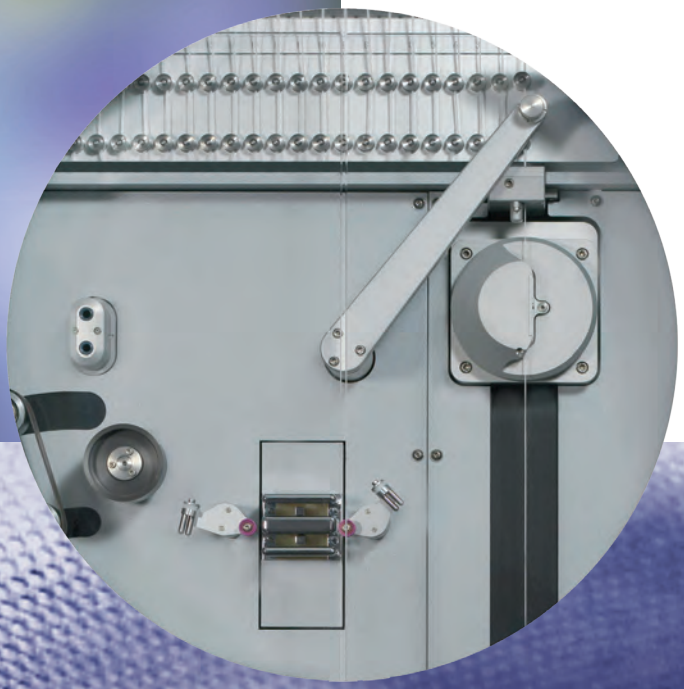
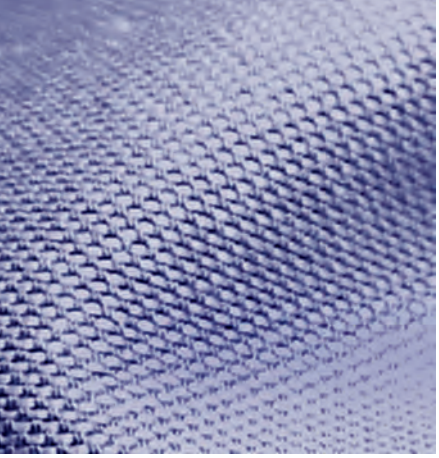
Textechno
textile testing technology



SPUN YARN CONTROL LINE

Automatic and Semi-automatic Testers for Spun Yarns, Rovings, Slivers and Tops



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Testing in Spun Yarn Production

As the demand for high-quality textiles continues to rise, the necessity of stringent testing protocols in spun yarns production cannot be overstated. Experts in the field understand that comprehensive testing is not merely a formality but an indispensable process that ensures the integrity, performance, and marketability of the final product.

Textechno offers a complete range of instruments to meet all demands of quality assurance. These tools not only ensure consistency in production but also help to reduce costs and prevent waste.

Moreover, in today's competitive and globally changing markets, customer satisfaction is paramount. Stringent testing with Textechno´s equipment not only ensures that the yarns meet industry standards but also enhances the overall performance and durability of the end products. Additionally, adherence to quality standards enhances a company's reputation, positioning it favourably in the market.

The textile industry is subject to various national and international regulations and standards. Adhering to these guidelines may not only be a legal requirement but also essential for maintaining the credibility of the industry. Textechno´s laboratory testing instruments allow to establish reliable, flexible, and easy-to-implement testing practices. This ensures that the produced yarns meet or exceed the specified standards, for instance related to safety, environmental impact, or other regulatory considerations.

TEXTECHNO SPUN YARN CONTROL LINE

To control the quality of all intermediate and final products in a spinning mill, the measurement of the following parameters is imperative:

- Linear density (count) on slivers, rovings, and yarns
- Unevenness on tops, slivers, rovings, and yarns
- Imperfections on yarns
- Hairiness and hair length classification on yarns
- Force- and elongation properties on yarns including weak spot analysis
- Yarn twist.

Up-to-date testing devices should be suitable to support all types of spinning processes. They are used for 100% cotton fibres as well as blends (e.g., polyester/cotton). The instruments are also well suited for yarns and intermediates made of or containing recycled fibres.

The Textechno **SPUN YARN CONTROL LINE** offers all necessary testing devices for a textile testing laboratory of a spinning mill to cover the above testing tasks.

