RIETER

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Cover:
Our innovations will be on show at ITMA Barcelona, Hall 6, Booth C201.

Back side:
The quality yarns of the Rieter Com4 yarn licensees can be found in Hall 3, Stand C229.

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Dear Customer,

In this special edition for ITMA 2019, Rieter showcases innovations for all four spinning processes that are established on the market. These innovations are designed to reduce raw material costs, energy costs and working costs, while also increasing productivity during production of the yarn quality required in each case. Improving the flexibility of the spinning mill plays an important role too. From numerous discussions with customers, I know that there is a considerable need for such solutions.

The blowroom VARIOline with the new UNIclean B 15 brings significant improvements in terms of energy consumption and the cleaning result for all spinning processes. The same applies to the new high-performance card C 80, which offers an unrivaled level of productivity.

To increase the cost-effectiveness of the ring spinning and compact-spinning process, Rieter reveals the new comber E 90, the new roving frame F 40, the piecing robot ROBOspin and three different compacting units that can easily be installed on and removed from a ring spinning machine: COMPACTdrum, COMPACTapron and COMPACTeasy.

Innovations that bring considerable improvements in efficiency for the rotor spinning process are also presented. The draw frame module RSB-Module 50 can be used in combination with the high-performance card C 80 and can be configured to a highly efficient direct process with the new semi-automated R 37 or the fully automated R 70. The new rotor spinning machines are characterized by low energy consumption, high productivity and high machine availability with low raw material costs.

There are innovations for the air-jet spinning process too: The process for producing a very attractive yarn made of 100% combed cotton is presented. On the market, people often say that this process is not cost-effective because of the short-fiber content that is combed out – let yourself be convinced otherwise.

The new innovations for the four spinning processes are supplemented by two new functionalities of ESSENTIAL – Rieter Digital Spinning Suite: ESSENTIALorder and ESSENTIALconsult, which are preinstalled on every new Rieter machine. The next steps are also demonstrated:

ESSENTIALlab for integrating laboratory data into the spinning mill management system, ESSENTIALoptimize, the intelligent recipe management system, and ESSENTIALautomate for integrating the transport and logistics systems.

As you can see, Rieter's range of digital services is growing. But there are also new solutions for optimizing the installed basis. With the PSM Drafting Motor, Rieter After Sales offers a significant improvement on the machines G 33 and K 44; and with the Energy Saving Support Disc it offers the possibility to make considerable energy savings on rotor spinning machines.

The Rieter Group's component manufacturers also introduce further innovations for day-to-day operations, such as the Bräcker ring traveler C1 ELM udr and the new SOLIDRING B 188 from Suessen.

And SSM reveals another yarn innovation: *fancyflex* is a technology for manufacturing slub yarn for textured yarns.

We are looking forward to your visit,

Dr. Norbert Klapper
CEO

The Most Economical Rotor Direct

Innovations at every stage of the process

C 80

Card

The card C 80 produces 30% more card sliver. The significantly larger carding area forms the basis for high productivity, best sliver quality with 10% fewer imperfections or raw material savings.

RSB-Module 50

Autoleveler draw frame module

The RSB-Module 50 is based on the successful established technology of the autoleveler draw frame RSB-D 50. It features two draft zones for outstanding yarn evenness.

Process

R 37

Semi-automated rotor spinning machine

The R 37 features impressively high productivity, very high raw material flexibility, and low energy consumption. The proven user-friendly machine concept can be enhanced through automation of the package change.

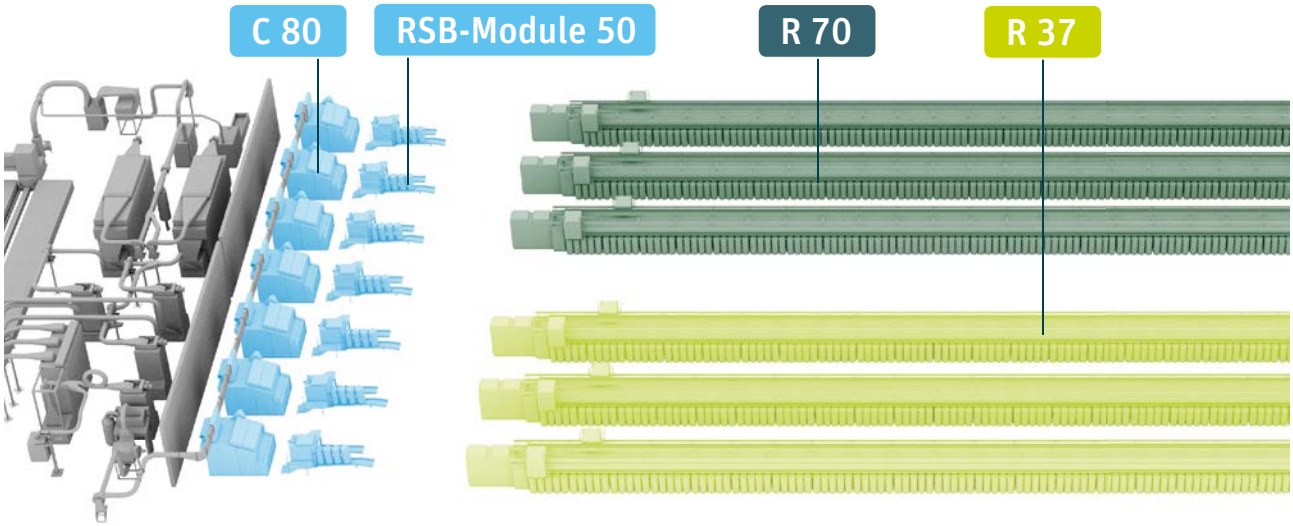
R 70

Fully automated rotor spinning machine

The optimum raw material utilization, maximum productivity and yarn quality, and the low energy consumption of the fully automated rotor spinning machine R 70 are setting new standards on the market.

Productive Spinning with High Short-Fiber Content

Rotor direct process with RSB draw frame module on the card



New rotor direct process for maximum productivity and top quality with the card C 80, RSB-Module 50, and the rotor spinning machine R 70, alternatively R 37

The strength of the Rieter rotor spinning system has always been its high productivity and achievement of a consistent yarn quality, particularly in applications with shorter fibers. The new rotor direct process further greatly enhances system performance and yarn quality, even with low priced raw materials.

The fully automated rotor spinning machine R 70 sets new benchmarks in rotor yarn production. It uses the proven Rieter spinning technology with low ends down and high productivity, while also offering greater efficiency through individual piecing at every spinning position. In fiber preparation, the high-performance card C 80 with draw frame module RSB-Module 50 ensures 30% greater sliver production compared to the market standard.

Higher profit through low costs

High productivity and innovative technology throughout the process lead to minimum production costs per kilogram of yarn. The optimum utilization of raw material is an important factor in leveraging productivity. The R 70 enables spinning even with a high trash content, and therefore supports the use of more cost-effective raw materials. Energy-efficient drive concepts, innovative machine components, and the high productivity of the C 80 and the RSB-Module 50, as well as the latest technology of individual drives in the R 70 lead to significant energy savings.

High yarn evenness

The card C 80 and the RSB-Module 50 with its two draft zones offer significant advantages in terms of yarn evenness compared to modules with only one draft zone. Compared to other rotor spinning machines, the combination of modern spinning and piecing technology in the R 70 leads to far superior strength and yarn evenness. Thus, for example, from cotton blends with a share of more than 50% noil a yarn with high uniformity can be produced, even in the range finer than Ne 30 – at maximum machine availability and productivity. The rotor spinning process is optimally supported by the use of ESSENTIAL – from ordering spare parts via the Internet to using the intelligent recipe management system.

