Innovation with tradition

Uster Technologies – 60 years of experience and success. This proud heritage is the foundation for the company’s position as the leading high-technology manufacturer of quality measurement and certification instruments for the textile industry. It has also made the famed USTER® trademark uniquely known and respected throughout the industry worldwide.

USTER® testing and monitoring instruments, systems and services help to optimize quality and cost through each stage of textile production, from raw material – natural fiber or synthetic filament – to finished fabric.

Continuous, long-term investment in research and development is vital to the success of USTER, ensuring that the measuring and monitoring systems available to customers are robust, accurate and reliable – essential requirements for optimizing quality in textile products. Control and monitoring systems from USTER® use the latest intelligent sensor technologies, for guaranteed reliability in long-term use, with problem-free conversion and updating.

USTER® specialists are acknowledged experts in the field, providing an unrivaled fund of know-how, ability and ideas. They support the company’s product philosophy and maintain the quality culture which makes USTER® the first choice for manufacturers of quality textile products worldwide.

Today, the USTER® name is synonymous with innovative solutions for “Total Testing” and with worldwide standards in quality control and monitoring. With USTER® STATISTICS, the Group provides authoritative quality benchmarks that are the basis for the trading of textile products across global markets. Their objective reference values allow classification of cotton, rovings, slivers and yarns against worldwide production. USTER® STATISTICS are based on clear facts and market data, allowing direct and meaningful comparisons of quality against real standards in the textile industry.

The Uster Group is headquartered in Uster, Switzerland, and operates technology centers in the US, Switzerland and China. Five regional service centers and 50 representative offices, ensuring that USTER is right on the spot, wherever its customers are in the world.

Total Testing

In today’s challenging textile markets, companies can no longer rely on just a few basic skills. To achieve sustainable results by generating added value for their customers, they must excel in all areas of their operation.

The essential need is to strike the right balance between minimizing costs and consistently achieving the required quality. This demands effective and efficient control of yarn quality.

USTER has developed a unique approach to this challenge through the combination of laboratory testing, process monitoring and know-how. This approach is called ‘Total Testing’. It helps textile companies to transform their business by turning uncertain results to predictable profits – thanks to a shift from random sampling to continuous testing and the change from varying to consistent and subjective to objective quality control throughout the entire textile value chain from fiber to fabric.
Accurate verification of the raw material is the first step in quality management – which is absolutely essential in a modern spinning mill in order to remain competitive in today’s markets. The technology of the USTER® HVI 1000 is the standard used by the international cotton trade today, ensuring fiber quality agreements are met. It is the instrument of choice for all the leading cotton classing organizations worldwide. The USTER® AFIS PRO 2 provides the spinning mills with standard measurements for optimizing their processes based on the raw material they buy.
The USTER® HVI 1000 M1000 is designed to meet the high-throughput requirements of cotton classing organizations and large spinning mills worldwide where time is critical for determining market quality. It measures all the important quality parameters currently used in the cotton trade: micronaire, fiber length, length uniformity, strength, color, and trash. Additional information on short fibers, elongation cotton maturity and sample moisture content are also provided. These parameters are measured with the highest degree of accuracy and precision, meeting contract specifications.

The USTER® HVI 1000 M700 is designed to meet the needs of spinning mills that need to know all the important quality parameters used in the cotton trade but do not need the high throughput to get the job done. Using proper sample management procedures, the USTER® HVI 1000 M700 provides critical quality information at a higher throughput than previous generation HVI® systems.
The USTER® AFIS PRO 2 is the standard system for nep measurement (ASTM), recognized worldwide, and used from cotton ginning to yarn manufacturing. It measures various fiber characteristics such as fiber length, maturity, trash and nep content. The short fiber content, for example, is essential for assessing the carding and combing efficiency of a spinning mill. The potential saving of 2% in comber noil removal means better raw material utilization and greater profitability. Second-quality fabric showing an irregular or ‘neppy’ surface is often caused by a high nep content in the yarn, resulting from a high nep content in the sliver or roving. With the USTER® AFIS PRO 2, you can analyze the entire spinning process – opening, cleaning, carding, drawing and roving – with unrivaled precision.

