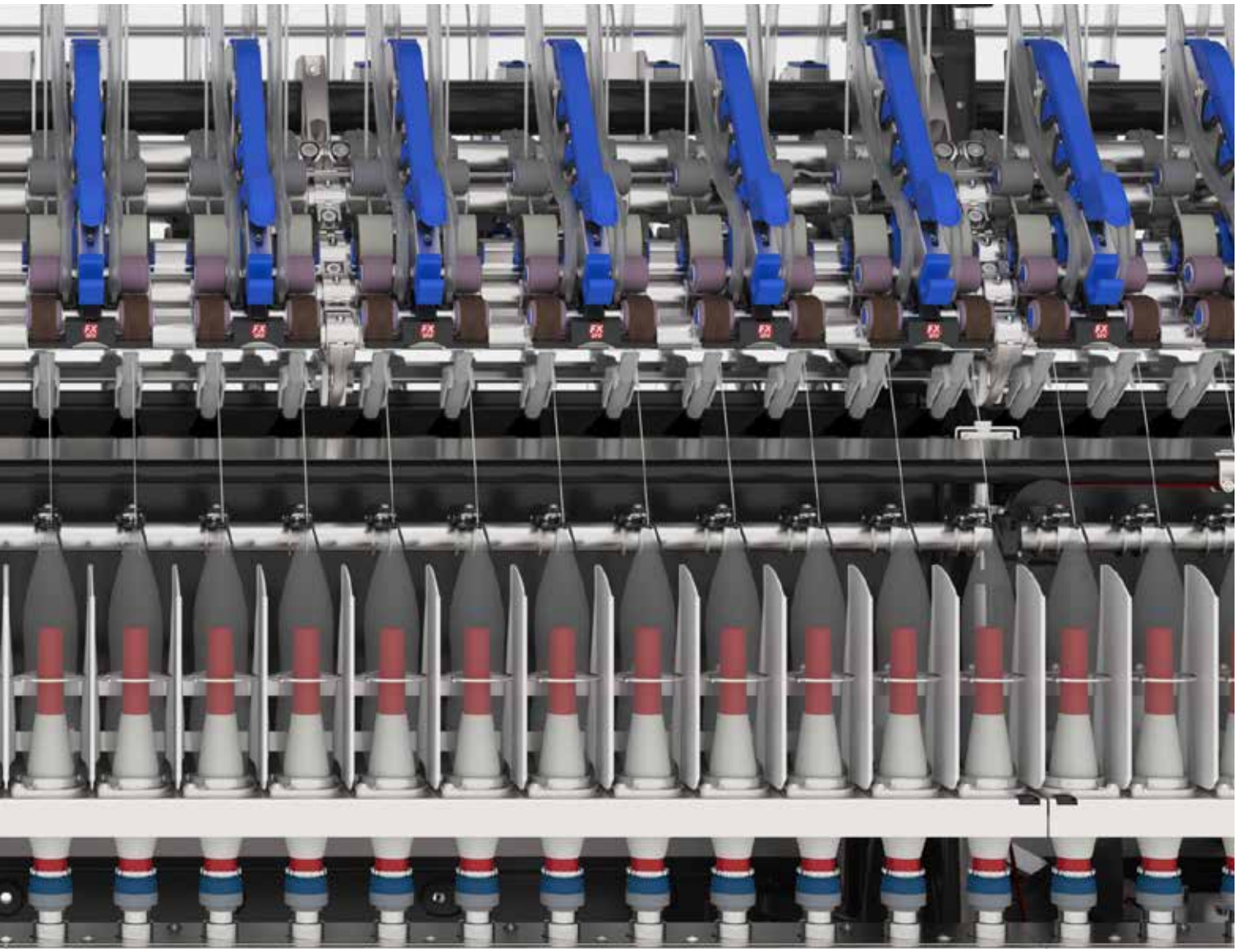
Tangential belt for uniform speed with less friction
The Saurer tangential belt drive generates an impressively low level of friction and minimal air resistance even at 30,000 RPM. The drive belt has 60% less contact angle compared with the 4-spindle belt drives. This results in significant energy savings and it generates lower wear and tear to the wharve.

Energy efficient IE4 motors
Extremely energy efficient IE4 motors are used as Standard in most of places, enabling to reduce energy consumption.