The right model for everyone

On the R 70, yarns up to Ne 60 can be spun from 100% cotton. For customers who tend to spin standard yarns and who are active in regions in which the availability of personnel is not a critical factor, the semi-automated rotor spinning machine R 37 can offer an alternative solution. Compared to the fully automated rotor spinning machine R 70 with the latest technology, the R 37 is specifically designed for economical production with manual support. With the new robot ROBOdoff, automatic package change without interrupting the spinning process is now also possible on the R 37.

New Benchmark in the Carding Process

Card C 80 increases production by 30%

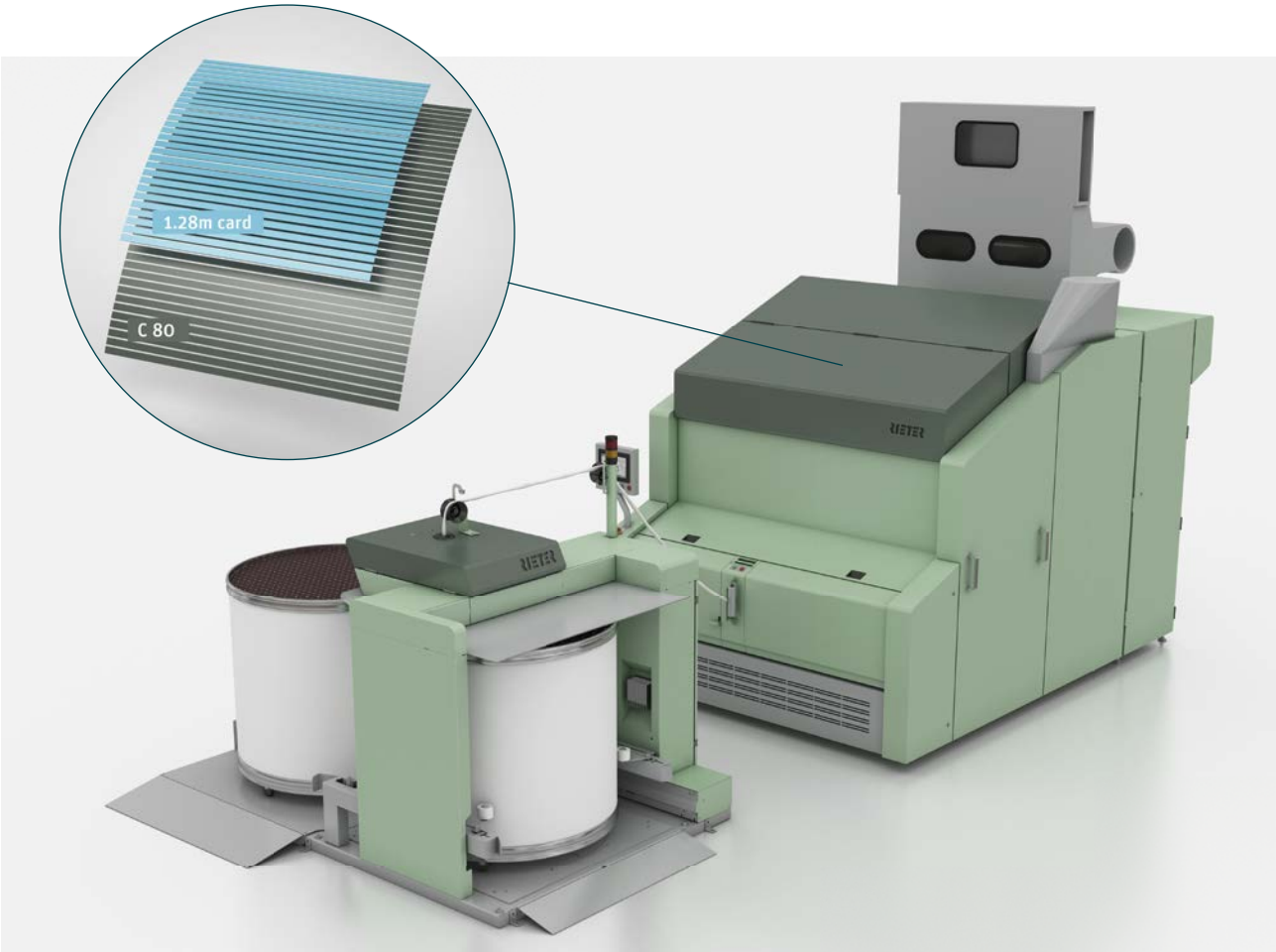
With a 30% production increase, the new card C 80 enters a new dimension. It also offers energy savings of up to 20%. Quality spinners benefit from efficient raw material utilization and excellent yarn quality.

Customers with the highest productivity requirements count on the new card C 80. Compared to all other cards on the market, the C 80 produces at least 30% more card sliver at a consistently high sliver quality. As a result, the number of cards required for a spinning mill can be significantly reduced. Depending on the raw material, this means that where four cards were previously used, only three are now required. Another benefit: Significantly lower energy consumption per kilogram of card sliver produced. This has a huge impact on lower production costs. The basis for this increase in productivity is the larger active carding area and the maximum technological utilization of the carding cylinder circumference.

Top quality

For customers who value higher quality, up to 10% fewer imperfections are possible compared to yarns produced with other cards available on the market. This is based on the largest active carding area and the centrally adjustable carding gap, which is characterized by unprecedented precision.

With today's standard card sliver quality, it is possible to achieve a lower loss of good fibers and therefore raw material savings.



C 80 – The world's most productive card with the largest active carding area

Semi-Automated Rotor Spinning with Maximum Flexibility

New R 37 offers high yarn purity over a wide range of applications

The semi-automated rotor spinning machine is the ideal solution for customers with personnel availability who want to use low priced raw materials. It enables cost-efficient spinning of rotor yarns based on high productivity, low energy consumption and personnel-saving machine ergonomics – with maximum flexibility in terms of the raw material used.

R 37: wide application range, high productivity and low energy consumption. Package change is performed automatically.

The innovative technology of the new R 37 enables excellent trash extraction and reduces the ends down. The R 37 therefore offers up to 8% higher productivity than other semi-automated machines. A major contributory factor to this productivity is the optimized spinning box, now with exchangeable trash channel. This enables the efficient processing of a much wider range of raw materials than previously, particularly those with a high trash content. Using a trash channel specific to the raw material secures optimum trash extraction and ensures that the rotor groove remains clean for longer. This greatly reduces ends down. Yarn purity and therefore imperfections and Classimat values are also considerably improved. Customers benefit from a reliable and robust spinning process – with considerably fewer ends down than on other machines.

Low energy consumption

The previous model, the R 36, already consumed 5% less energy than competitor models, thereby greatly reducing production costs. This is due to the modern drive concept which is also used in the R 37.

Automatic package change

The particularly low working height of the R 37 combined with the AMIspin piecing device makes the machine easier to work with. As a result, up to 8% more spinning positions can be served by the same number of operators compared to other machines. Newly an optional robot, the ROBOdoff, changes the full packages without interrupting the spinning process. In this case all doffed packages have the same defined package length. ROBOdoff enables more efficient work organization and replaces the exhausting process of manual doffing along the machine.

Top-Level Rotor Spinning

Optimum raw material utilization and maximum productivity: the R 70

The new fully automatic rotor spinning machine R 70 combines the advantages of the Rieter spinning box with optimal arrangement of individual drives at each spinning position. The results are high productivity, raw material cost savings, and low energy requirements.