Extensive measurements – multiple benefits
If you want to control your spinning process and with it your yarn and fabric quality, you should consider what USTER® AFIS PRO 2 has to offer. Consistent quality monitoring to determine the effectiveness of carding and combing will make off-quality yarn a thing of the past – and save you money on processing.

The true art of ginning is knowing when and how to use a technical advantage. USTER® INTELLIGIN provides the cotton ginner with critical data on color, trash and moisture. Because not all cottons are the same, the ginning process requires constant monitoring based on incoming harvest qualities, fiber characteristics, picking methods and growing conditions. USTER® INTELLIGIN provides total quality monitoring of the ginning process – resulting in the highest quality output and customer value. This monitoring system gives gins with hands-on management the necessary tools for processing quality cotton. Gainers can use real-time information to make decisions whether to increase cleaning or maximize yield/value.
The cost-effective alternative

**USTER® LVI** Low Volume Instruments are a cost-effective alternative for customers who want to test only one specific cotton quality parameter with USTER® precision.

**USTER® MN100 NEP TESTER**
The USTER® MN100 NEP TESTER measures neps and critical nep size. It uses the same measurement principle as the AFIS®. Neps can seriously impair yarn quality. So, nep count and size data helps with maintenance and machine settings.

**USTER® LVI 760 COLOR/TRASH METER**
The USTER® LVI 760 COLOR/TRASH METER measures the color and trash levels of cotton. It uses USTER® HVI sensor technology. Color differences can show up later in dyed fabric. And trash variations can affect spinning efficiencies and cause yarn and fabric defects. Monitoring these properties at purchasing and processing is the way to ensure quality and control costs.

**USTER® LVI 730 FIBROGRAPH**
The USTER® LVI 730 FIBROGRAPH measures fiber length, length uniformity and short fiber. It uses the same measuring principle as the HVI®. Fiber length is a major factor in yarn evenness, strength and spinnability.

**USTER® LVI 380 FIBERGLOW**
The USTER® LVI 380 FIBERGLOW measures the intensity of fluorescence of cotton fiber at the ultraviolet wavelength. Measuring color alone is not enough – since fluorescence is a major cause of barré faults in grey and dyed fabric.

**USTER® LVI 775 MICRONAIRE**
The USTER® LVI 775 MICRONAIRE measures cotton fiber micronaire. It uses the same measurement principle as the HVI®. Micronaire is important in blending of cotton bales at the laydown. Checking it helps to prevent yarn and dyeing defects.
Progressive quality control of slivers, rovings and yarns in the textile laboratory guarantees optimal spinning machine settings and required quality. USTER offers at the same time laboratory results of yarn quality data which are used to set standards recognized all over the world.
Brilliant testing – superior analysis

Unique, patented sensor technology with sensational 800 m/min test speed makes the USTER® TESTER 5-S800, the absolute original, an indispensable yarn testing system – also for you.

**USTER® TESTER 5-S800**
Mass and yarn count variations, thin places, thick places and neps can influence the quality and the sales price of the yarn enormously. With the USTER® TESTER 5-S800, these quality parameters can be determined with an incredible test speed of 800 m/min. The optoelectronic sensors of the USTER® TESTER 5-S800 give additional quality-relevant information. One innovation, exclusive to USTER®, is having foreign fiber measurements integrated into the USTER® TESTER 5-S800. With the new Fancy Yarn Profile feature, the S800 offers all the benefits of precise quality control. Only USTER’s unique sensor technology guarantees a hitherto unobtainable degree of precision – and the measuring accuracy which is the benchmark for the textile industry.

**USTER® TESTER 5-S400**
The USTER® TESTER 5-S400 measures with a high precision all relevant quality parameters for describing the mass evenness and the imperfections. Today, foreign fibers are important issues in spinning mills – because too many make it impossible to sell the yarn. In the S400, the integrated FM sensor detects and classifies foreign-fiber density, in one step, along with all other important quality parameters. With the features of OH Sensor and Fancy Yarn Profile, the S400 offers all the benefits of precise quality control. The USTER® TESTER 5-S400 guarantees reproducible quality data and more efficiency in the production.

