Ring
Spinning
Optimization

Total
Contamination
Control

Yarn
Prognosis

Alarm
Center

Mill
Analysis

USTER® *QUALITY EXPERT*
The Quality Management Platform™

USTER®
Think quality

Optimization
Cost control
Manpower
Consistency
Automation
Finished fabric
Labor skills
Energy and cost
Fabric yield
Analysis
Quality
Productivity
Waste reduction
Testing
Market reputation
Interest
Global sourcing
Raw material
Maintenance
Yarn breaks
Claims
Sustainability
Safety
Compliance
Contamination
Depreciation
Efficiency per production step
Transparency
Raw material usage

What is Think Quality™?
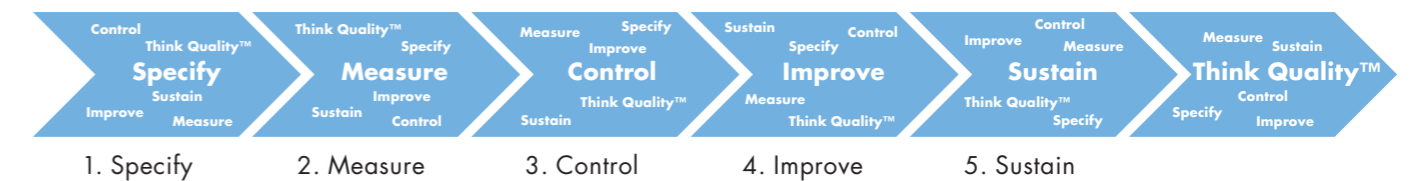### It is 'managing your textile mill with quality in mind'

Today's textile markets are highly-competitive, throughout the entire value chain from fiber to fabric. Customers expect unique products, at the right quality and free from unacceptable defects, every time. Mills need to manufacture economically, with best-possible use of resources – especially raw materials and labor. These are major challenges, requiring comprehensive mill management strategies.

Take control of your quality – Think Quality™

USTER's unique Think Quality™ approach is the way to 'manage your textile mill with quality in mind'. It integrates world-class USTER® products and services to ensure you always produce optimum quality, enhancing your reputation – as well as achieving predictable profits.

Think Quality™ means:
– Working to clear quality specifications from customers
– Controlling raw material sourcing, costs and yields
– Applying the best measurement and information systems
– Continuous production monitoring, for rapid response
– Understanding improvement options, through automated application know-how
– Benchmarking with USTER® *STATISTICS*
– Improve yield and assure quality of the final product

Control Think Quality™ **Specify** Sustain	Think Quality™ Specify **Measure** Improve	Specify Measure Improve **Control** Think Quality™	Sustain Specify Control **Improve** Measure	Improve Control Measure **Sustain** Think Quality™	Measure Sustain **Think Quality™** Control
Improve Measure	Sustain Control	Sustain	Think Quality™	Think Quality™ Specify	Specify Improve
1. Specify	2. Measure	3. Control	4. Improve	5. Sustain	

USTER® *QUALITY EXPERT* – The Quality Management Platform™ for textile process excellence

Connecting to the USTER® *QUALITY EXPERT* is the route to effective decision-making and preventive process optimization in textile mills. Assistant Q, the expert with 70 years of experience, facilitates fast action by smart alerts. USTER® *QUALITY EXPERT* expands its insightful analytics with valuable intelligence as each additional instrument is connected. It is the ultimate Quality Management Platform™ to drive consistent quality in every part of the spinning process.

USTER® *QUALITY EXPERT*

Ring Spinning Optimization

Total Contamination Control

Yarn Prognosis

Alarm Center

Mill Analysis

USTER® *QUALITY EXPERT* is available either as a standalone solution via a dedicated client-server – or hosted within USTER® *TESTER 6*.

USTER® *QUALITY EXPERT*
The Quality Management Platform™

USTER® *QUALITY EXPERT* is the Quality Management Platform™ for advanced process optimization across yarn manufacturing processes. A single system provides complete control, securing fiber, yarn and fabric quality. A combination of 100 % in-line monitoring, precise laboratory testing and integrated intelligence delivers the power to predict potential faults and prevent claims.

USTER's Application Intelligence is the foundation for merging textile application know-how with insightful analytics and connected products. Smart algorithms guide data-based decisions, extending the analytical possibilities as each additional instrument is connected.