The outstanding feature of the R 70 is the improved spinning box, which creates advantages in terms of raw material utilization and productivity. A more efficient trash extraction using the optimized BYpass, and the improved yarn tenacity, enable the use of low priced raw materials with a higher noil or trash content. Compared to other machines, it achieves greater spinning stability and higher yarn tenacity. This enables a productivity increase of up to 7% per spinning box. This means that yarn values in line with market standards can be achieved using a combination of higher productivity and low raw material costs.

Energy requirement reduced further

The use of state-of-the-art individual drives at each spinning position reduces the time required for piecing the yarn end after ends down, ensuring the efficiency of the machine is maintained at a consistently high level. This pays off in particular in the case of frequent lot changes or when restarting the machine. The R 70 features extremely efficient suction. The energy-saving automatic filter cleaning and optimal air flow reduce energy consumption by up to 5%. The state-of-the-art electronically controlled individual drives are highly efficient. Friction losses through additional drive elements, for example the belts and deflection pulleys, are no longer an issue. If a spinning position is not in use, the individual drives do not consume any power.

The function VARIOlot enables simultaneous spinning of two yarn qualities. This is enabled by the independent machine sides with a tube loader and package conveyor belt on each side. Optionally, multiple lots can also be processed on each side. This makes the R 70 highly flexible.

The R 70 therefore opens up new, previously untapped potential to reduce production costs.

R 70: Savings in raw material costs together with high productivity and low energy consumption reduce the production costs.

News from the Inventors of Comp

Groundbreaking innovations for the ring spinning

E 90

Comber

The latest machine from the market leader of combers offers a wider range of applications and maximum yarn quality with 10% greater sliver production.

F 40

Fully automated roving frame

The F 40 is equipped with the fastest doffer on the market – ensuring a high level of productivity. The unique doffing system enables short downtimes and thus high efficiency. The roving frame with up to 252 spinning positions reduces production costs.

acting

and compact-spinning process

COMPACTdrum
COMPACTapron
COMPACTeasy

Compacting devices

The new compacting device family offers compacting solutions that are easy to install and remove. Conventional ring yarns and compact yarns can be spun on the same machine. The variety of devices offers the ideal solution for every requirement.

G 38

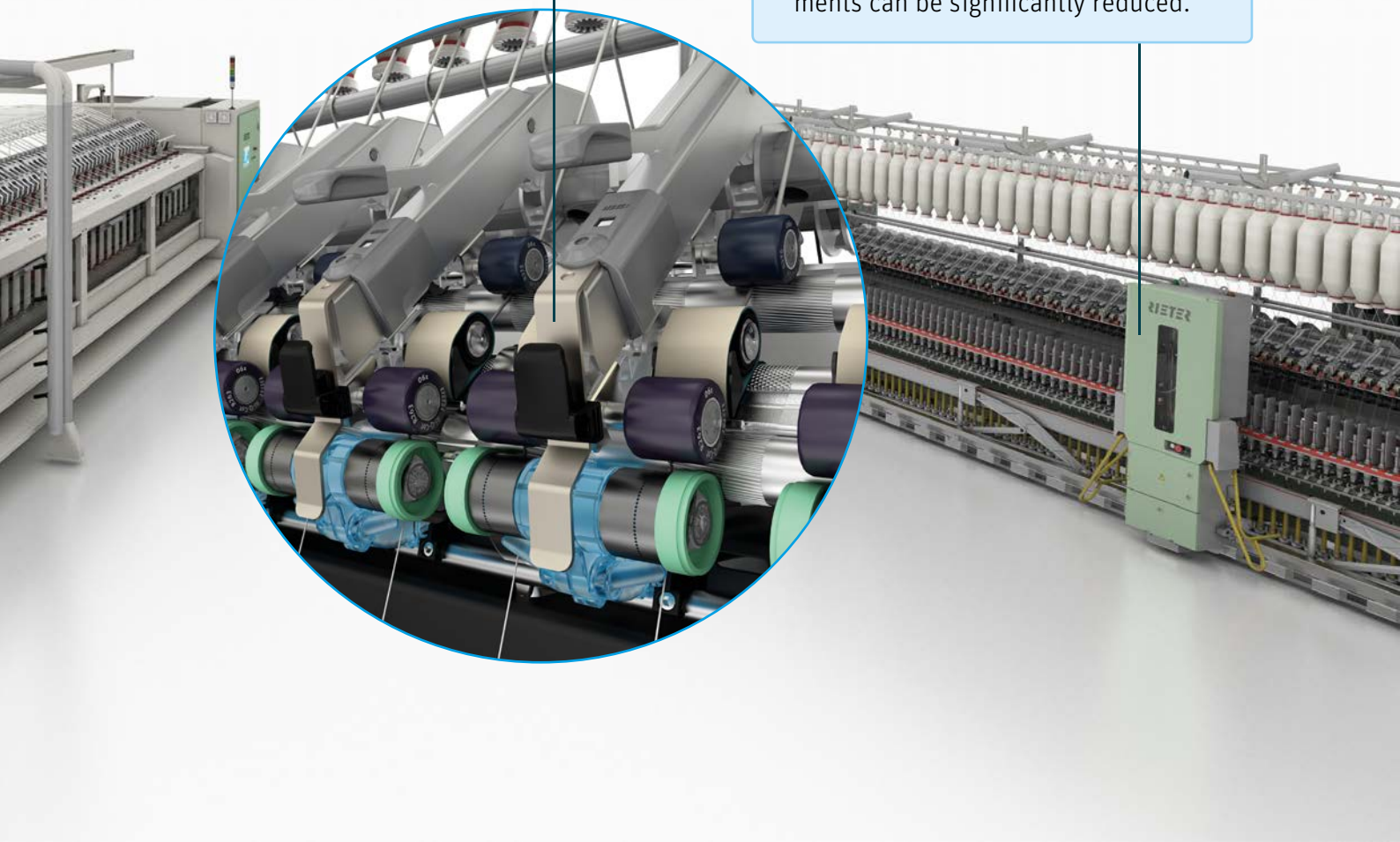
Ring spinning machine

The ring spinning machine G 38 flexibly produces high-quality standard and special yarns with high performance. Thanks to the low energy consumption and savings in personnel costs, it makes spinning highly profitable.