Spinnfinity as standard option– the state-of-the-art system for doffing without underwinding
Dirt-repellent, durable and lightweight – these are the features that allow Spinnfinity to reduce costs, increase productivity and improve ergonomics. Spinnfinity is the lightest system on the market. This significantly reduces energy consumption.

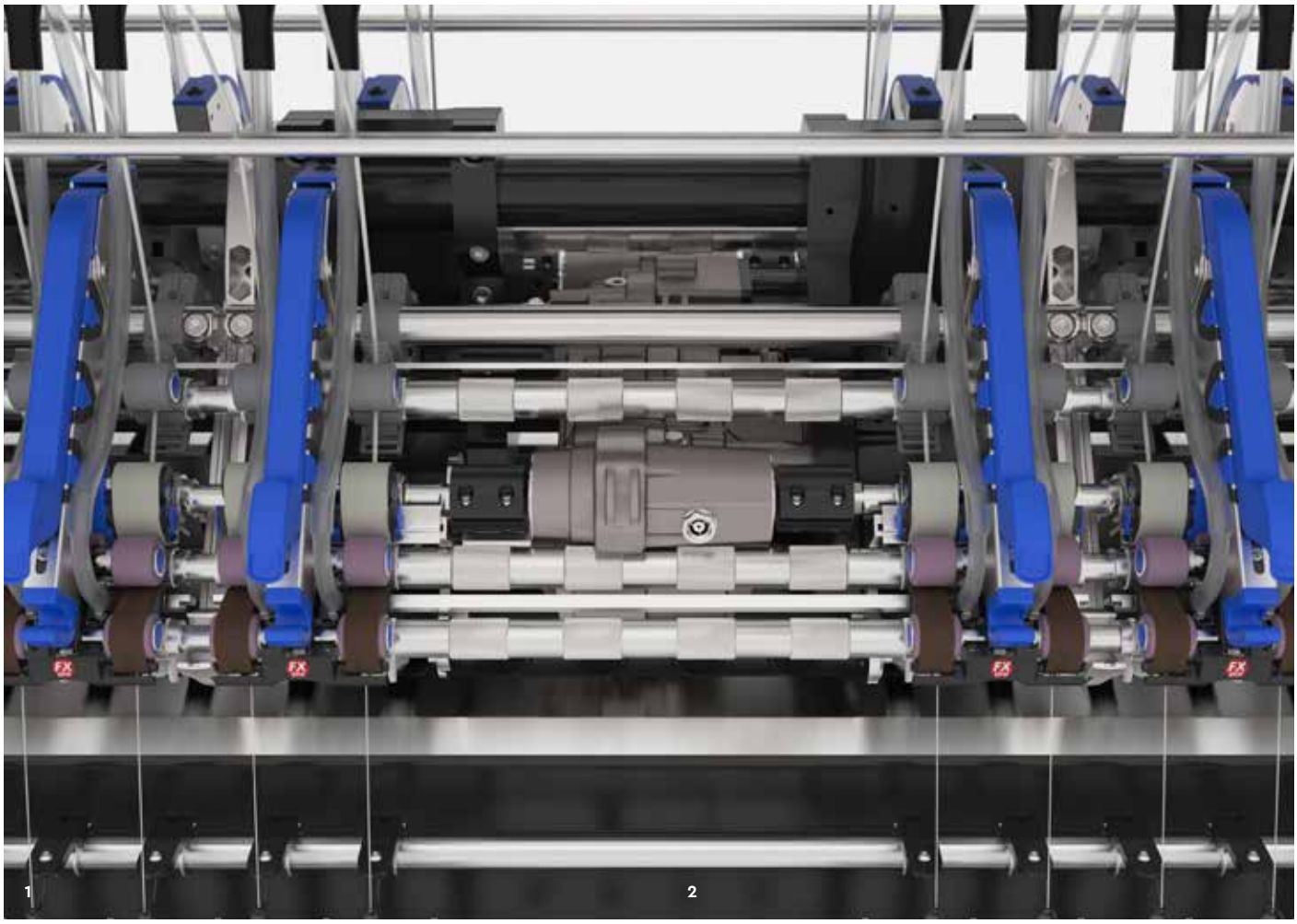
Energy saving Eshape spindles
The unique double elastic spindle bearing with combination of 17.5 mm wharve diameter reduces the bearing forces, resulting in low vibration, low noise and low energy consumption. High speed of 30,000 RPM can be achieved.