USTER® *QUALITY EXPERT* Value Modules

Alarm center – creates awareness and triggers action
Quality consistency is the goal of every spinning mill, as inconsistent quality results in claims from customers. The alarm center uses the textile Application Intelligence embedded in Assistant Q to make sure that any variation is detected and fixed as early as possible. Assistant Q provides suggestions on what to check and records all proposed solutions, so that each mill can populate its solution knowledge base.

Mill analysis – insightful analytics for data-based decisions
Connecting all spinning processes makes everything transparent and comparable. USTER® *QUALITY EXPERT* provides full-scale mill analysis which can identify quality and productivity trends, working proactively to prevent faults and foster improvements.

Yarn prognosis – increases credibility between spinners and yarn users
An accurate yarn prognosis ensures customer satisfaction and strengthens cooperation between spinners and downstream processors. Testing of every yarn lot for fabric appearance, pilling and weaving performance is performed with no additional costs and in the most reproducible way. Mutual understanding, based on a common 'quality language', is supported through USTER® *STATISTICS* – the globally-recognized benchmarks. Ultimately, claims will be reduced.

Total Contamination Control – for managing remaining contaminants in yarns at minimum possible cost
What is the right level of contamination removal? How can you use fiber cleaning and yarn clearing to achieve consistent levels of contamination that will satisfy the requirements of the customer? How do you prevent waste of good material? Total Contamination Control uses the power of USTER® *QUANTUM 4.0* and USTER® *JOSSI VISION SHIELD*, combined with USTER's long experience in contamination control, to answer these questions in practice.

Ring Spinning Optimization – the link to productivity and quality
Tasks such as finding the right speed settings and the best time for traveler change – while also controlling end-breaks, hairiness and yarn imperfections – require know-how and good control of the ring spinning process. Combining USTER® *SENTINEL* and USTER® *QUANTUM 4.0* in the Ring Spinning Optimization Value Module of USTER® *QUALITY EXPERT* provides everything needed to draw the perfect speed curve. This will help to achieve maximum productivity and low energy consumption, with the required yarn quality.

USTER® *QUALITY EXPERT*
The Quality Management Platform™

As the unique Quality Management Platform™, USTER® *QUALITY EXPERT* opens up new horizons for quality optimization in textile mills. With each connected instrument joining the Quality Management Platform™, USTER® *QUALITY EXPERT* expands its intelligence for fault prevention and assured quality. Each Value Module of USTER® *QUALITY EXPERT* targets automation of costly tasks, fault prevention and higher process performance at the required quality level, constantly and reliably.

The well established Value Modules of USTER® *QUALITY EXPERT* are based on Application Intelligence:
– Alarm center – creates awareness and triggers action
– Mill analysis – insightful analytics for data-based decisions
– Yarn prognosis – increases credibility between spinners and yarn users

USTER® *QUALITY EXPERT* combines the most advanced in-line quality control systems to create unique cost and process optimization potential. In the critical process of contamination removal, USTER® *QUANTUM 4.0* works together with USTER® *JOSSI VISION SHIELD* to secure end-to-end control. Combining USTER® *QUANTUM 4.0* with USTER® *SENTINEL* stops defect creation at source and enhances the full potential of ring spinning machines, while keeping quality under control.

USTER® *QUALITY EXPERT* enables prediction and prevention, for process optimization:
– TCC (Total Contamination Control) – for managing remaining contaminants in yarns at minimum possible cost
– RSO (Ring Spinning Optimization) – the link to productivity and quality

Alarm center
The USTER Application Intelligence embedded in Assistant Q can immediately recognize issues with no need for configuration by the spinner. Suggestions for problem-solving are made directly and users can also expand the knowledge base with actions they enter themselves.
– Early warning of potential quality problems
– Possibility to save valuable raw material
– Guidance and problem-solving advice
– Reduced efforts for knowledge management

Mill analysis
Full control from fiber to yarn: quality optimization replaces number crunching, using vast reporting possibilities.
– Mill analysis over entire mill process
– Identification of trends within individual processes
– Improved utilization of laboratory testing

Yarn prognosis
See quality from the customer's viewpoint. Compared to traditional testing, yarn prognosis requires no fabric sample or weaving test runs. It provides the possibility to test all produced lots at practically no cost. In addition, the results are not influenced by variations of visual inspection methods.