ROBOspin

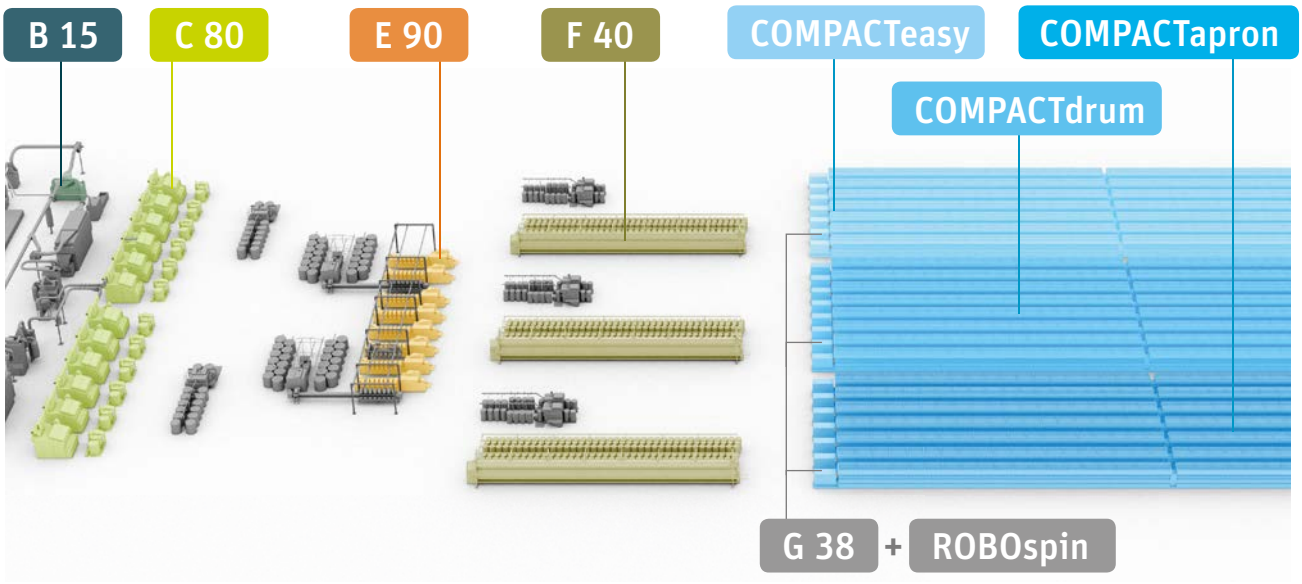
Piecing robot

The piecing robot in ring spinning enables a highly automated spinning process. The personnel requirements can be significantly reduced.



Maximum Flexibility and Future-Oriented Automation

The right compacting system for everyone



New compact-spinning process on G 38 with UNIclean B 15, card C 80, comber E 90, roving frame F 40, ROBOspin and compacting devices.

Every customer has its own specific requirements for ensuring the success of its spinning mill. As a system supplier with many years of experience, Rieter offers the broadest portfolio on the market, which is continually updated to offer even more flexibility.

In end spinning, the COMPACT family opens up new possibilities for the compacting process. The three new compacting devices COMPACTeasy, COMPACTdrum and COMPACTapron are easy to install and remove, enabling simple switching between ring yarn and compact yarn. The devices fulfill a range of different customer requirements: very high yarn tenacity, reduction in hairiness, or an investment requirement that is as low as possible.

The devices are suitable for use with all Rieter ring spinning machines. For customers who want to produce further high-quality special yarns alongside compact yarn, the G 38 is the ideal solution. Thanks to the integrated VARIOspin system for slub yarns, the customer can change between standard and slub yarns simply at the touch of a button. The Rieter compacting system is therefore suitable for all yarn types, raw materials, and yarn counts. The VARIOline already offered the VARIOset function for rapid adjustment of blowroom machinery according to the properties of the raw material. This function is also available with the new high-productivity UNIclean B 15.

The future of spinning

ROBOspin is the first reliable piecing robot in ring spinning. It automates the piecing process – from finding the yarn, through threading into the traveler, to piecing the yarn. Ring spinning becomes even more attractive.

The new fully automated roving frame F 40 with the shortest doffing time on the market also ensures rapid bobbin change and high efficiency. With the comber the most frequently used machine settings have been greatly simplified. Some settings that previously required mechanical adjustment can now be easily changed on the operating unit. In addition the proven lap transport system SERVOlap and the automated lap change and batt piecing system ROBOlap enable further autonomy.

Rieter is now offering its customers a new concept featuring cans with a diameter of 1 200 mm as an alternative for the spinning preparation. This increases the machine efficiency while also reducing personnel costs and waste. Fewer sliver piecers also increase the yarn quality.

With the use of Rieter ESSENTIAL, the ring spinning and compact-spinning process are optimally supported too.

Constant High Yarn Quality Guaranteed

Comber E 90 for maximum flexibility

The newly developed comber E 90 features the highest productivity and a wide noil extraction range for maximum flexibility. It guarantees outstanding, consistently high yarn quality at the lowest production costs.

The E 90 has a sliver production of over 100 kilograms per hour, making it the most productive comber on the market. The productivity gain of 10% compared to today is achieved by the new intelligent drive concept, together with the improved combing technology and the newly integrated SB-D 50 draw frame technology.

The E 90 offers a much wider range of applications, as the minimum noil extraction can now be reduced by up to 3% with only a slight drop in quality. This is made possible by completely newly developed technology components that considerably expand the application range of the circular and top comb. From applications with low noil extraction to high-quality fine yarns: The E 90 offers maximum flexibility for continually changing markets.

Outstanding quality

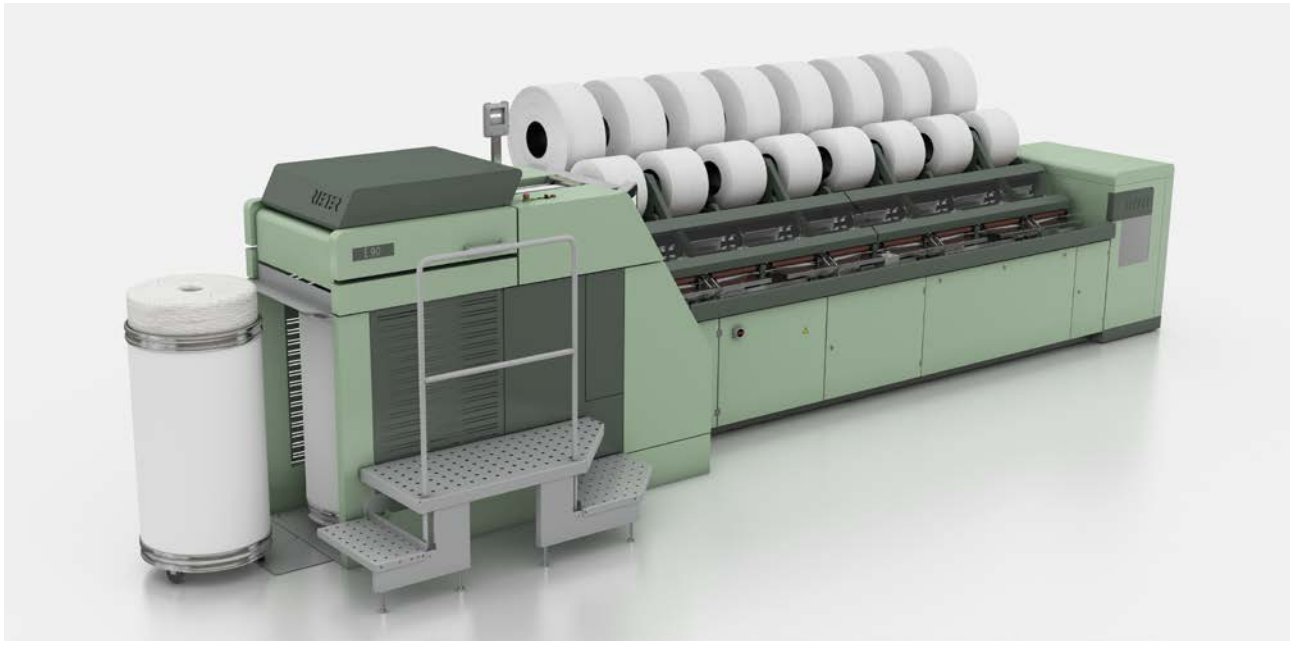
Improved technology components ensure a gentle yet simultaneously effective fiber treatment. The Rieter draw frame technology integrated in the machine guarantees perfect sliver quality, monitored by the Rieter Quality Monitor (RQM).

The new comber E 90 produces highest sliver quality thanks to the integrated SB-D 50 draw frame technology.

The RQM has already proven itself in many thousands of applications.

Unbeatable production costs

The comber E 90 stands out with its very low production costs. These are based on high productivity and up to 1% better fiber yield, and associated lower raw material costs. Added to this is a reduction in energy consumption of up to 40% compared to main drives with multiple motors, as well as the space saving enabled by the optimized footprint of the machine.



