

**RANDOM TESTING IS THE PAST – TOTAL TESTING IS THE FUTURE!
WITH USTER® ONLINE AND OFF-LINE SOLUTIONS THIS IS NOW A REALITY!**

THE WAY TO THINK QUALITY

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USTER®
Think quality

The 5 elements of Think Quality

Full range of leading products

USTER® offers a full range of leading products to consistently measure quality at all stages of the textile value chain, providing reproducible and accurate data.

Total quality testing

USTER® is the only company to offer “Total Quality Testing” with an unmatched correlation of laboratory and online tests to provide ideal process optimization.

Understanding of customers’ processes and operations

USTER® has a comprehensive understanding of its customers’ processes and operations and can help them improve efficiency, productivity, quality and profitability – as well as providing top-class after-sales support and employee training.

Quality-cost optimization

USTER® facilitates quality and cost optimization along the entire textile supply chain, providing expert consultancy services from raw material to retail. Spinning mills are certified under the USTERIZED® scheme, which recognizes quality production.

Define quality for the textile industry

USTER® defines standards for the whole industry, through USTER® *STATISTICS*, and globally accepted parameters such as USTER® *CLASSIMAT*, USTER® *EVENNESS*, USTER® *HAIRINESS*, USTER® *IMPERFECTIONS* and USTER® *HVI* cotton classification.



**LEADING
RANGE OF
PRODUCTS**

**Wherever textiles are produced,
USTER® products are there –
measuring, checking, reporting,
analyzing.**

Wherever textiles are produced, USTER® products are there – measuring, checking, reporting, analyzing. All in the name of quality, and ultimately, dedicated to assisting our customers in their constant drive for efficiency and profitability. USTER® products are founded on more than 60 years of expertise. We work continually on innovative solutions to make sure we are ahead of the game, by offering to our customers the very latest options for all their quality testing and monitoring requirements. Our products are used in every stage of textile manufacturing from raw fiber to finished fabric, for testing and monitoring – both in process and in the laboratory. Online systems range from USTER® *INTELLIGIN* for use at the earliest stage of raw cotton processing, to the world-leading USTER® *QUANTUM 2* digital yarn clearer.

Laboratory systems such as the legendary USTER® *TESTER* series – the latest of which can pinpoint and assess an amazing range of fiber and yarn characteristics – are what made USTER® famous, and our full range of off-line testing solutions is growing. Spinners worldwide depend on equipment such as the USTER® *HVI 1000*, USTER® *AFIS PRO 2*, while the USTER® *TENSOJET 4* and USTER® *TENSORAPID 4* go way beyond mere strength testing by predicting accurately how yarns will run in downstream processes.

USTER® online and laboratory testing are perfect partners, with test data that correlates precisely, so that results can be readily interpreted and applied to actual manufacturing routines. Total integration with USTER® *STATISTICS* also means the test data can be instantly understood and communicated. Another vital element in the USTER® “Think Quality” concept.



USTER® LABORATORY AND ONLINE SYSTEMS – THE WAY TO THINK QUALITY

Raw material cost and quality are the most dominant factors in yarn manufacturing. USTER® *INTELLIGIN*, USTER® *HVI*, and USTER® *AFIS* allow for the control and classification of fiber quality from the producer to the textile mill. USTER® *INTELLIGIN* allows a gin to preserve quality while optimizing the turnout versus the classing grade. This allows optimal pricing of the cotton bales by utilizing critical fiber quality measurements online at the gin. USTER® *HVI* continues as a link in the processing chain from the gin by providing the classification of cotton in worldwide classing offices and the market value of cotton as well as optimizing the mix laydowns for yarn manufacturing. USTER® *AFIS* continues with total testing in the processing chain by providing critical information for the optimization of the spinning preparation process, as well as the maintenance cycles for those processes.

