



## **USTER® TENSOJET 5**

The WEAVABILITY™ system

## **USTER® TENSORAPID 5**

The strength measurement system

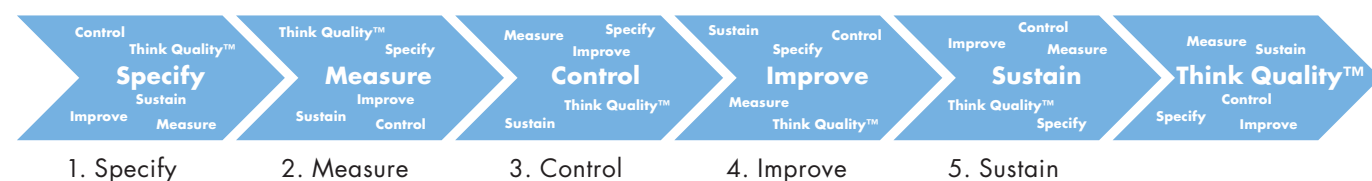
## What is Think Quality™?

It is 'managing your spinning mill with quality in mind'.

In today's competitive markets, spinning mills need to deliver yarn of the right quality every time. The yarn must meet the expectations of customers, be free of unacceptable defects, and be produced with optimum use of resources. And all this has to be achieved in an extremely challenging business environment!

### Take control of your quality – Think Quality™

USTER's unique Think Quality™ approach is the way to 'manage your spinning mill with quality in mind'. It combines the many aspects of our products and services to ensure the right quality is produced every time. Think Quality™ the USTER way means helping textile producers to improve their control of quality, with the ultimate aim of turning quality into profitability. To achieve predictable profits for long-term business sustainability.



The principles are simple. Priorities include: a clear specification; the right measuring systems; a 'fast response' control of production; a good understanding of improvement options; and optimization of processes for business sustainability.

### USTER® TENSORAPID 5 and USTER® TENSOJET 5 – the vital link to Think Quality™

The USTER® TENSORAPID 5 and USTER® TENSOJET 5 are acknowledged as the tensile testing standards in the industry. They encompass many of the principles of USTER's unique Think Quality™ approach.

Together with the USTER® TESTER 6 – The Total Testing Center™ – the mill benefits from intelligent alarms. Smart reports integrate results from both evenness and tensile tests, providing an overview of the quality being produced. This allows fast decision-making by the mill, to minimize complaints.

## Essential yarn properties for downstream processes

A basic requirement for any yarn is that it can stand up to downstream processes without causing stoppages or affecting production efficiency. No matter what the demands on the fabric in the end-use, it is during high-speed weaving and knitting that yarn comes under the greatest stress and strain forces. So the strength and elongation requirements for a yarn depend mainly on end-use and downstream processes.

Minimum strength and elongation properties are needed to prevent a yarn breaking or being damaged in downstream operations, as well as avoiding damage to the end-products in weaving. Warp yarns in particular are placed under tremendous stress, so high tensile-strength values are important. In both weft and warp knitting, the forces are relatively lower, but yarns still need good elongation properties. Sewing thread yarns require both high strength and extremely consistent elongation values.

USTER meets the industry's need for increasingly effective and accurate tensile testing with two high-tech instruments:

- USTER® TENSOJET 5 – for precise forecasting of yarn processability for high speed weaving machines, with a test speed of 400 m/min.
- USTER® TENSORAPID 5 – universal tensile tester for globally accepted standards in both staple and filament yarns. Testing speed is steplessly adjustable between 50 and 5000 mm/min.