Impresses with highest productivity and a wide range of noil extraction: E 90

The Roving Frame with the Fastest Doffer

New F 40 produces economically high-quality rovings

It impresses with its fast bobbin change and high efficiency: the fully automated roving frame F 40. Its precise bobbin build-up provides the perfect feed for quality yarns.

The F 40 achieves an outstandingly high machine efficiency. One important factor in this efficiency is the very short doffing time of just 90 seconds. This is made possible by a unique technical solution – doffing inside the machine. The paths for the bobbin change are short. This reduces the time until the roving frame is productive again.

Precise bobbin build-up

For a consistently effective running behavior on the ring spinning machine, roving bobbins with a perfect bobbin build-up are required. The F 40 achieves this with a range of technical solutions, including the drives positioned centrally on the bobbin rail. There is a threaded spindle for each two sections. The central alignment ensures even load and movement. This therefore supports the precise bobbin build-up.

A further technical refinement is the special bobbin spindle with patented drive crown. This reliably drives the bobbins. The crown enables the tube to securely click into place on the spindle, thus ensuring that it can be picked up precisely during production. The tube is guided and driven on the top; as a result, the bobbin runs very quietly. The roving is wound up precisely throughout the entire bobbin build-up process.

With up to 252 spinning positions, the F 40 is ideal for ring spinning machines with a large number of spinning positions. This reduces investment costs and production costs.

The fully automated roving frame F 40 convinces with the very short doffing time and excellent bobbin quality.

Most Efficient Fiber Preparation

Energy-optimized VARIOline with highly productive UNIclean

The energy-efficient blowroom line VARIOline now saves up to a further 30% in energy. With the new pre-cleaner UNIclean B 15 for line production of up to 2 400 kg/h, top quality fiber cleaning has just become much more efficient.

VARIOline offers the most productive and energy-efficient fiber preparation with optimum raw material cleaning. The new function ECOrized makes the line even more efficient. It enables energy savings of up to 30% in the pneumatic fiber transport. Intelligent software dynamically controls all fans and automatically adjusts the air balance when the fiber quantity is changed.

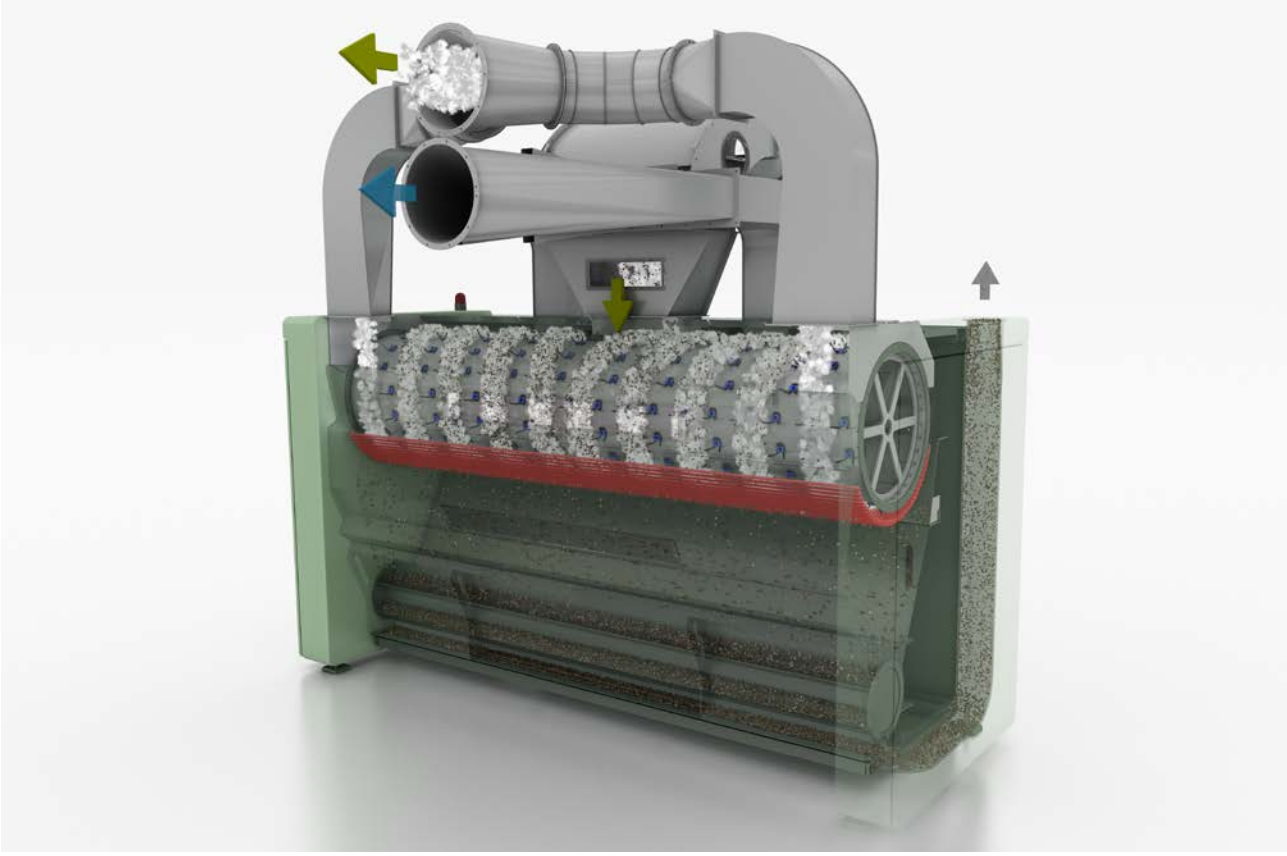
Low energy costs

Where previously two UNIclean B 12 machines were required, nowadays a single pre-cleaner is sufficient for up to 2 400 kg/h: the UNIclean B 15. The space-saving and energy-saving B 15 optimizes the spinning mill layout and therefore the production costs. This is proven by the figures: With energy costs of 0.08 USD per kWh and a production of up to 2 400 kg/h, up to 10 000 USD per year can be saved.

Excellent raw material utilization

Cleaning with the B 15 is extremely gentle, as the material transfer does not involve any clamping. The optimum cross section of the grid bars, ideal material transfer, and the large dedusting surface ensure reliable cleaning of the material. This improves the raw material utilization and enables a cleaning efficiency of up to 90%.

With a production of up to 2 400 kg/h, the blowroom line VARIOline together with the highly efficient bale opener UNIfloc A 12 and the UNIclean B 15 is the key for highly efficient and gentle opening and cleaning of the raw material – with maximum flexibility through adapting the machines to the respective raw material properties via VARIOset.



A single pre-cleaner is now sufficient for 2 400 kg/h. The UNIclean B 15 cleans the raw material extremely gently at maximum productivity.

Compact Spinning on a New Level

Three compacting devices for all requirements

Spin ring yarn today, and compact yarn tomorrow: The three compacting devices COMPACTdrum, COMPACTapron and COMPACTeasy can be quickly and easily installed on or removed from a ring spinning machine. Depending on customer specifications and market requirements, every technology has its advantages.

Rieter and Suessen – the inventor and market leader in compact spinning – are offering the market three new compacting devices: the sieve drum solution COMPACTdrum, the pneumatic apron solution COMPACTapron, and the mechanical solution COMPACTeasy. But which compacting device is suitable for which application and how do customers gain the most benefit?