Full range of flexible electronic drafting

Flexible design of drafting drives
The flexible electronic drafting system drive NSD-i of Zinser 51, uses frequency-controlled motors and servo motors. This NSD-i designed for the maintenance free operation. Draft parameters and twist parameters can easily be adjusted on the Easyspin with one touch. There is no need to change gear wheels or make any other mechanical adjustments. The settings of fancy and twist direction are centrally managed via the Easyspin touchscreen.

Controlled shut down during power failure
Production is secured, even in the event of a power failure. The Zinser 51 monitors brief power outages autonomously without any stoppage in production. If the power is down for longer than approx. 2 seconds, a controlled shutdown is implemented. The machine will subsequently start up again without any problems. Your benefit: no unnecessary yarn breakage, less operator input and high productivity.



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Maintenance free middle drive even for superlong spinning machines

Modular design of NF²D for all applications
The NF²D offer a simple and modular patterned design, which ensure the space utilization. It offers a wide range of applications for super long machines. The maintenance free middle drive concept in Zinser 51 comes as a plug & play concept.

Processing man-made fibers in super long machine is challenging, NF²D creates a new trend in processing of such fibres. Depending on the application, it is possible to install even more than one NF²D on the Zinser 51.

Spin the full range with the Saurer compact systems

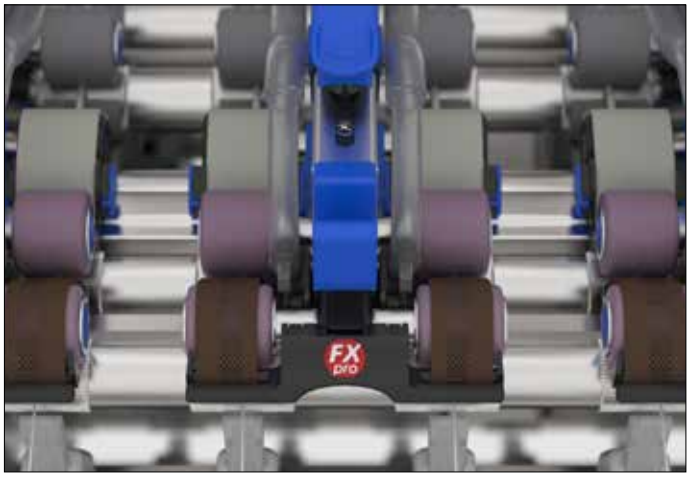
Choice of two self-cleaning compact systems – Impact FX and Impact FX pro
The two self-cleaning Impact FX systems are the world's most economical compact spinning technologies. Impact FX is the first choice for compact yarns up to a yarn count of Ne 24.

The new Impact FX pro compact system was specially developed for yarns in the medium and fine-yarn count ranges. It achieves particularly low hairiness, fewer imperfections, enhanced strength and improved uniformity. Impact FX pro is equipped with a multi-hole apron. The compaction is particularly efficient and gentle on the fibres.

Independent compact vacuum unit
An independent compact vacuum unit supplies both technologies with the defined compact force. The compact vacuum is individually adjustable. This guarantees high process reliability and a permanently consistent yarn quality.

Spotlight on recycled yarns
Both compact systems can process short fibers very well due to the system. They are ideal partners for the production of recycled yarns.

Self cleaning compact waste chamber
Then new innovative self cleaning compact waste chamber saved additional energy in production. This is especially supporting the processing of recycled fibres with higher share of short fibres.