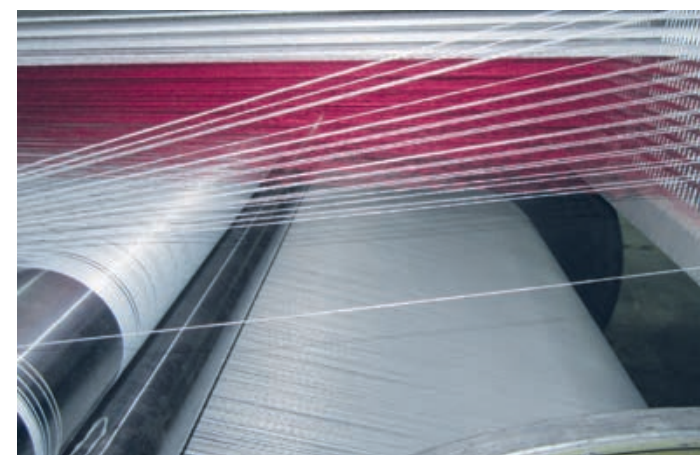
Tensile testing has been used in textiles since the earliest days of the industry, and USTER's latest tensile testers have an even more vital role in the drive for improved process efficiencies and precisely specified yarn profiling between mills and their customers through their capacity, precision and reliability.



## Minimizing yarn breaks and optimizing productivity

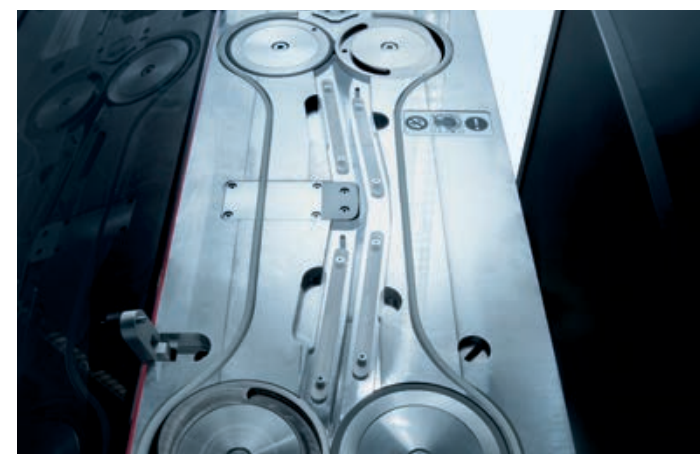
Tensile properties are essential in preventing yarn breaks during downstream operations such as beaming, weaving and knitting. The USTER® *TENSOJET 5* gives a precise forecast of yarn by determining strength and elongation outliers for these high-performance processes, at a testing speed of 400 m/min for optimized production efficiency.

- The best way to predict WEAVABILITY™
- Test capacity of 30 000 breaks per hour, for increased efficiency
- Ultimate process control with connection to USTER® *TESTER 6*



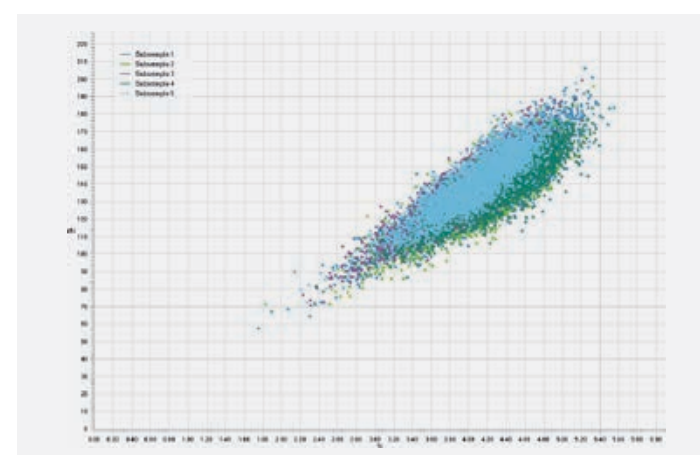
### The best way to predict WEAVABILITY™

The USTER® *TENSOJET 5* is a unique tensile measuring system. It is the standard for prediction of WEAVABILITY™ by giving an accurate forecast of yarn behavior in subsequent processing, especially on high-performance weaving machinery. The high speed of 400 m/min of the USTER® *TENSOJET 5* actually simulates the dynamic stress on the yarn during weaving. Fewer weak places in the yarn means higher efficiency on downstream machines. The prediction of WEAVABILITY™ increases economic efficiency, as well as weaving quality and profit margins.