First, the good news: Customers benefit from every solution. All devices offer maximum flexibility. The compacting devices are "Plug on/Plug off" units for ring spinning machines, which means that customers can rapidly switch between ring yarn and compact yarn. In addition, all raw materials can be processed, from cotton to blends up to man-made fibers. When the benefits of compacting have been exhausted in terms of yarn properties, advantages are offered in yarn quality, which pay off in further processing and in the final product. The production costs are low, since all compacting devices require very low-maintenance and have an extremely low energy requirement compared with today's standards. All devices can be included in the specification and delivered with a new ring spinning machine. Existing ring spinning machines can be upgraded easily.

COMPACTdrum: Impressive hairiness reduction

The compacting device COMPACTdrum is ideal for products in which minimum yarn hairiness is important, as well as for markets in which energy costs are high and maximum productivity is essential.

The next generation of sieve drum technology also requires very little energy: less than one Watt per spindle. All technology components are low-maintenance and require little servicing.

The produced yarn offers an impressive new dimension in hairiness reduction, particularly for long hairs. The high qua-

The three new compacting devices COMPACTdrum, COMPACTapron and COMPACTeasy

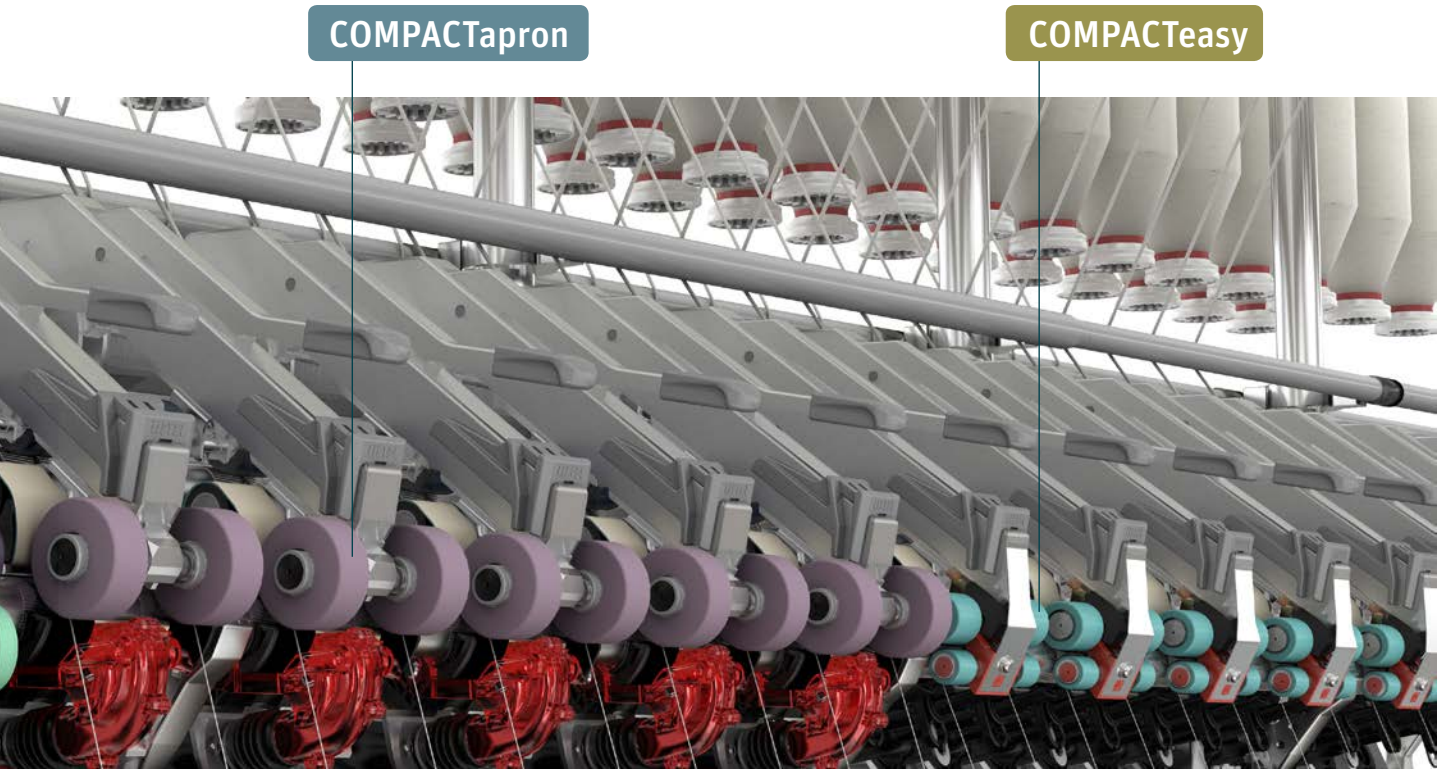
lity consistency is based on the durable technology components with an innovative new coating on the drum. The low hairiness is particularly relevant for shed formation in the weaving mill. It greatly increases machine efficiency. In knitting mills, the low hairiness leads to reduced needle wear and therefore fewer standstills. This results in considerably improved running behavior in downstream processing. In addition, there is a higher efficiency compared to other yarns.

COMPACTdrum is exclusively available for Rieter ring spinning machines. One device is used for two spinning positions. The device can be attached to suitably prepared ring spinning machines in just a few steps: Open the drafting system arm, remove the existing suction tube, insert the compacting device, and close the drafting system arm. Never before has switching between ring and compact yarn been so easy.

COMPACTapron: Concept for the future
COMPACTapron is the perfect choice for customers who want to spin compact yarns with maximum strength. This device is the second-generation lattice apron compacting solution from Rieter subsidiary Suessen. The new 3D technology with freely floating fibers through the compacting zone sets new standards in yarn tenacity, combined with low energy consumption. COMPACTapron is highly flexible. It can be installed on all machine types. COMPACTapron is a world's first, and will be presented at ITMA 2019 as a concept for the future of lattice apron compacting.

COMPACTeasy: Simple solution for every application
COMPACTeasy is the ideal solution for customers who want to spin standard fibers – in particular man-made fibers and their blends - in the count range Ne 20 to 80.

The special features of COMPACTeasy: Compacting is performed mechanically, without additional energy requirements. Fibers flow into a y-shaped channel. Here they are compacted twice. The yarn values reach a very good level. COMPACTeasy is available for all types of ring spinning machines.



The availability of COMPACTeasy is limited to selected countries.

Earn More Money with a Rieter System

A compact spinning case study

The Rieter compact-spinning process is renowned for consistently high yarn quality and maximum flexibility. Customers who opt for Rieter systems also benefit from lower production costs compared to spinning mills with machines from different suppliers. The cash flow generated demonstrates the outstanding economy of the complete system, which is perfectly synchronized and is supplied from one source.

Advantages in raw material utilization, energy efficiency and labor costs reduce production costs to a minimum. For example, this is demonstrated by a compact-spinning mill, which produces combed cotton yarn with a count of Ne 60 for shirting fabrics. The raw material is a blend of medium and long-staple cotton. Up to 413 kilograms of yarn is produced per hour. A "mixed spinning mill", which is equipped with machines from two different machine manufacturers, is used for comparison. The unique characteristics, such as the low hairiness of the compact yarn produced on the G 38 with COMPACTdrum, can create a higher yarn price. However, the case study does not take Rieter's benefit into account, and is instead based on the raw material prices and yarn prices for both systems being the same.