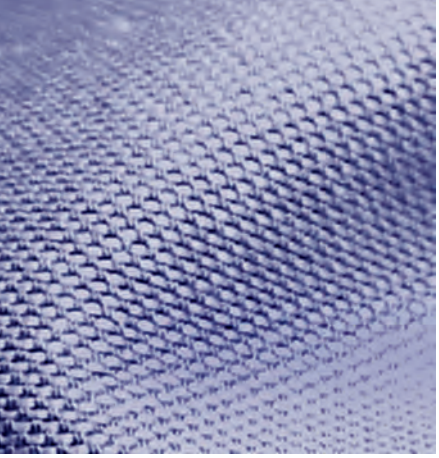
Several safety precautions and a high degree of automation ensure that Textechno's instruments are both, in accordance with all relevant machinery directives and convenient to use.

COVAMAT S and COVATEST+ Capacitive Evenness and Hairiness Testers

Testing of evenness and determination of imperfections are essential for staple fibre spinning mills to control the quality of the slivers, rovings, and yarns during the complete spinning process. A spectrogram analysis of the mass distribution over the sample length gives important information to optimize the carding-, drawing-, combing- and spinning process. Textechno's innovative one-slot capacitive evenness sensor design for yarns allows for the measurement of all above-mentioned parameters at high testing speeds. In combination with the yarn Hairiness module (including total hairiness, yarn diameter, and hair length classification) **COVAMAT S** and **COVATEST+** are perfect instruments for effective quality control and quality assurance. The instruments are designed to perform yarn evenness and hairiness tests according to all accepted standards, e.g. ASTM D1425/D1425M-14, ASTM D5647 and ISO 16549. As another outstanding feature, the testing of yarns can be carried out simultaneously to the evenness testing of slivers and rovings which are measured in a separate testing zone (**COVASLIVE** module, left side of the instrument).

The fully automatic model **COVAMAT S** is equipped with a 24-position package changer. The semi-automatic model **COVATEST+** is available as a price-sensitive alternative without package changer and threading arm if no automation is required.

COVAMAT S



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STATIMAT DS
Automatic Evenness-, Count-,
and Tensile Tester for Spun Yarns

The **STATIMAT DS** represents the most integrated testing solution for the most important yarn quality parameters – tenacity, count, and evenness - in one instrument. **STATIMAT DS** perfectly fits the needs of both, the spinning- and yarn processing industry, such as weaving or knitting. Due to this high degree of automation, it guarantees a fast return of investment. The three tests on each package presented by the package changer for 24 yarn ends are performed in succession without any operator interference.

The test report contains all individual results as well as a statistical evaluation of all yarn parameters including thin places, thick places, and neps. The test results are well comparable with all commonly known cotton statistic compilations. The application range of the **STATIMAT DS** can be extended by using interchangeable load cells with a force-measuring range up to 1.000 N as well as other sample holders for tensile tests on fabrics, yarn skeins for LEA tests, adhesion force tests on slivers and rovings, and other sample forms.

STATIMAT DS

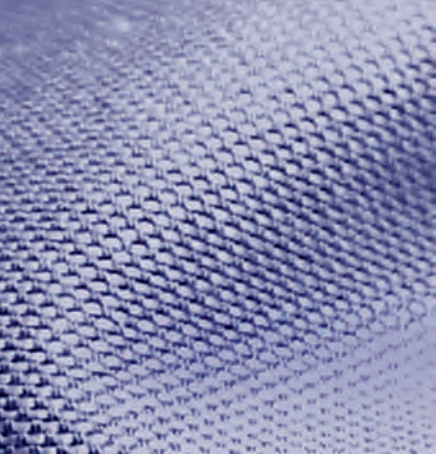
STATIMAT ME+
Automatic Tensile Tester for Yarns

The **STATIMAT ME+** is Textechno's standard automatic tensile tester for yarns operating on the principle of constant rate of extension (CRE), with interchangeable load cells with a force-measuring range up to 1.000 N, and a package changer for maximum 50 positions. Optionally the application range can be extended by a LEA testing kit, fabric clamps, as well as further clamps for testing the cohesion force of slivers and rovings. In all test methods the **STATIMAT ME+** meets the requirements of all important national and international standards.

STATIMAT ME+

TEXCOUNT TT
Count Analyzer

The **TEXCOUNT** system is suitable to determine the linear density of slivers, tops, rovings, and all kind of yarns. It utilizes an electronic balance with a resolution of 1 mg, which connects either to the **TESTCONTROL** system of a **STATIMAT** tester or to a separate PC. If the linear density is measured on a yarn sample, the result is automatically used by the **STATIMAT** software to accurately determine the tenacity of the sample, e.g. in cN/tex. For specimen preparation, typically our **TEXREEL** or **WRAP REEL TT** (slivers and rovings) is used.



DYNATENS
High-Speed Tensile Tester for Yarns

DYNATENS is a dynamic tensile tester dedicated to the detection and characterization of weak spots in staple fibre yarns.