**USTER® FM SENSOR**
Foreign fibers in knitted or woven fabrics are undesirable these days. The USTER® FM SENSOR provides an indication as early as in the laboratory of whether there are foreign fibers in the yarn.

**USTER® OH SENSOR**
The USTER® OH SENSOR is now standard equipment for the measurement of yarn hairiness in over 80% of all spinning mills. Only the USTER® OH SENSOR offers reproducible and comparable hairiness measurement – USTER® HAIRINESS, the unique standard that is accepted all over the world.

**USTER® OI SENSOR**
Reproducible detection of vegetable matter in yarns – the only sure route to the quality your customers expect now and in the future. For the first time, you can test with the USTER® OI SENSOR trash and dust particles in the yarn at the same time as evenness.

**USTER® OM SENSOR**
The simultaneous measurement of diameter variation, shape and density completes the controlling of yarn quality. Information gained through optoelectronic measuring of the two-dimensional yarn diameter.
Quality classification – the full picture
laboratory and in-process systems from USTER work together to cover all the quality control options. The USTER CLASSIMAT 5 checks cleaned or uncleaned yarn, reporting on defects and foreign-matter content based on levels and limits set by the user. It classifies yarn according to international standards.

Predictable WEAVABILITY® – optimized productivity
The USTER® WEAVABILITY® of yarn can be predicted by determining strength and elongation outliers in staple fiber yarns. Optimal quality means the necessary specifications are adhered to exactly.

USTER® CLASSIMAT 5
USTER® CLASSIMAT parameters and the associated USTER® STATISTICS have played a vital role in quality management since 1968. The classification of yarn defects is used extensively as an indicator of fabric quality, verification of yarn quality, control spinning processes and the key to optimizing yarn clearing at the weaving stage. While thick and thin places classification remains fundamental, high quality demands necessitates coverage of other critical quality parameters such as foreign-matter. USTER® CLASSIMAT 5 delivers all the traditional classification standards, while broadening its focus on measuring outliers for all quality parameters such as periodic faults, evenness, imperfections and hairiness. Especially important are its powerful foreign-matter tools for assessing colored foreign fibers, vegetable matter and for the first time – polypropylene content in combination with the release of the USTER® STATISTICS for key parameters including outliers, the USTER® CLASSIMAT 5 is a powerful tool to achieve and assure consistent quality!

USTER® TENSOJET 4
USTER® TENSOJET 4 – a real innovation in tensile strength testing. New standards are set by this predictor of USTER® WEAVABILITY®. With a testing speed of 400 m/min, the system can carry out fully automatic measurements with up to 30 000 tests per hour. This massive testing capacity allows entire bobbins to be analyzed for the first time and the degree of further processing efficiency to be predicted. Of course, the USTER® TENSOJET 4 also shows the traditional strength and elongation values which conform to the standards of international world trade.

USTER® TENSOGRAPH 4
Traditional tensile tests require a whole series of testing possibilities, variable test speeds and measuring lengths. The USTER® TENSOGRAPH 4 fulfills perfectly these requirements and is ideal for testing of staple fibers, filaments and technical yarns. All relevant quality parameters are covered and the means quality control at a glance. In recognition of the special requirements of the filament industry, USTER has introduced a purpose-designed software package for the USTER® TENSOGRAPH 4, which allows the whole quality control.

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Complementary testing for additional parameters
The USTER® ZWEIGLE range offers extended testing capabilities covering extra parameters such as twist, friction and count – the perfect complement to the essential world-class quality control provided by USTER® instruments in areas such as evenness and strength measurement.

**USTER® ZWEIGLE HL400**
The USTER® ZWEIGLE HL400 measures the actual hairiness length, assessing the level and number of protruding fibers in the yarn to provide the industry-standard ‘S3’ hairiness value, operating at 400 m/min.

**USTER® ZWEIGLE TWIST TESTER 5**
The USTER® ZWEIGLE TWIST TESTER 5 features a specially-developed tensioning system, essential for correct measurement of yarn twist and a special version for tire cord.