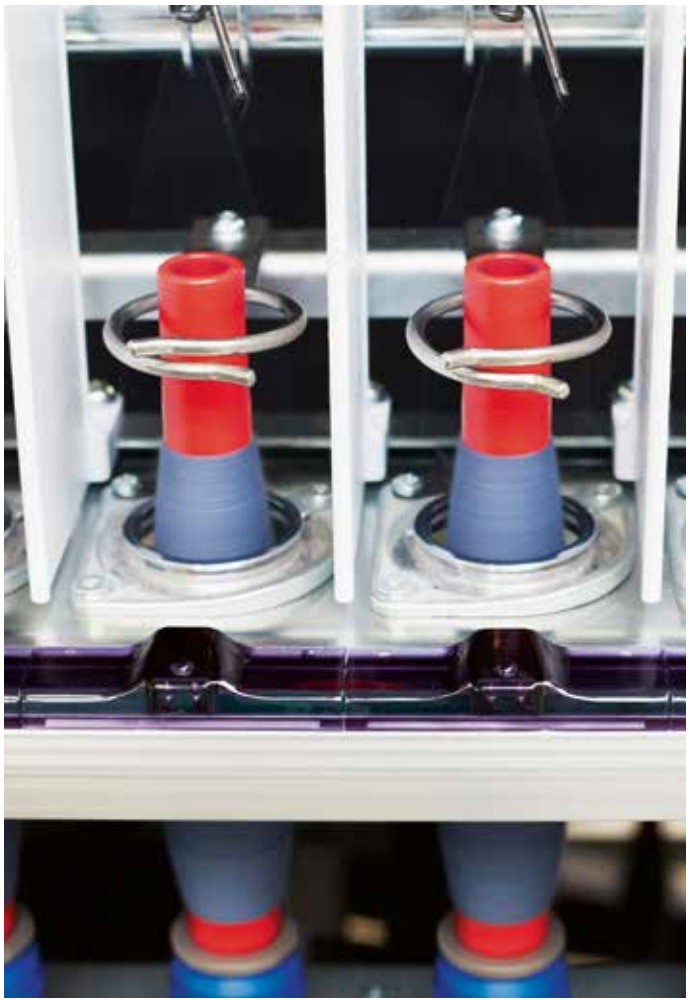
Pioneer in all special yarn applications

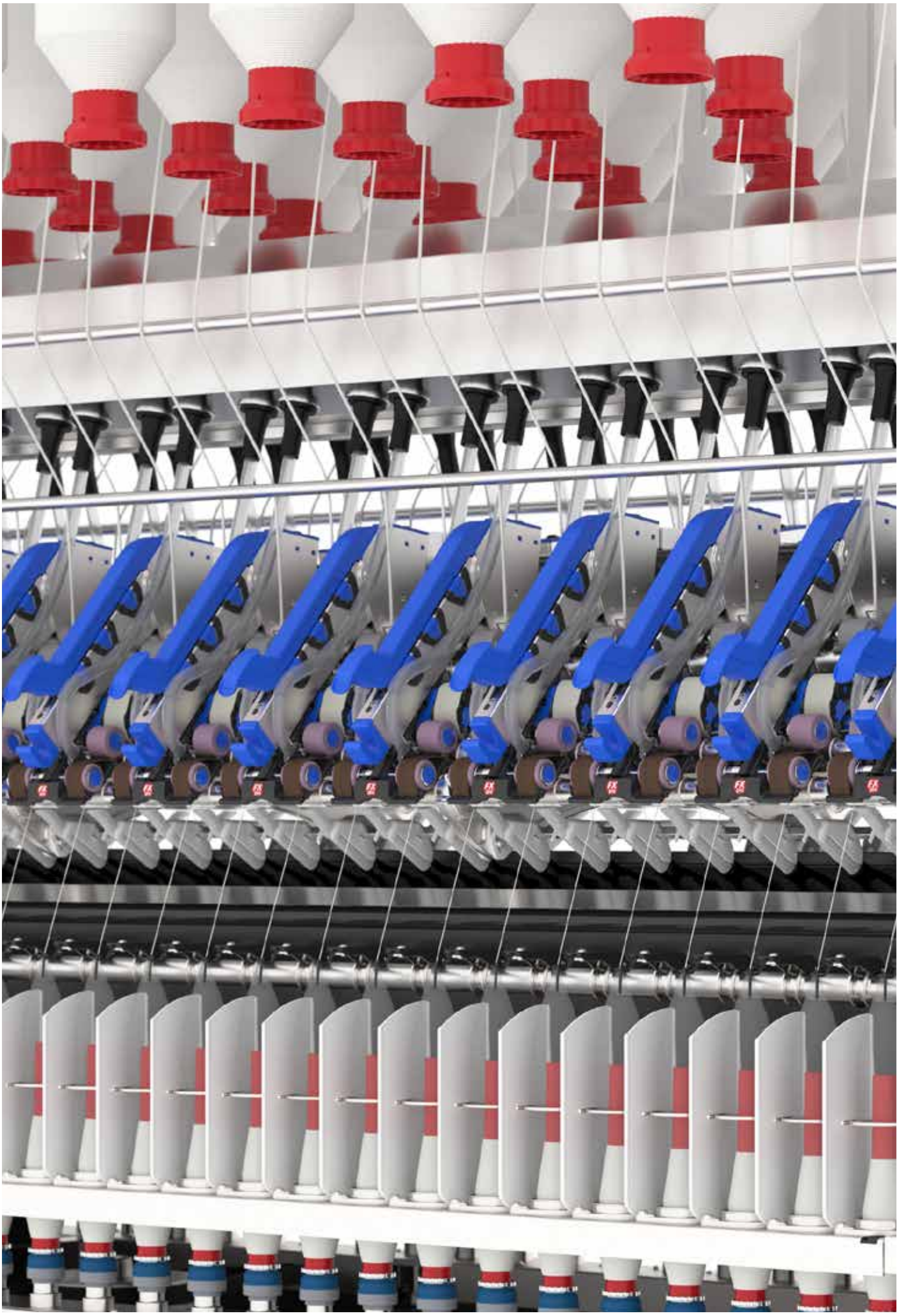
Special yarns for wide applications.
When it comes to special yarns like fancy, core, siro, dual core, soft core, hard core and different technical yarns, Zinser has always been a pioneer. The machine is ready for all these application.