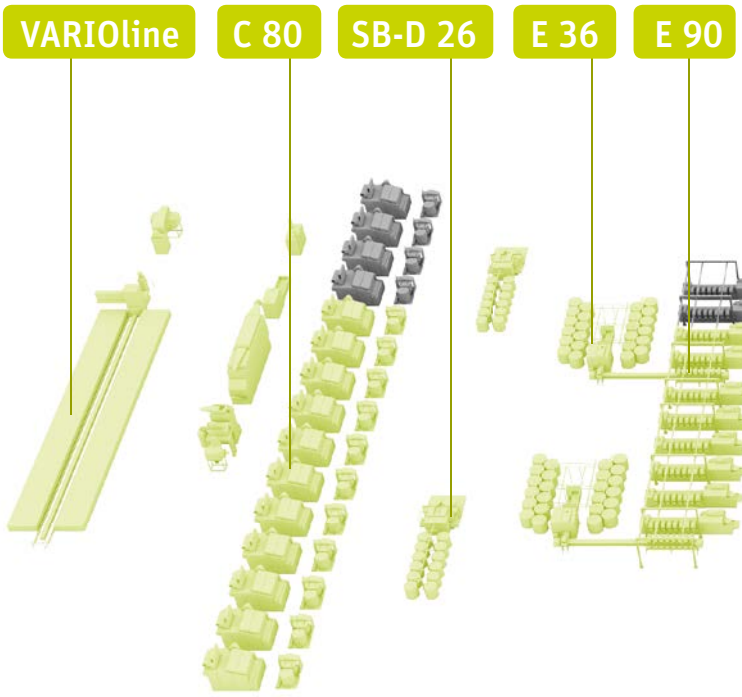


Fig.: The complete Rieter system requires 750 m² less space.

Significantly lower space requirement

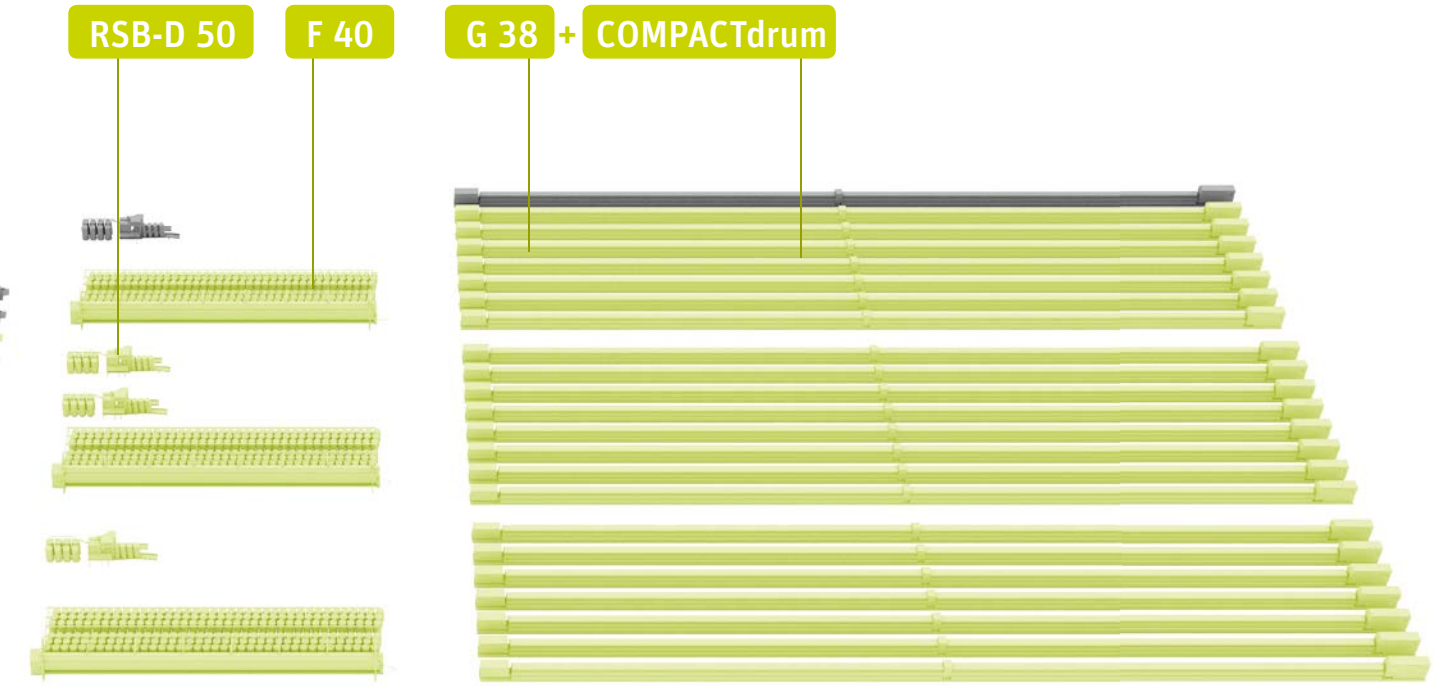
The high productivity of Rieter machines allows a reduction in the number of machines, thus saving a lot of space compared to a process using a "mixed system": In the case study mentioned above, the Rieter spinning mill requires one compact-spinning machine, one autoleveler draw frame, two combers and four cards fewer than the "mixed system" (figure). Space-saving machine concepts, such as for draw frames, also lead to a compact spinning mill layout. This allows space savings of approximately 750 m² – and therefore significantly lower building investment and lower maintenance costs.

Higher cash flow

In addition to the high yarn quality, the reduction in waste is a key factor in an economical compact-spinning process with combed cotton. Raw material is saved in the blowroom line VARIOline thanks to the optimum combination of microtufts, the function VARIOset and progressive cleaning. On the high-performance cards C 80, the maximum technological cross-section and the pre- and post-carding zones that can be equipped individually ensure excellent raw material utilization. In combing, high-quality technology components on the comber E 90 allow a reduction in noil extraction while retaining the same yarn quality. To summarize, raw material savings of one percentage point can be achieved with a Rieter system compared to "mixed systems". When using raw material priced at USD 3.50 per kilogram, this equates to a saving of roughly USD 260 000 per year.

Energy-efficient solutions – for example, the low energy requirement when compacting – and the high production capacity generate energy savings of 10% throughout the process. This means: With energy costs of 0.074 USD/kWh and a production of 413 kg/h of yarn with a count of Ne 60, around USD 160 000 can be saved per year.

Furthermore, 6% less personnel are required thanks to automated solutions and user-friendly machines with a uniform concept. Taking raw material waste, energy and labor costs, interest rates and ongoing operating costs into consideration, the total production costs calculated for the Rieter system for the combed compact-spinning process are approximately 5% lower than a solution from different suppliers.



This means that customers who invest in the Rieter compact-spinning system as per our example generate USD 400 000 more cash flow per year compared to customers who decide on a “mixed system”.

Rieter Ring and Compact-Spinning System
Advantages with the same raw material price and yarn price

Production of 413 kg/h yarn with a count of Ne 60:
- Space requirement -750 m^2
- Raw material utilization +1%
- Energy consumption -10%
- Personnel requirement -6%

Additional cash flow of around USD 400 000 per year

The picture becomes even more interesting when the total service life is taken into account, which is estimated at 15 years in this case study. Thanks to improved raw material utilization, lower energy consumption and reduced personnel requirements, the Rieter spinning mill generates an additional cash flow of USD six million over this time period. The resale value of the machines after 15 years was not included in the calculations. This means an extremely attractive return on investment is achieved over the entire service life of such a system.

The system partner
A complete Rieter system draws on Rieter’s expertise throughout the entire spinning process: from raw material to yarn. In addition to the economic advantages, Rieter also offers expert advice on the optimal spinning technology. Furthermore, the Rieter experts provide support with yarn marketing and offer a wide range of services. The entire spinning mill can be networked and controlled from a single platform with ESSENTIAL – Rieter Digital Spinning Suite. This guarantees high quality and optimal efficiency, both now and in the future.