TCC (Total Contamination Control)
Balances ejections in the blowroom and cuts in winding in the most advanced way:
– Links systems within production to minimize risk of foreign matter quality issues, with focus on defined quality and profitability targets
– Reveals the optimization potential to save costs

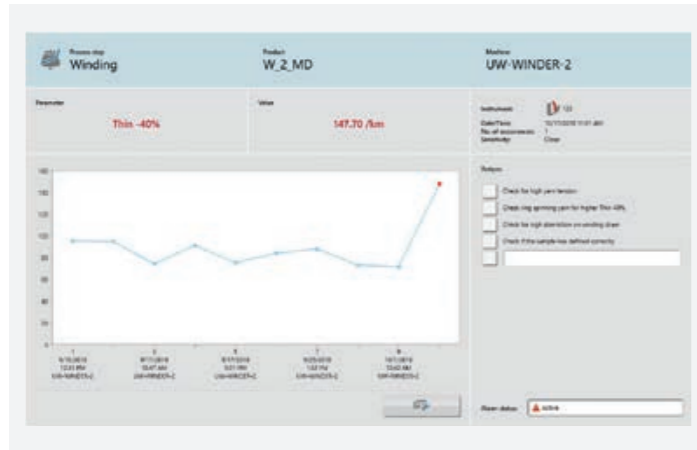### RSO (Ring Spinning Optimization)
Higher efficiencies, lower waste levels and optimized quality are the result of this winning combination. USTER® *QUANTUM 4.0* and USTER® *SENTINEL* provide quality transparency from the top to the bottom of the cop. Combined with speed setting and end-break monitoring in ring spinning, this provides ultimate control over productivity and quality.

Alarm center
Creates awareness and triggers action

Mill analysis
Insightful analytics for data-based decisions

Every single test is scanned and evaluated. Quality issues are notified via rules based on USTER® knowledge and experience. Alarms for each process stage are triggered automatically, defending against costly claims.

– 100 % monitoring of all key processes to react immediately to quality deviations 24/7
– Learning system: benefit from profound textile application know-how and extend it according to your needs
– USTER Application Intelligence with Expert Assistant for reliable alerting

USTER® QUALITY EXPERT has the power to combine and analyze data from a number of connected instruments, covering every process step in yarn production. Information is condensed and presented in an easy-to-read format, to help the user target areas for optimization.

– Fiber-to-yarn quality analysis with process view
– Quality comparisons based on data from multiple instruments correlated to USTER® STATISTICS
– Carding and combing performance for reliable spinning preparation

React immediately to quality deviations – 24/7
In quality management, timing is everything. Late reactions to quality problems can be very costly to spinning mills. USTER® QUALITY EXPERT takes in data from all production processes, analyzing it to spot deviations in quality. Alarm trends are easy to follow, using a comprehensive dashboard display of alarms by process and machine.
– Earlier warning of potential quality problems
– Possibility to save valuable raw material

Fiber-to-yarn quality diagrams
A single report highlights weak spots in each process and quickly signposts improvements. The simple format means that even inexperienced users can quickly understand quality variations. For instance, essential fiber information delivered by USTER® AFIS PRO 2 makes it easy to recognize possible influences on downstream processes, to avert causes of costly fiber damage.

Benefit from profound textile application know-how
USTER® QUALITY EXPERT adapts to the changing needs of textile mills, so that spinners can create a tailored quality system. Wide-ranging quality alerts can be further extended by feeding in mill-specific rules on trouble-shooting, constantly expanding the level of knowledge. By highlighting issues and proposing solutions speedily, this intelligent knowledge-base system enables textile mills to save time while solving inconveniences.

Intuitive yarn quality comparison diagrams
Yarn quality comparisons integrate laboratory and in-line data. They point up differences between products, or even production lots, supported by the power of USTER® STATISTICS. Side-by-side comparisons show where improvements have been made and point to areas for further optimization. Additionally, the vast possibilities of quality comparison reports can be used to provide information for yarn buyers, or for quality assurance.