Zinser offers reliable fancy yarn production with multi count and multi twist effects and also combination of both. Fancy is an additional option for Zinser 51, but no separate attachments are needed to start production. The machine is ready with one touch in Easyspin. It also offers a professional fancy designer, in which the critical points of the design and fabric stimulation can be done on PC. Once the right pattern is found, it can be transferred from the PC to Easyspin. The simulation possibility helps to avoid production loss and wastage.

Specialized yarns
Industrial yarns like Aramid, glass fiber, high tensile carbon fibers etc., can also be spun on Zinser 51. For these applications Zinser 51 offers unique drafting arrangements with special weighting arm and bottom rollers.

Prepared for processing recycled fibres
The unique design of the Zinser compact system offers the ideal solution to process mechanically recycled fibres. The self cleaning compact unit enables spinning blends with even with higher than average percentage recycled fibres. Zinser 51 can also spin blends or even 100% regenerated fibres.





Premium component package

The world's most versatile weighting arm series
Zinser 51 offers the world class German made mechanical weighing arm PK 2630SE/PK2630SEC as a standard. Customer benefits from easy handling and maintenance free operation and consistent yarn quality.

High performance spindles
Based on the customer requirements various type of spindles can be chosen for different applications. These spindles are world class uniquely designed for Zinser ring-spinning machines.

High speed Halo spinning rings
Perfect solution for high speed with traveller speed up to 47 m/sec. (Dependent on yarn count and speed). With a service life of up to more than 8 years.

High quality drafting rollers
Drafting bottom rollers are made in-house with higher stability for all applications and fitted with trouble free bearings. Maintenance free top roller bearings do not require any greasing during life-time and ensure uniform yarn quality.

Quality to the last detail
Reinforced separators for coarse counts, synthetics and blends to maximize the life time and seamless running.

Movable BC rings as standard option for bigger tube lengths above 230mm to maximize the productivity.

Automation means profiting

Producing independent of personnel
Automation minimises the need of spinning staff per shift allowing the mill personnel to focus on more qualified tasks. Automation also ensures yarn quality, eliminating manual errors.

Saurer offers you economical and individual automation solutions:
- for the roving frame and roving bobbin doffing
- for transporting roving bobbins to the ring spinning machine
- for doffing and the transport processes at the ring spinning machine
- for transport solutions from the ring spinning machine to the winding machine
- for package transport from the winding machine

Tailor-made roving bobbins transport systems
Saurer offers you customized roving transport automation from any commercial roving frame to the Zinser 51. The transport system reduces manpower requirements, speeds up roving logistics and ensures yarn quality through non-contact transport.