**USTER® ZWEIGLE YARN INSPECTION WINDER**
The USTER® ZWEIGLE YARN INSPECTION WINDER provides a simple overview of yarn quality data, highlighting parameters such as thick and thin places, neps and hairiness, along with periodic faults. This data helps quality control staff make an extra ‘human’ check on the standard values obtained from test instruments.
**USTER® AUTOSORTER 5**
The count determination of staple fiber slivers, rovings and yarns is the core of the entire textile spinning process. The USTER® AUTOSORTER 5 determines the average count, variation of the count of preproducts and yarns and calculates the confidence limits – thus greatly reducing the daily sorting work. With flexible testing programs and the variability in the counting systems, there are no limits to its use.

**USTER® ZWEIGLE YARN REEL / USTER® UNWINDING DEVICE / USTER® ZWEIGLE ROVING REEL**
The USTER® ZWEIGLE YARN REEL and the USTER® UNWINDING DEVICE are widely recognized as standard equipment for precise electronic length measurement. Both types are designed for automatic operation, with an optional semiautomatic model of the USTER® ZWEIGLE ROVING REEL.
The two most important parameters for filament yarn quality are mass variation and yarn strength/elongation. Accurate, precise testing is provided by USTER’s tailored package for filament: the USTER® TESTER 5-C800 evenness tester and the USTER® TENSORAPID 4-C tensile strength tester. Results from both these instruments can be combined and integrated to offer significant advantages in the monitoring of filament yarn quality at the production stage, as well as assessing how the yarns will perform in subsequent manufacturing processes.
Specialized solutions for filament yarn
Accurate testing of filament yarn is a complex and specialized process. Mass variation, as well as strength and elongation, are the critical quality parameters. USTER® TESTER 5-C800 and USTER® TENSORAPID 4-C are the indispensable testing instruments, tailor-made for filament yarn production.

USTER® TESTER 5-C800
The USTER® TESTER 5-C800 is an indispensable instrument for quality control of filament yarns and has long been a synonym for the highest precision standards. Even the smallest fluctuation in evenness is very important in filament yarns, and can make the difference between profitable and non-profitable production. The spectrogram of the capacitive measurement makes every periodic fault in the spinning machine and the spinning process immediately visible. Thanks to the mechanical twisting unit, reproducibility with test speeds of up to 800 m/min is ensured.

USTER® TENSORAPID 4-C
USTER® TENSORAPID 4-C measures the key quality parameters of force, elongation and tenacity, using software specially designed for filament yarns. The system can test a wide range of counts in all main filament types, including polyester, polyamide, polypropylene, viscose and aramid. The software allows users to select a number of key options for filament production, providing data on filament break force, various modulus values, yield points and draw ratios for stress and strain, matching these to reference values for strength and elongation.
A 100% quality control with simultaneous, exactly definable fault elimination enhances yarn values in today’s global textile markets. The USTER® QUANTUM has this characteristic and guarantees optimal cost-effectiveness and virtually fault-free yarn after winding or OE spinning.
A new world of quality
The USTER® QUANTUM 3 uses unique Smart Clearing Technology™ to bring a new world of quality to yarn spinners, managing machine set-up and giving users vital options about both productivity and removal of unwanted contamination. USTER® QUANTUM 3 is designed for automatic winding machines (OE Spinning continues to be served by the well-known USTER® QUANTUM 2). The USTER® SILVERGUARD works on the machine – drawframe, card or comber – to provide precise monitoring of sliver quality.

USTER® QUANTUM 3 – Winding
The USTER® QUANTUM 3 is the next-generation yarn quality assurance system for automatic winders. It simplifies the entire machine set-up, rapidly analyzing each yarn and recommending ideal tolerances for the required quality level. Using a range of comprehensive sensor technologies, USTER® QUANTUM 3 clearing detect thin and thick places, foreign matter with color differentiation and polypropylene, delivering the lowest level of contamination with minimal downtime. For the first time, powerful electronics allow the full yarn body to be displayed and used as the basis for the clearer settings.