Assistant Q – ever-ready helper with extensive USTER Application Intelligence
Quality managers no longer need to waste time on trivial tasks. Assistant Q is like a well-qualified and highly-experienced new 'staff member' who ensures nothing goes unnoticed. He works tirelessly to present spinners with exactly the information they need, for the ultimate goal of 'managing the spinning mill with quality in mind'. The unique rule engine and smart algorithms for alarms and predictions build the foundation for reliable alerting.
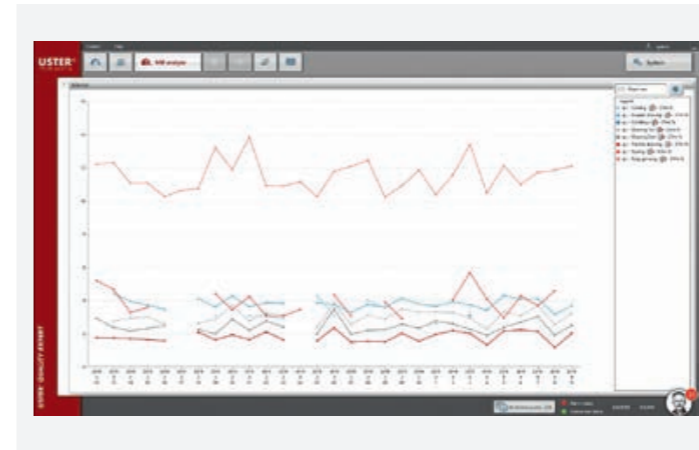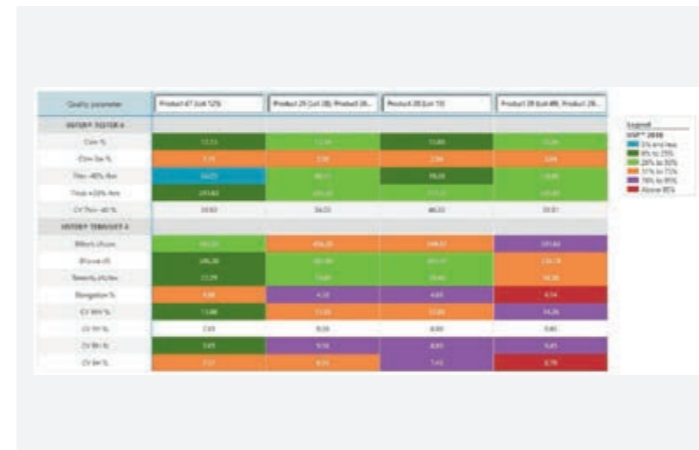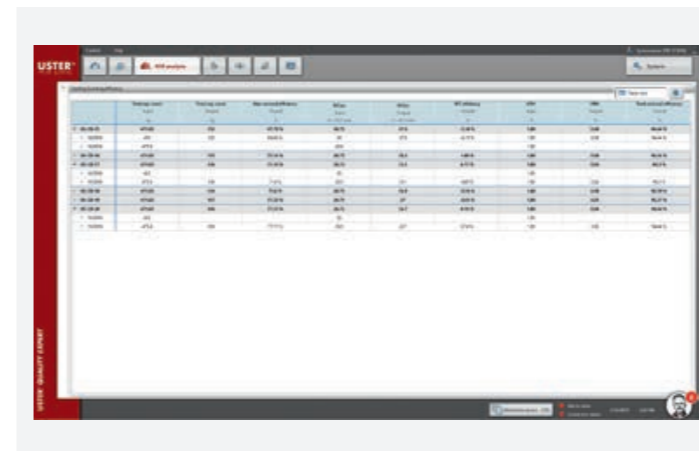

Carding and combing performance
Carding and combing are decisive processes in fiber preparation. USTER® QUALITY EXPERT has dedicated reports for monitoring efficiency trends in these processes. The right time for changing card wire or combing elements is crucial for quality and cost. Automated alerts for nep and short fiber removal ensure that all machines are in the right condition and action is taken at the right time.

Yarn prognosis
Increases credibility between spinners and yarn users

Information sharing with mobile and dashboard formats:
Key data direct to key people

Spinners are increasingly keen to see quality from the perspective of the customer, the yarn user, to understand the issues concerning weavers and knitters. The combination of USTER® TESTER 6 and USTER® QUALITY EXPERT with intuitive yarn-grading options provides an accurate prognosis for customer satisfaction, based on an easy-to-understand grading system.

– Fabric appearance: a vital preview of fabric quality
– Pilling resistance: most important for fabrics
– Weaving performance: very important for production efficiency in weaving mills

Are the recent changes in ring frame speed causing trouble? Is the operator quickly aware of sudden changes in machine performance? Such questions are now easily addressed by the information interfaces. In addition, USTER® QUALITY EXPERT enables quick training of users to simplify system operation.