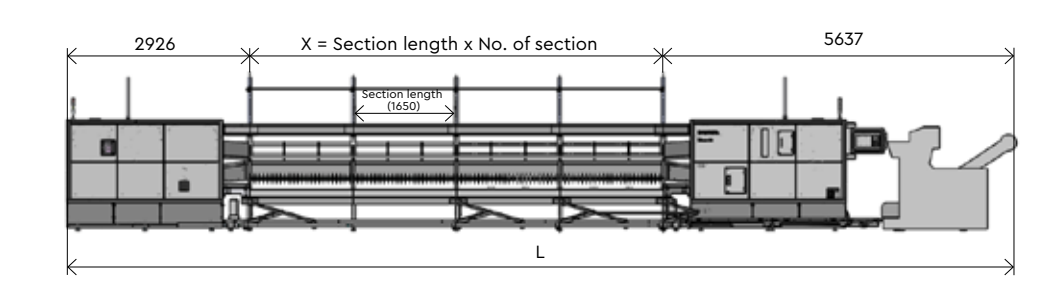
Cowemat – the most reliable doffer
The original Cowemat doffs fully automatically in under 2 minutes. For all machine lengths. Safety standards such as an independent vacuum supply, releasable grippers and a light barrier guarantee reliable doffing.

Bobbintray for more productivity
Bobbintray, the automatic bobbin transport with precision drive, handles your valuable yarn gently and transports it entirely contactlessly. This makes your spinning mill even more independent of personnel and your high yarn quality is 100% protected.

State-of-the-art linked solutions with any commercial winding machine
The Zinser 51 can be connected to any commercial winding machine. The contact-free bobbin conveyance protects the yarn and makes you independent of personnel. If required, a steamer can be integrated between the ring spinning machine and the winding machine. The fully automatic linked system is the benchmark for economic efficiency and quality.

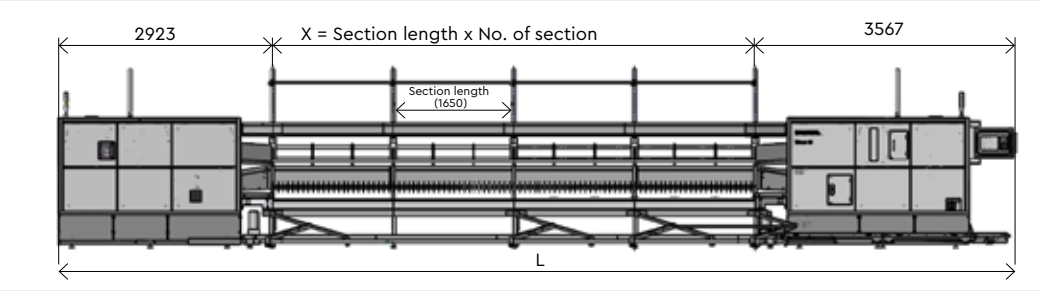
Cowefeed: stand-alone solution
The self-sorting tube feed in Cowefeed alone saves so much time and personnel. The operators simply dip the empty tubes into the feed container. Cowefeed sorts independently and error-free.

Machine dimensions – Zinser 51



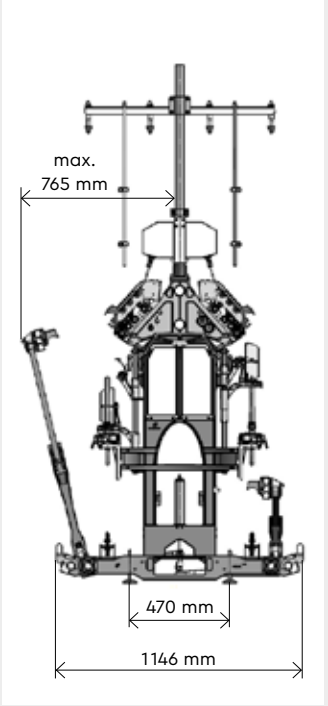
Zinser 51 with Cowemat 396 F, with Cowefeed

Machine length L (mm)
L = 8560 + X



Zinser 51 with Cowemat 396 V, linked systtem

Machine length L (mm)
L = 6490 + X



Machine dimensions – Zinser 51

Gauge [mm]	Max. no. of spindles	No. of spindles per section	NF²D length (mm)
68.75	2056*	48	275
75	1848**	44	300