The instrument continuously subjects the tested yarn with an increasing amount of stretch resulting in up to 12 yarn breaks per second at yarn feeding speeds of up to 800 m/min. Additionally, almost the full length of the yarn (> 90 %) which is passed into the instrument is checked. In this way, no weak spot is overlooked which corresponds to highest testing efficiency.

At the same time, **DYNATENS** also measures the average breaking strength and the average elongation at break reliably.

In **DYNATENS** the very high testing rate and highest testing efficiency is achieved using two comoving godets. Since both godets rotate in the same direction, the stretching and breaking of the yarn is induced by the second godet running at a faster speed than the first one.

After each yarn break, the yarn threads itself through the second godet without any need for additional moving parts or yarn reservoir inside the tester. In this way, **DYNATENS** also only requires a minimum level of maintenance resulting in low total cost of ownership.

DYNATENS

TEXREEL

The electric **TEXREEL** prepares yarn skeins of a pre-defined length, for instance for the determination of yarn count (linear density). Several safety precautions such as a complete encapsulation or an automatic locking system for the acrylic glass cover ensure that Textechno's **TEXREEL** is both, in accordance with all relevant machinery directives and convenient to use.

The **TEXREEL** can also be operated in manual mode with open cover, if necessary. To facilitate the operators daily work, the protective acrylic glass cover does not have to be lifted. Instead, **TEXREEL**'s cover smoothly slides to the side.

The **TEXREEL** is supplied with 6 reeling positions, a version with 2 reeling positions for reinforcement rovings or coarse yarn and higher torque for tangential strip-off is also available.

TEXREEL

WRAP REEL TT

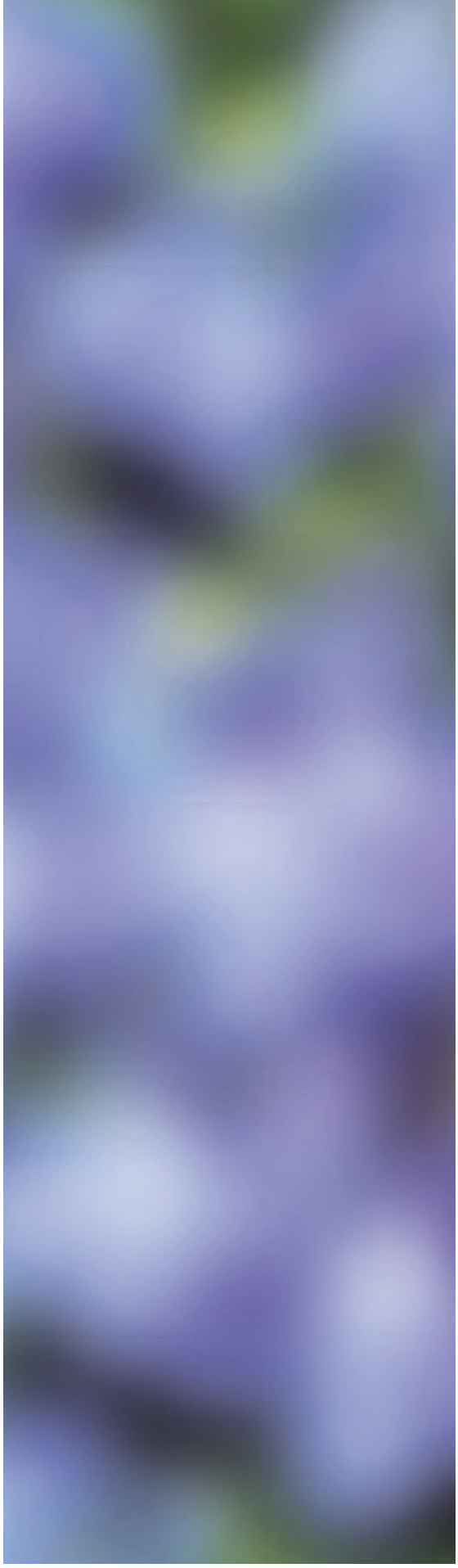
The **WRAP REEL TT** creates sliver- and roving samples of a desired length for linear-density testing. The wrap reel is an electric desktop device equipped with a pre-selection counter, a holder for roving packages, a pressing roll, and a cutter.

TWIST TESTER TT

This is a semi-automatic device for the determination of the twist number on yarns, plied and cables yarns, and rovings. The tester operates in both directions, "S" and "Z". It utilizes the untwisting method, un- and re-twisting method, as well as the SCHUTZ method for OE yarns. The test results are provided in T/m. The device is equipped with an automatic „0"- point detection, LC display for showing the test results, and a printer. The gauge length can be set between 5 and 50 cm.

TWIST TESTER TT

Technical contents can be subject to changes by Textechno.



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