– USTER® MOBILE ALERTS – your app to stay connected to quality
– USTER® MILL DASHBOARD option – for customized presentation of relevant information
– Quick tutorials – for easy user training

Fabric appearance
Yarn tested on USTER® TESTER 6 is evaluated for fabric appearance using smart algorithms based on measured parameters and USTER know-how. The grade for fabric appearance:
– Saves cost of sample fabric production
– Is more objective than human visual inspection
– Makes it possible to grade every tested yarn lot

Pilling resistance
For fabrics, pilling is a key issue. Poor pilling resistance can ruin fabric appearance, resulting in rejected material and customer claims. The grade for pilling resistance:
– Requires no sample fabric and no pilling test
– Is a standard test method, unaffected by the instrument or pilling test method used
– Makes it possible to grade every tested yarn lot

Weaving performance
The weaving performance grade allows spinners to identify batches with a high risk of yarn breaks during weaving. Reliable detection of weak places allows the weaving behavior of the yarn to be assessed, based on data obtained by the system. The grade for weaving performance:
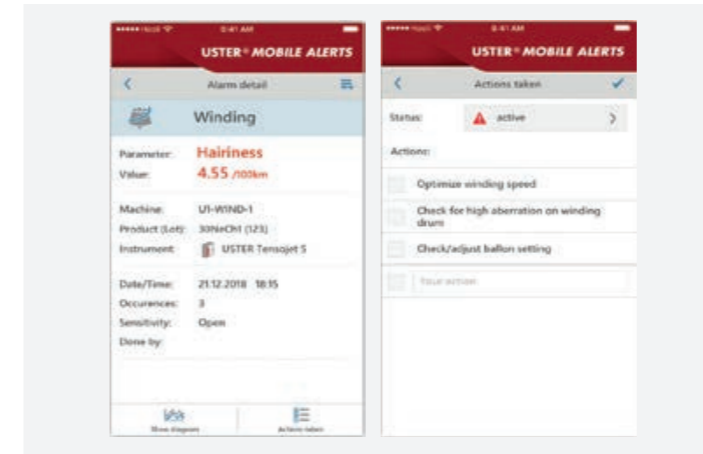– Is more representative, based on measurements of 100 % of the production from USTER® QUANTUM 4.0
– Makes a first assessment, even before the yarn reaches the beaming process

USTER® MOBILE ALERTS: connected to quality
Practical quality know-how brought to every stage of the textile yarn spinning process – and directly delivered in one application to your mobile device. Combined data from in-line and laboratory instruments, continuously analyzed by Assistant Q, helps operators to be aware of quality issues in production, allowing immediate countermeasures.
– Real-time notifications
– Improved communication by faster information flow

Customized presentation of relevant information
Automated quality data collection is essential. But the next stage – analysis of that data – must be transparent and in a simple format, so operators can trigger action on the shopfloor. That's where the USTER® MILL DASHBOARD option comes in: it displays customized and relevant data at exactly the right point in production.

Easy user training with quick tutorials
USTER® QUALITY EXPERT is already easy to navigate and use, providing managers with top-class information. If more training is needed, Assistant Q provides tutorials to make it even easier for anyone to understand and operate the system.
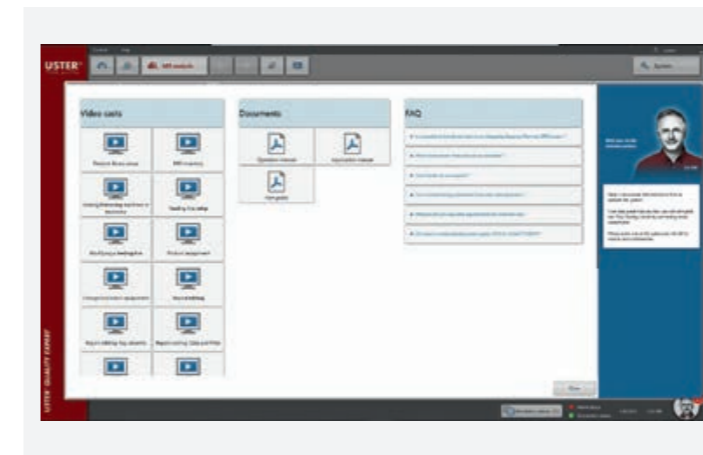
Total Contamination Control means precisely controlled contamination levels in yarns, with minimum waste. USTER is the only single-source provider of this integrated solution.