The chain of efficient tools continues with the USTER® *TESTER 5* to define the setting of cards, drawframes, roving frames and spinning machines to periodically control and measure processes and assuring their best performance. Numerous options for the measurement of fabric strips, slivers and yarns with the USTER® *TENSORAPID 4* are available, and isolated weak places can be analyzed with the USTER® *TENSOJET 4*. A permanent and random sampling remains a must for improved quality. The final stage in spinning mills has to be monitored to check 100% of the yarn before it is shipped to customers. USTER® *QUANTUM 2*, as a supervision system for this final process, allows the user, for the first time ever, to separate all the outlier bobbins of a batch. Detailed investigations of the ejected bobbins in the laboratory make this process unique – because only USTER® systems users can identify the source of faults along the entire spinning process based on standardized parameters. This control circle increases the efficiency and lowers the manufacturing costs. With all these measures the mills can expect the best output for the high investments in spinning machinery.

Yarn traders, weavers, knitters and retailers expect yarns which survive the process of fabric manufacturing and which guarantee the final product quality. For this reason Uster Technologies offers two instruments which are particularly useful to test the incoming yarn in weaving and knitting plants: the USTER® *CLASSIMAT QUANTUM* and the USTER® *TENSOJET 4*. Also key players in the textile industry use the services offered by Uster Technologies such as the USTER® *STATISTICS* and USTERIZED® to define their yarn profile and to classify their suppliers. Finishing plants want to avoid yarns which lead to color variations due to immature raw material, high hairiness variations or to other quality deteriorations such as the appearance of colored foreign fibers or polypropylene fibers after bleaching. Retailers have to manage an enormous spectrum of suppliers. This is only realistic if the retailers have a sufficient knowledge of raw material and yarn quality. Uster Technologies provides tools and services to identify quality problems with suppliers which can have disastrous consequences for retailers – and to support suppliers with yarn quality below the requirements to be brought to a higher quality level.

CUSTOMER VALUES

USTER® HVI 1000

USTER® AFIS PRO 2

USTER® HVI 1000

The USTER® HVI 1000 is the fiber classification system. With 1,850 installations globally, major government/private classing organizations and mills depend on it to set standards and classify cotton. With its industry-leading, full range of measurement capabilities, the USTER® HVI 1000 gives you the confidence to optimize and manage your raw-material cost and quality for improved profitability. Raw material is the highest cost in manufacturing – control it with USTER® HVI 1000.



USTER® AFIS PRO 2

The USTER® AFIS PRO 2 is the fiber process control system. Recognition by ITMF, ASTM International, and 850 installations worldwide are proof. A unique single fiber/event measuring principle and full range of measured properties make it indispensable for optimizing settings at carding, drawing, and combing resulting in improved quality, raw-material control, and efficiencies. Quality control cannot begin without process control – get control with USTER® AFIS PRO 2.



CUSTOMER VALUES

USTER® TESTER 5

USTER® TENSOJET 4

USTER® TENSORAPID 4

USTER® TESTER 5

With the USTER® TESTER 5-S800 early detection of quality problems is possible. The new Fancy Yarn Profile measures slub yarns to make it reproducible. The testing speed at 800 m/min allows high throughput of samples. An array of advanced sensors measure key yarn quality parameters like hairiness, diameter variations, trash, dust and foreign matter. Combining USTER® TESTER with USTER® QUANTUM and USTER® STATISTICS, "Total Testing" becomes reality.



USTER® TENSOJET 4

The USTER® TENSOJET 4 is the only WEAVABILITY® system to predict processing efficiency. With its test capacity even isolated weak places can be detected. The test speed of 400 m/min achieves these results by applying practical loads on the yarn similar as found under production conditions in weaving and knitting. For specialities and filament yarns the USTER® TENSORAPID 4 allows full freedom for its users – also by help of its special filament software.



CUSTOMER VALUES

USTER® QUANTUM 2

USTER® CLASSIMAT QUANTUM

USTER® QUANTUM 2

USTER® QUANTUM 2 is the tool to realize "LAB Online" and is the key to "Total Testing" – proven by over 1.5 million installed clearers. This reliable supervision system monitors 100% of the production, separates critical outlier bobbins and quantifies them for the entire manufacturing on a continuous basis. With analysis of these ejected bobbins, you can identify the source of faults along the entire spinning process. This continued improvement process results in an optimization of production efficiency and a reduction of the total number of exceptions.