*Middle bottom roller drive NF²D

≥ 1440 spindles for cotton
≥ 1200 spindles for man-made fibres

**Middle bottom roller drive NF²D

≥ 1320 spindles for cotton
≥ 1100 spindles for man-made fibres

Technical data – Zinser 51

	Conventional Ring	Impact Ring
Staple fibres	up to 64 mm	up to 54 mm
Raw materials	Combed cotton, carded cotton, viscose, madmade fibres, recycled fibres and their blends	
Count range for 100% cotton **Option** **Count range for man-made fibres and their blends**	Ne 6 – 160 up to Ne 260 Ne 6 – 120 (more on request)	
Draft range	6 – 118-fold	
Spindle gauge	68.75 mm, 75 mm	
Tube length	180 – 260 mm	
Ring diameter	36 – 54 mm	
Spindle speed	30 000 rpm (mechanical)	
Spindle drive	Tangential belt drive	
Doffing device	Cowemat	
Zero Underwinding	Spinnfinity	
Suction drives	Optisuction with direct driven IE4 motors	
Drafting drives	Independent drives for AUW-EUW-MUW NSD–i (electronically controlled drafting system drive with electronical break draft)	
Draft and twist parameters	One touch adjustment with Easyspin (graphical user interface)	
Bottom roller diameter **Option**	27 – 30.5 – 27 [mm] 32 – 30.5 – 32 [mm]	27 – 30.5 – 27 – 27 [mm]
Top roller diameter	30 – 25 – 30 [mm]	28 – 25 – 28 – 27 [mm]
Electrical parameters	380 V, 400 V, 415 V, 440V 50 or 60 Hz	

Options:
- Sirospun
- Corespun
- Fancydraft
- Fancydesigner
- Energy Monitoring
- ISM (individual spindle monitoring)
- RSM (roving stop motion)
- Senses
- Stand-alone version with Cowefeed

Regarding this brochure
Research and development never stand still. This may mean that some statements about Saurer products are obsolete due to technical progress.
The illustrations are selected for informative content only. They may contain special equipment which is not included in the standard scope of supply.

Senses – Sensibly connected.

Visualise your ring spinning machine data with Senses.

In Senses you can collect, visualise and analyse the machine data of your ring spinning machines and all other Saurer machines.

Data transparency in ring spinning
Senses makes the machine data of your ring spinning machines transparent. With the help of the individually configurable cockpit, you always have all the data relevant to you in view.

Find out more about Senses.

Simple, fast and secure recipe management*
With Senses, you can easily distribute recipes digitally to your machines. This reduces the setting time at the machine as well as the risk of incorrect entries. In addition, you have an overview of all your machine settings at all times, you can identify deviations and correct them in Senses if necessary.

Find out more about Senses Element Recipe.

Less operator workload with doff view*
The doff preview clearly shows the operator on a screen in the spinning mill where and when the next doff will take place. This allows you to better plan the deployment of your operators.

Find out more about our Senses Element Shop Floor

* Some functions are option-dependent

Sun – Service Unlimited.

Keep your ring spinning competitive with our Life Cycle Partnership.

We offer innovative solutions and services to ensure product quality, machine performance and profitability throughout the machine life cycle. Original parts ensure the full potential of your machine. Tested and proven for decades in spinning mills worldwide.

Updates and Upgrades
Let us increase your productivity and improve the performance of your mill. Keep your machines up to date with our modifications, retrofits and software updates.

Find out about our latest updates & upgrades for your installed machine base.

Preventive maintenance
Preventive maintenance ensures reliable production: you can avoid unplanned machine downtime and keep your mill running at a high level of efficiency.

Find out more about our preventive services for your installed machine base.

Secos – more than just your e-shop
In Secos you can order your original parts online and find all your machine documentation.

Find out more about our Secos e-shop & register now.
secos.saurer.com

Saurer Academy
Learn anywhere, any time with the online media library and book online seminars, presence training at Saurer or your own mill through the Saurer Academy.

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TÜV CERT DIN EN ISO 9001

Our quality management system complies with the requirements of EN ISO 9001.

BLUEcoMPETENCE Alliance Member
Partner of the Engineering Industry Sustainability Initiative