– USTER® *VISION SHIELD EXPERT*: targeted blowroom alerts
  on contamination to trigger early reaction
– Optimization of foreign matter ejections and yarn clearer cuts,
  to balance efficiency and quality
– Preventive action with direct impact on profitability of ejections
  and remaining contamination levels

Targeted blowroom alerts for early reaction

Foreign matter contamination is the biggest issue for cotton textile mills, and setting the right ejection levels is a key for minimum waste levels. Smart alerts based on dedicated rules instantly detect changes in ejection levels and save raw material 24/7 in a less complex way. For instance, laydown changes with possible impact on contamination ejections will be recognized and relevant alerts triggered. Individual data is collected and consolidated by USTER® *VISION SHIELD EXPERT*, which also connects events to trend charts and shows effects over time.
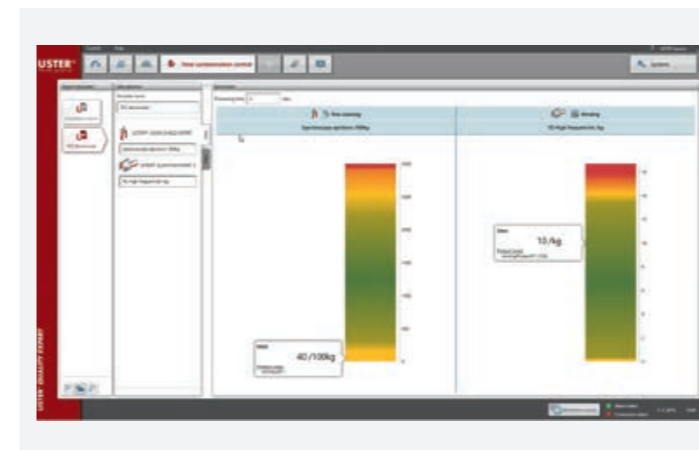
### Optimization of ejections and cuts with benchmark reports

Due to the interaction of the initial control with USTER® *JOSSI VISION SHIELD* and the final control at winding with USTER® *QUANTUM 4.0*, optimization is achieved with guidance by USTER Application Intelligence in an intuitive benchmark report. Balancing ejections and clearer cuts, the lowest remaining contamination levels in yarns can finally be controlled at the lowest costs.

Preventive action with direct impact on profitability

Early ejections to control the level of contaminants in fabrics, and yarn classifications to indicate disturbing contamination remaining in yarns, provide potential for optimization. Proactive contamination control helps spinners to prevent faults, while reducing production costs significantly.

Ring Spinning Optimization
# The link to productivity and quality
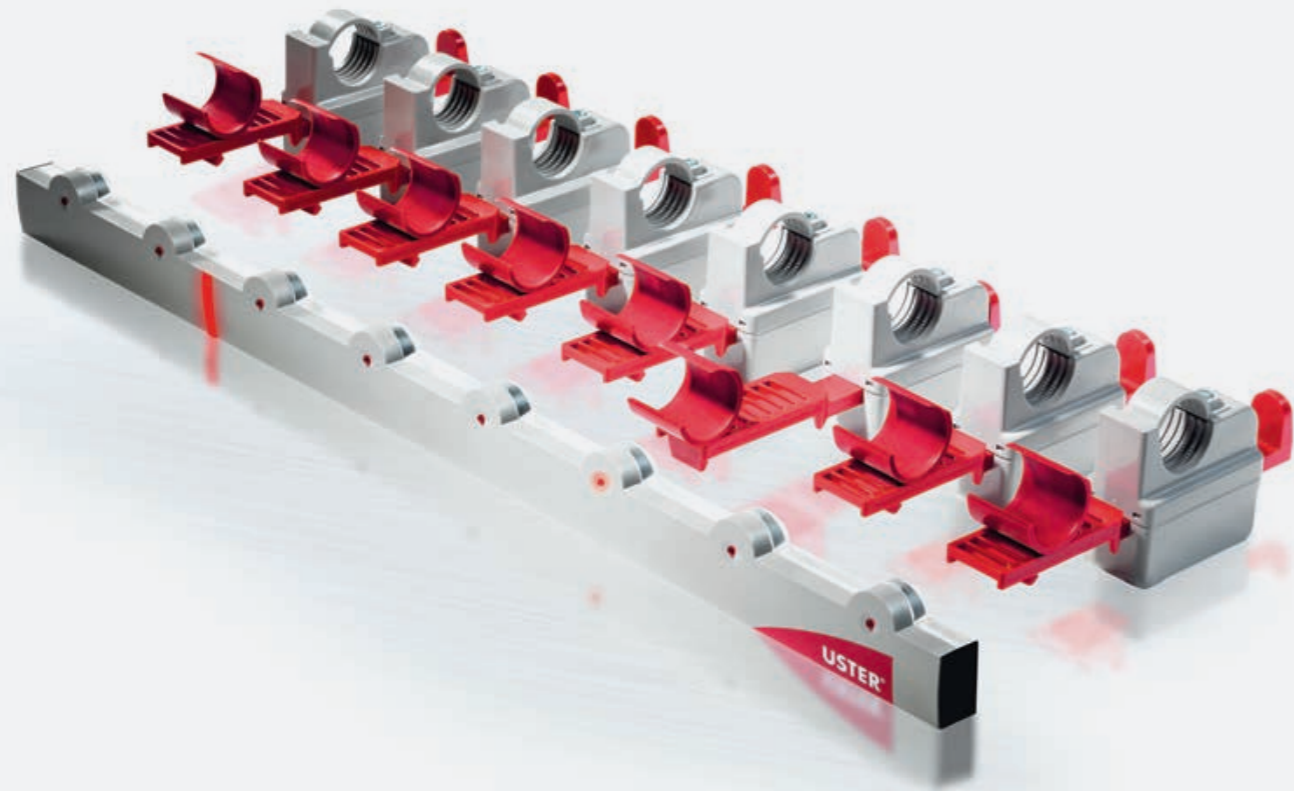
RSO (Ring Spinning Optimization) focuses on the most costly stage in yarn manufacturing: the ring spinning process. For the first time, mills can intelligently correlate ring quality data and winding quality data in a single system, for significant profitability increases.