### Test capacity of 30 000 breaks per hour

Extensive and rapid measurement at a rate of 30 000 tests per hour allows the prediction of weak places in the yarn. An important benefit, since such problems are difficult or impossible to predict reliably with conventional testers. Graphic tools like the scatter plot show all significant information at a glance and the built-in correlation with the USTER® *TENSORAPID* as well as integration with USTER® *STATISTICS* benchmarks makes the USTER® *TENSOJET 5* the essential instrument to minimize claims.



### Ultimate process control with connection to USTER® *TESTER 6*

Integration of results with USTER® *TESTER 6* allows users to profit from intelligent alarms through the Total Testing Center™. Additionally, through the USTER® *QUANTUM 3* yarn clearers, weaving performance grades are available. These allow spinners to identify batches with a high risk of yarn breaks during weaving.

Smart analysis – including yarn evenness and hairiness – allows comparisons with yarn profiles, to deliver the right quality to minimize claims.



## Comprehensive tensile testing to global standards



Traditional tensile testing requires a whole series of test possibilities and variables. For over 50 years, the USTER® *TENSORAPID 5* has been renowned through the industry for its high precision and reliability. It enables spinning mills to obtain accurate measurements to their own specific standards, so they can guarantee that their yarn quality meets customer requirements.

- Accurate and reliable measurements to guarantee the requested yarn quality
- Meets all tensile testing requirement for all kind of yarns
- Ultimate process control with connection to USTER® *TESTER 6*



### Accurate and reliable measurements

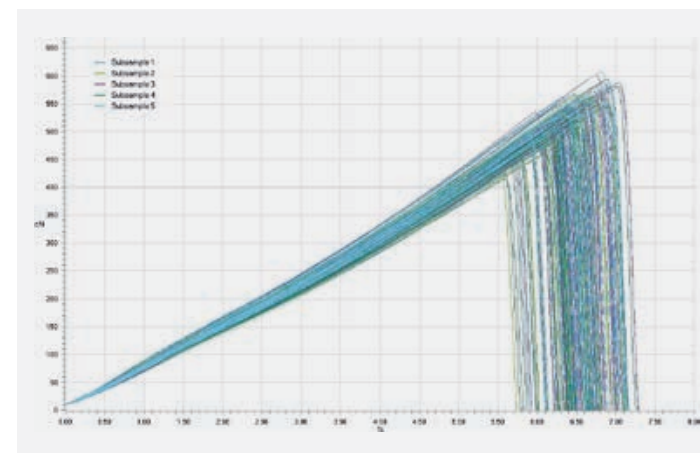
Offering automatic and precise information on yarn strength, elongation and tenacity, the USTER® *TENSORAPID 5* is acknowledged worldwide as the standard instrument. All measurements are in line with international standards, including those from ISO, ASTM and Chinese authorities.



### Meets all tensile testing requirement

The USTER® *TENSORAPID 5* is the most versatile instrument in the market able to meet all requirements for both staple and filament yarns. The wide range of force and elongation testing possibilities covers all known tensile test procedures and tensile values. Naturally, results correlate directly with the world's textile quality benchmarks, the USTER® *STATISTICS*.

Two measuring heads are available: 500 N for typical yarns and 1 500 N for yarn as well as fabric and skein tests.



### Ultimate process control with connection to USTER® *TESTER 6*

Integration of results with USTER® *TESTER 6* allows users to profit from intelligent alarms through the Total Testing Center™.

Smart analysis – including yarn evenness and hairiness – allows comparisons with yarn profiles, to deliver the right quality to minimize claims.

### 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](http://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.



### Uster Technologies AG

Sonnenbergstrasse 10  
8610 Uster  
Switzerland  
T. +41 43 366 36 36  
F. +41 43 366 36 37  
[sales@uster.com](mailto:sales@uster.com)  
[www.uster.com](http://www.uster.com)