USTER® QUANTUM 2 – OE Spinning
It is important in OE Spinning to achieve maximum productivity with top quality. With digital technology and advanced capacitive or optical sensors, all faults are eliminated precisely according to your settings, with minimum stoppages. The proven USTER® QUANTUM 2 Foreign Fiber option comes with the unique Vegetable Filter option to filter out vegetable matter and seed coats that disappear after bleaching. This reduces the number of foreign fiber stops on the OE spinning machine, while maintaining the required quality. USTER® QUANTUM 2 LAB Online comprising USTER® EXPERT central data management system, USTER® CAY optimization software, true hairiness measurement and USTER® CLASSIMAT Online offer unique capabilities to implement total testing and significantly enhance the value of your yarns.

USTER® SILVERGUARD
The USTER® SILVERGUARD is an automatic online system of modular design for quality control in sliver production. The system monitors sliver count variations, unevenness periodical faults and thick places directly at cards, combers and drawframes. As soon as the defined limits are exceeded, an alarm or a machine stop is triggered.
EXPERT SYSTEMS

World-class USTER® testing and monitoring technology provides all the essential data for optimizing both quality and productivity in textile mills. To guarantee maximum benefit, mill managers can rely on USTER® EXPERT SYSTEMS to interpret that data and set out the options, clearly and quickly. Smart technology within USTER® EXPERT SYSTEMS zooms in on the essentials, so spinners can specify quality levels and set up machine processes to match their requirements, precisely – and as economically as possible.
State-of-the-art technology and innovative system architecture – providing clear choices for mill managers

World-class USTER® testing and monitoring technology equips mills with all the data they need for optimized quality and productivity. To exploit the maximum potential of this valuable information, USTER® EXPERT SYSTEMS convert complex data into practical options for the mill manager, automatically, clearly and quickly. Smart technology within USTER® EXPERT SYSTEMS zooms in on the essentials, so spinners can specify quality levels and set up machine processes to match their requirements, precisely – and as economically as possible.

USTER® QUANTUM EXPERT 3

With USTER® QUANTUM EXPERT 3, you don’t have to be an expert. This unique software package does the whole job for you – giving you total control of your winding room and managing yarn clearer settings to create the optimum balance between ideal quality and highest productivity. USTER® QUANTUM EXPERT 3 automatically collates every piece of data from the clearers, filtering it into a series of dynamic reports which focus on every winding parameter – helping to analyzing trends, locating problems and activating improvements. Key personnel, from top management to quality teams, to production heads and maintenance crews, receive targeted and totally comprehensive information whenever they need it, enabling rapid, proactive responses. USTER® QUANTUM EXPERT 3 delivers real practical benefits – to transform vital data into effective actions for enhanced profitability.

USTER® LAB EXPERT

USTER® LAB EXPERT – automatically collects test results from current and many previous generation USTER® fiber and yarn laboratory testing instruments. Reporting formats can be customized to suit individual needs and in addition data can be exported from the EXPERT server in defined formats to external locations. The system can be extremely useful to combine multiple parameters on the same report to identify patterns or exceptions. Long-term trends of different parameters help to identify gaps in process or raw material areas.

USTER® SILVER EXPERT

A quality exception in spinning preparation can lead to several hundred metres of second quality yarn. But with the online monitoring of USTER® SILVERGUARD and the powerful analytical capabilities of USTER® SILVER EXPERT this can now be prevented. Quality and production data from the USTER® SILVERGUARD and some previous models, installed on the drawframes, cards and combers, is continuously collected and evaluated according to user programmable limits. The USTER® SILVER EXPERT includes spectrogram analysis software that automatically evaluates spectrogram data and guides the user towards potential problem areas.
USTER – not only a synonym for innovative products, but also a supplier of comprehensive services. These cover our entire textile know-how, which is at the disposal of our customers, helping them to become more efficient in applying their processes and making their final products superior.
The language of quality – defining global standards

USTER® STATISTICS support the entire textile industry related to quality management. They provide a common language for yarn producers and buyers, taking the guesswork out of yarn trading and giving them the confidence that a yarn will meet their needs exactly. For yarn producers, the USTER® STATISTICS are a true indicator of standards in their mill processes and yarn quality, measured against authoritative global standards.

Optimal service – customer satisfaction

With 5 regional and more than 120 local service centers – we are where our customers are. A total of 200 dedicated USTER® certified service engineers worldwide provide fast and reliable technical support. Benefit from local know-how transfer in your specific markets and enjoy our services.
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 200 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 three technology centers, five 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.