– In-line assistance with ring spinning and winding alerts by Assistant Q
– Spindle speed optimization for higher performance, while building the best possible cops
– Optimizing ring spinning with cross-process correlation

In-line assistance with ring spinning and winding alerts
Assistant Q now offers even more smart alerts: deviations in ring spinning machines are now detected and alerted immediately. Essential conditions of the ring spinning process, such as relative humidity and temperature, are continuously monitored and alerts triggered by significant changes. Together with winding alerts from USTER® QUANTUM 4.0, complete coverage of quality and productivity is achieved.
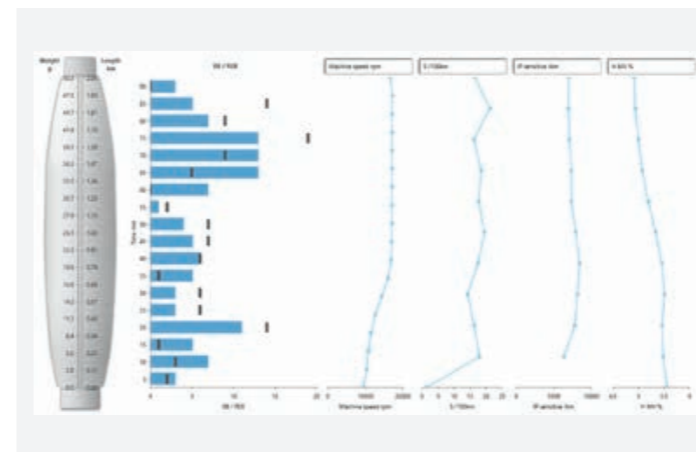
Higher performance while building up best cops
A comprehensive speed curve analysis, and its impact on quality throughout cop build-up, are elements of the new way of optimizing ring spinning performance. Cop build-up quality is the new optimization dimension, enabling spinners to select correct machine settings for higher production yields, while keeping quality at the required levels. Furthermore, comparison of ring frame performances between different machines is now possible.
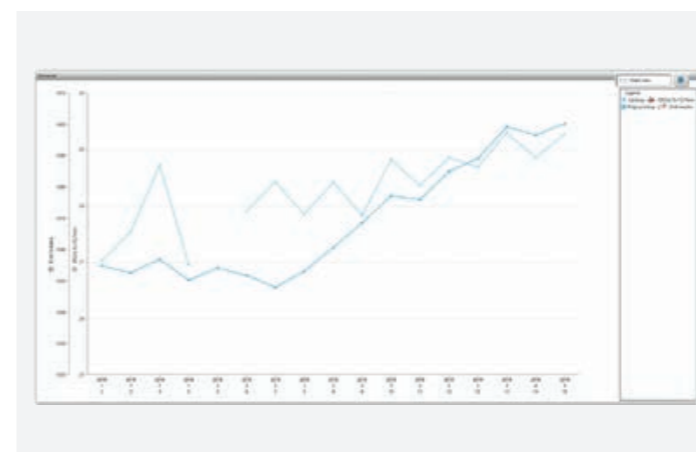
Optimizing the ring spinning process
The unique ability of USTER® QUALITY EXPERT to build correlations between the various process steps is the foundation for optimization. A change in the Short Fiber Content percentile (SFC%) can have a major impact on ring spinning performance. USTER® QUALITY EXPERT connects to laboratory and in-line systems, supporting action at the right place and time.