Produce Innovative Yarn Economically

Efficient air-jet spinning system for 100% combed cotton

There is increasing demand for air-jet yarns in the textile chain. These enable very high-quality products to be produced. Rieter introduces the process with which air-jet yarns of the highest quality can be made economically from 100% cotton.

Yarns that are made of combed cotton and have been spun on a Rieter air-jet spinning system impress with their pleasant soft touch, even surface, impressive resistance to pilling and washing, shape retention, and intense colors. The spinning mill line with the productive UNIclean B 15, the innovative card C 80, the new comber E 90 and the optimized air-jet spinning machine J 26 guarantees maximum fiber utilization, low energy consumption, reduced space requirements and high productivity – and therefore the cost-effective production of these yarns.

Economic advantages

Thanks to the top-quality fiber preparation with efficient noil extraction on the comber E 90, as well as the optimal fiber guiding in the spinning unit of the air-jet spinning machine J 26, the average raw material utilization is four percentage points better than with other systems. Energy-saving elements, such as the individual drives on the spinning and winding units, enable energy savings of up to 15% throughout the entire system. With the compact draw frames, the double-sided machine concept of the J 26 and the high machine performance, a Rieter system uses significantly less space than other systems. The new card and the new comber set a very high benchmark for productivity in an air-jet spinning system for cotton. The J 26 convinces with its high efficiency and a delivery speed of 440 m/min for combed cotton yarn with a count of Ne 30.

Increase quality and efficiency

The proven air-jet spinning machine J 26 offers innovations which simplify handling and support consistent yarn quality. The spinning nozzle, the heart of the yarn formation, has a new hinged design. This enables fast and efficient operation. The newly developed suction system ensures that much less trash and fewer fibers collect at the drafting system. The yarn quality remains consistently high. Individual drives at ev-

A Rieter spinning mill with the air-jet spinning machines J 26 produces unique cotton yarns extremely economically.

ery winding unit make it possible to produce yarn packages with different hardness. This allows soft dye packages to be produced directly on the machine, which avoids the need for time-consuming rewinding. Winding the yarn using "true anti-patterning" prevents threads in multiple successive winding layers from lying on top of each other or parallel next to each other. This is the only way to achieve perfect and even package build-up and thereby optimal unwinding behavior in the following process.

Unique advantages for downstream processing

The J 26 can produce yarns with Z- or S-twist as required. This is beneficial in knitting. By alternately feeding Z- and S-twisted yarns, the knitted surface becomes dimensionally stable and the touch becomes very soft. Even after several washing cycles, the products do not tend to be affected by spirality.

In weaving mills, the air-jet yarns convince with a very good size pick-up, which lowers the size amount and therefore reduces the costs. After weaving, the fabric is washed, whereby the cleaning of the waste water is less elaborate and thus more environmentally friendly.

The low hairiness of the J 26 yarns also reduces the fiber fly during weaving. This minimizes deposits on the weaving machine. There is less need to be cleaned, which increases machine running times.

Fabrics with high-quality character

The fabrics produced from the J 26 yarn have a unique color luster. The surface is very even, which is primarily based on the low hairiness. This is the ideal prerequisite for printing on fabrics. The contours are extremely clear and defined. Overall, end products such as T-shirts, sweaters and terry towels have a very high-quality character. The products also impress in daily use: High piling and wash resistance, maximum shape retention and intense colors – even after many washes – ensure a long-lasting and therefore sustainable product.

Successful with ESSENTIAL

Rieter makes progress with the digitization of the spinning mill

All customers who purchase new Rieter machines get access to ESSENTIALbasic, the entry-level model in the Rieter Digital Spinning Suite. ESSENTIALbasic makes it possible to use important functions and access additional modules in the Rieter Digital Spinning Suite, which is undergoing continuous enhancement. Rieter is also presenting new modules that can be used to further improve the competitiveness of the spinning mill.

The all-in-one spinning mill management system: ESSENTIAL – Rieter Digital Spinning Suite integrates all digital applications. The system connects all machines and auxiliaries that influence the production of yarn and provides user-defined interfaces for third-party systems such as enterprise resource planning (ERP). Users can select modules in the Rieter Digital Spinning Suite that best suit their requirements and add them individually.

ESSENTIALbasic with every new Rieter machine

The digitization package ESSENTIALbasic is delivered with every new Rieter machine. Every Rieter customer can have it enabled upon request. Among other things, it includes the use of digital machine documentation and the possibility to order spare parts via the Internet. This module is also available for machines that have already been installed.

Introduce the right measures

The Rieter monitoring system offers new features too. ESSENTIALmonitor provides clearly organized data from the entire spinning process centrally. This allows all relevant information to be collected, weaknesses to be identified and personnel to be utilized in the most economical way. The specific and continuous record of production, energy, and quality data enables short reaction times for the right measures to be initiated. This increases efficiency and reduces the cost of

The all-in-one mill management system: ESSENTIAL – Rieter Digital Spinning Suite

spinning mills. As a new feature, recommendations for how to improve productivity are provided. ESSENTIALmonitor can be operated either via a computer in the spinning mill, via a mobile app, or via ESSENTIALdashboard, i.e. a large display unit in the spinning mill.

Intelligent maintenance
ESSENTIALmaintain enables intelligent spinning mill maintenance by analyzing sensor data from critical machine components and identifying abnormalities to avoid outages. The module offers a clear overview of all future, current and past maintenance tasks.

Avoid outages
ESSENTIALpredict applies machine learning algorithms to sensor data and compares the running behavior of similar machine types. As soon as a machine starts behaving abnormally, the user receives a message containing instructions from Rieter on how to avoid a potential outage.

New at ITMA: Ordering and management
ESSENTIALorder offers the user the possibility to manage spare parts procurement. As well as the spare parts ordering service, the webshop also features additional state-of-the-art functionalities. The module also offers an online spare parts catalog tailored to the specific machine configuration. ESSENTIALorder can be accessed via ESSENTIALbasic.

New at ITMA: Find information quicker
ESSENTIALconsult provides quick access to important information. The digital manual contains all operational and installation manuals, eliminating the need to spend time searching through traditional paper manuals. This module is also part of ESSENTIALbasic.

With these ESSENTIAL modules, Rieter offers an opportunity to capitalize on the potential for intelligent spinning. The ESSENTIAL portfolio will soon feature three additional modules: ESSENTIALlab, ESSENTIALoptimize and ESSENTIALautomate.

Quality data at a glance
A spinning mill management system would not be complete without the quality data collected from your laboratory equipment. With ESSENTIALlab, your quality data is integrated into the customer-oriented cockpit, allowing you to take action whenever this is required.

Optimized process recommendations
In the event that the lot, yarn count or end usage of the yarn changes in a spinning mill, the intelligent recipe management system ESSENTIALoptimize recommends the correct settings for the entire spinning process. The system first compares the current settings with the best practices from Rieter. ESSENTIALoptimize then suggests improved settings and/or optionally the optimal raw material to increase performance and reduce operational costs, while maintaining quality at a targeted level.

Transport automation as an integral element
ESSENTIALautomate integrates automated transport and logistics systems into ESSENTIAL. This gives the user an insight into the efficiency of the transport automation and helps to improve efficiency through combination with the production data from ESSENTIALmonitor.

Do you want to experience the benefits of ESSENTIAL?

Access to the ESSENTIAL platform, including ESSENTIALorder and ESSENTIALconsult, is free to Rieter customers. Please contact your Rieter sales representative to find out how to access the Rieter Digital Spinning Suite.

https://www.rieter.com/products/digitization/essential-rieter-digital-spinning-suite/

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