USTER® CLASSIMAT QUANTUM

The USTER® CLASSIMAT QUANTUM measures the frequency of seldom occurring defects including thick/thin places and foreign fibers. This ensures that the entire production conforms to end customers' specifications for seldom occurring defects, even if there are different generations of yarn clearers. A comparison to the built-in USTER® STATISTICS helps to benchmark to international standards and have a continuous improvement process. Further, long-term trends help to compare raw material quality or spinning process settings over weeks, months or years.



CUSTOMER VALUES

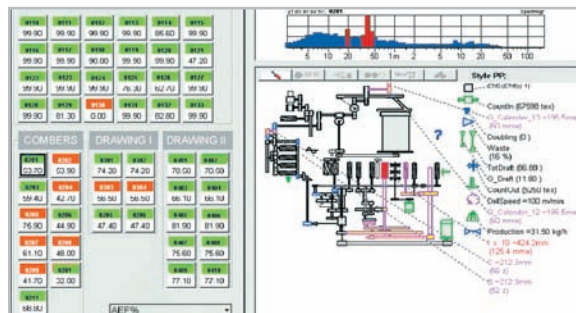
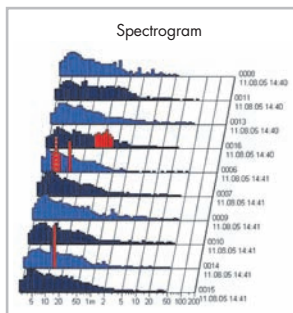
USTER® EXPERT SYSTEMS

USTER® EXPERT SYSTEMS

With USTER® *SLIVER EXPERT* and USTER® *RING EXPERT* the spinning mill achieves 100% quality testing of sliver and yarn in the spinning preparation and in ring spinning.

With 100% quality testing the mill heavily reduces the time and effort needed by supervisors for the detection of quality deviations and for the investigation on the problem sources. The combination of the online data with the consolidated laboratory data in USTER® *LAB EXPERT* gives the mill the complete quality overview.

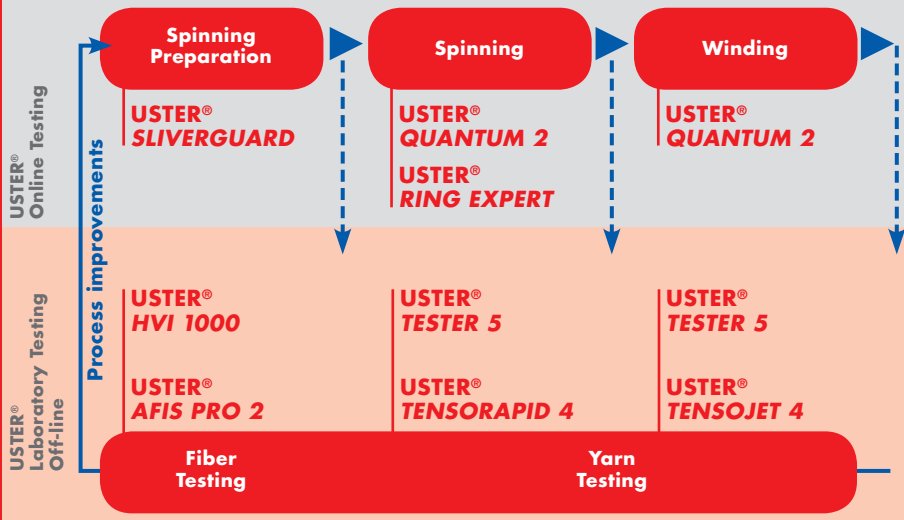
USTER® *SLIVERGUARD* provides robust and reliable autolevelling for cards and draw frames, ensuring the maximum evenness of the sliver.