USTER® *QUALITY EXPERT* comes in two distinct versions – both with no compromises in ultimate analysis, unique Value Modules and fault prevention mechanisms. Exploring vast optimization possibilities with the USTER experience for total transparency is now easier than ever.

– Flexible access possibilities and single data language improve collaboration
– Single data entry and management point
– Highest standards of application expertise and technical excellence, for increased efficiency in mill routines

The same data language throughout the mill

Mill Managers, Quality Managers, Operators and all other mill personnel benefit from USTER® *QUALITY EXPERT* as a Quality Management Platform™ from fiber and yarn through to fabric, enabling a common understanding. New and more flexible system access ensures improved collaboration.

Single data entry and management point

Managing a spinning mill with quality in mind requires quality data systems to be an everyday tool to help get the essential jobs done efficiently. USTER® *QUALITY EXPERT*'s interoperability fulfills this need, as the single data entry and management point in the mill. Connecting instruments in a simplified manner enables the fastest possible data entry.

Application Expertise and Technical Excellence

Operators might be in the lab, for example, or mill managers in a conference room – regardless of locations, the two distinct designs of USTER® *QUALITY EXPERT* give the right people the access they need, any time. USTER's quality data analysis brings application expertise and technical excellence, with Value Modules customized to individual mill needs. It delivers an essential competitive advantage without massive investments.

Value Module		USTER® AFIS PRO 2	USTER® JOSSI VISION SHIELD	USTER® TESTER 6	USTER® TENSO-RAPID 4/5	USTER® TENSO-JET 4/5	USTER® SENTINEL	USTER® QUANTUM 4.0
Alarm center		•	•	•	•	•	•	•
Mill analysis		•	•	•	•	•	•	•
Yarn prognosis*	Grade for Fabric Appearance			with CS/HL/OH/OM				
	Grade for Pilling Resistance			with CS/HL/OH				
	Grade for Weaving Performance			•		•		Foreign matter Vegetable Clearing option & ADVANCED CLASSIFICA-TION
Total Contamination Control			•	•				•
Ring Spinning Optimization				•			Roving Stop option	•

*The Yarn prognosis Value Module differs in the standalone version. Please find the detailed requirements in the Technical Datasheet.

The Quality Management Platform™ allows customized configuration according to individual needs. Starting with the standard Value Modules, each intelligent connection leverages the possibilities to achieve preventive power for process optimization.

Stay connected to quality: Mobile assistance for fastest alerting on individual mobile devices is possible with the USTER® MOBILE ALERTS application.

The standard from fiber to fabric

Uster is the world's leading supplier of total quality solutions from fiber to fabric. Uster standards and precise measurement provide unparalleled advantages for producing best quality at minimum cost.

Think Quality™

Our commitment to state-of-the-art technology ensures the comfort and feel of the finished product – satisfying the demands of a sophisticated market. We help our customers to benefit from our applied knowledge and experience – to think quality, think Uster.

Broad range of products

Uster occupies a unique position in the textile industry. With our broad range of products, we have a wide reach across the textile chain that is unmatched by any other supplier in the market.

Optimal service

Know-how transfer and instant help – we are where our customers are. A total of 215 certified service engineers worldwide grants fast and reliable technical support. Benefit from local know-how transfer in your specific markets and enjoy our service à la carte.

USTER® STATISTICS – the textile industry standards

We set the standards for quality control in the global textile industry. With Uster Statistics, we provide the benchmarks that are the basis for the trading of textile products at assured levels of quality across global markets.

USTERIZED® – brand your products with quality

USTERIZED® stands for 'defined quality assured' within the textile chain. We invite selected customers to join the USTERIZED® Member Program. More information at www.usterized.com.

USTER worldwide

With four technology centers, four regional service centers and 50 representative offices around the world, Uster is always sure of delivering only the best to its customers. Uster – committed to excellence, committed to quality. And that will never change.

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