TOTAL TESTING

Closed-loop quality system

Correlation of the quality characteristics between online and off-line testing systems



USTER® VALUES

- 100% of the yarn is monitored online and outliers are ejected.
- Outliers are analyzed in the laboratory.
- Systematic advices for repair crew.
- Repair crew reports results back to the laboratory.

Online testing is becoming more and more important in textile processes, and USTER® continues to play a leading role in advancing progress in this area. Textile laboratory on the other hand remains an essential element to analyze raw material and yarns. Uniquely, USTER® can offer its customers the best of both worlds: effective, comprehensive and integrated “Total Testing”.

What makes “Total Testing” really special is the correlation of the data produced by USTER® laboratory and online testing systems. For spinners, this means USTER® can provide a comprehensive closed-loop quality control in the mill. Imagine the possibilities: Bobbins which are ejected by the winding machine due to quality problems can be analyzed in the laboratory, and the repair crew can permanently improve the production positions which produce outliers. The monitoring of quality characteristics on the machine is also called “LAB Online”. Since USTER® applies the same sensor principles on the machine and in the laboratory, there is a high correlation between the findings online and off-line. This is a unique feature provided by USTER®.

The “Total Quality” package means just that. Systematic analysis, correction of faults, process optimization. All managed and expressed in industry-standard parameters, and directly comparable with USTER® *STATISTICS*.

CUSTOMER UNDER- STANDING



CUSTOMER WITH POOR QUALITY MANAGEMENT

- Quality management is a function of know-how, processes and tools
- **Poor quality management** shows in:
 - Limited know-how of available quality strategies/procedures.
 - Application of only very few quality procedures; often also the wrong ones.
 - Incomplete tool set (measurement instruments, quality data, etc.).
- **Unstable yarn quality**

We help to optimize
efficiency, productivity, quality, traceability and profitability

USTER® THINK QUALITY APPROACH

- Extension of knowledge about available quality procedures.
- Identification and elimination of inappropriate procedures.
- Introduction and support of additional procedures.
- Suggestions for appropriate products embedded in these procedures.

CUSTOMER WITH SUPERIOR QUALITY MANAGEMENT

- **Superior quality management** shows in:
 - Extensive know-how of available quality strategies/procedures.
 - Application of a large number of quality procedures as part of the operational processes.
 - Appropriate tool set applied.
- **Reliable, reproducible, matching yarn quality**



Every textile producer is different, and every USTER® customer is special. Each with their own products and processes, with individual priorities to be met and defects to be solved. The USTER® approach to customers is based on developing an in-depth relationship – so we can understand exactly how we can help them achieve their goals. There are many factors which need to be considered: geographic location, economic conditions, market segment, business size and scope, raw materials used, production technology installed. USTER® is committed to a comprehensive understanding of all these aspects, as we strive to help our customers achieve precisely the right quality levels for their products. Our background of 60 years' know-how in textile testing means we are well equipped to analyze those needs, based on expertise and experts throughout the textile chain.

Then, of course, we have the technology to ensure that our customers' quality-control needs are met. Our measuring and monitoring systems are the best – and our unrivalled expertise means we can ensure those systems are used to their best advantage.

That's what the "Think Quality" concept means. Helping textile producers to improve their quality-control procedures, with the ultimate aim of turning quality into profitability. We are ready with customized solutions, integrating testing and monitoring options within the broader picture, taking into account all the factors which make each customer and each quality management project unique.

TEXTILE SUPPLY CHAIN



ISSUES

- 70% of quality problems in a finished fabric can be traced back to the yarn.
- Yarn issues can impact the efficiency of downstream processes.

USTER® VALUES

With USTER® *STATISTICS* and USTER® systems

- we are able to help defining the quality profile for yarns,
- we certify USTERIZED® spinning mills, capable of ensuring constant quality production,
- we provide consulting and support from producers through to retailers and from retailers back to the producers.

When a retailer finds a defect in his endproduct, the implications can rebound back up the entire textile manufacturing chain. That means trouble for the fabric supplier, as well as for the yarn producer, and even for the supplier of the original raw material. USTER® is dedicated to preventing that chain reaction, by tackling its source. Prevention is better than cure, and effective quality control is the only way to avoid the problems that can lead to “seconds”, rejected deliveries, price penalties and damaged reputations. What’s needed is all-embracing knowledge – of the whole textile processing sequence, from raw fiber to finished fabric or garment. And USTER® has that knowledge in abundance. Our know-how has been built up and refined over 60 years.

We have the expertise, we have the equipment, and we are unique in having a background of success along the entire textile chain. USTER® has the reputation, and the track record, that can only come from practical experience of problem-solving and an objective understanding of what quality really means for everybody – from raw material to retail. Our consultancy work involves studying and optimizing quality requirements, and enhancing quality performance for a wide range of customers. We know, for example, that a high proportion of fabric faults actually originate in the yarn. And we know how to prevent those faults. We are close to the industry – our USTERIZED® program, for example, means we are in partnership with a pool of quality-certified spinners. While USTER® *STATISTICS* set the benchmarks for everyone, and USTER® systems provide the framework.

Everything that’s needed to draw up a meaningful quality profile for fibers and yarns, part of a closed loop that can raise quality and reduce costs at every step along the textile chain. That’s what we mean by “Think Quality”.

QUALITY STANDARDS

The USTER® name is a watchword for textile quality, setting and maintaining the standards by which textile products are measured, assessed, bought and sold. So many of the familiar terms used today throughout the textile industry worldwide have their origins at USTER®. Examples such as USTER® *CLASSIMAT*, USTER® *EVENNESS*, USTER® *HAIRINESS*, USTER® *IMPERFECTIONS* and USTER® *HVI* cotton classification are all instantly recognizable.

USTER® quality parameters are applied to all aspects of testing. From raw cotton classing to yarn fault analysis – measuring and analyzing key factors such as mass variation, hairiness, trash and dust content, foreign matter contamination, weak places – and right up to process control, yarn profiling and weavability predictions.

And USTER® makes a real difference, one that can be measured in profits for our customers. It's already clear that textiles tested on USTER® equipment can command better prices in the marketplace. That value is enhanced still further by applying the USTER® *STATISTICS* benchmarks, by which fibers, slivers, rovings and yarns are classified worldwide.



**THINK
QUALITY =
THINK USTER®**

Quality – for us it's a way of life, expressed outwardly in our "Think Quality" slogan. For our customers along the entire textile chain, "Think Quality" is both an invitation and an opportunity.

"Think Quality" is our way of reaching out to our industry partners, supporting them in the optimization of their manufacturing operations, so that their products reach consistently the requested levels of quality – for higher value and greater profitability to them. Our testing and quality control products are unbeatable, covering both laboratory and online applications. "Think Quality" is a truly unique approach, made even more attractive by the integration of the famed USTER® STATISTICS, benchmarking data by which many textile quality parameters are compared.

We have a lot to offer: know-how, expertise, equipment and customer support – all world class, all recognized for USTER®'s legendary status in the industry. For over 60 years, we have been THE premier quality reference point for textile producers, and that proud heritage is upheld today as strongly as ever.

THE WAY TO THINK QUALITY
Effective quality optimization, both online and off-line

Ever since the first edition appeared in 1957, USTER® STATISTICS have been recognized as the authoritative and objective basis for yarn trading.

The 50th anniversary of USTER® STATISTICS, in 2007, is certainly a golden milestone for the industry. USTER® also offers its customers the chance to maximize the benefits of their partnership by linking their products directly to the recognized quality brand, under the USTERIZED® program.

This is the ultimate quality seal, a highly prized certification of quality, available only to selected producers who can demonstrate top-class quality management standards. Benefits include USTERIZED® branding rights, a dedicated Web site and exclusive access to USTER® technical information. USTER® quality standards, USTER® STATISTICS and the USTERIZED® brand – the ultimate expression of the "Think Quality" concept.

