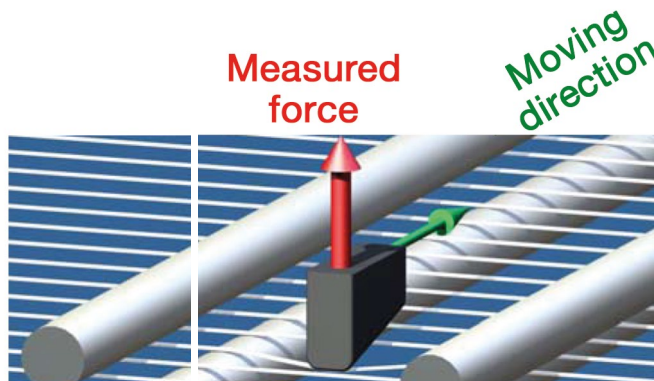


Monitoring the Thread Tension

TENSOSCAN 5373

- Reliable monitoring of the thread tension of each thread of a yarn sheet
- Fast and secure detection of threads with tension outside the pre-set limits

The thread tension monitoring device TENSOSCAN controls continuously and automatically the thread tension of each individual thread of a yarn sheet. A measuring head moves across the entire width of the yarn sheet and measures thereby the tension of the threads with a speed of 2 meters per minute. That means that during one minute all tension values of a 2 meter yarn sheet can be measured.



NEW MEASURING PRINCIPLE

The newly developed measurement principle lets the ceramic-coated sensor slide extremely gently across the threads and therefore prevents textile and material wear. The yarn sheet is led tangential, i.e. without additional friction, through the guide rods. The sensor in the measuring head scans successively all threads and determines the thread tension.

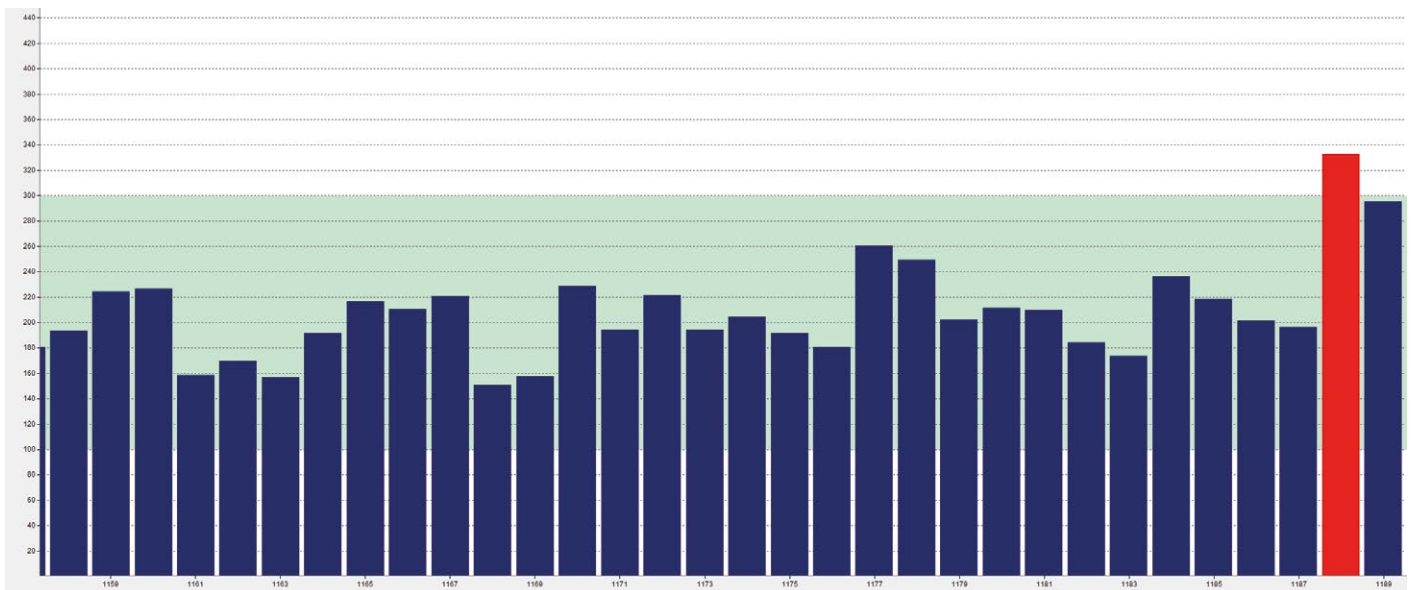
QUALITY ASSURANCE

A quality assurance by automatic recording and archiving of the measured values for each beam is possible. The evaluation long term (measurement) is related to a beam, i.e. the measurement starts automatically when warping a new beam and ends with finishing of this beam.



It is possible to read off the average value, in addition, the smallest and the largest occurring measured value for each thread during this period.

With each beam change the measuring data of the beam are stored automatically in a file. The file name contains the beam number and the order marking.



STOPPING THE MACHINE WITH INCORRECT THREAD TENSION

The TENSOSCAN control unit is connected to the stopping device of the warping machine and can stop the machine when a too high or too low thread tension is registered. Measured values outside of the permissible limits are shown in red. The thread numbers of the threads with too high or too low tension can be determined quickly by zooming into the bar chart.

Type	5373A	5373B1	5373B2	5373B3
Measuring range	10 cN ... 100 cN	5 cN ... 50 cN	10 cN ... 200 cN	50 cN ... 1000 cN
Thread distance	at least 0.7 mm	at least 1.0 mm	at least 2.0 mm	at least 3.0 mm
Reed gauge	maximum 36 threads/inch	maximum 24 threads/inch	maximum 12 threads/inch	maximum 8 threads/inch
Application	Warp knitting and weaving preparation	Warp knitting and weaving preparation	Warp knitting and weaving preparation	Multi-axial machines for glass fibre rovings, carbon fibre rovings

TENSOSCAN 5373 MEASURING CARRIAGE OVERVIEW

With TENSOSCAN it is possible to measure thread tensions from 5 cN to 1000 cN. Measuring carriages for different measuring ranges are available. The connecting cable to the control unit is a trailing cable. Alternatively a version using an energy chain is available.

TENSOSCAN 5373 INSPECTION HEAD BEDS OVERVIEW

The inspection head bed serves for the guidance of the threads during the measuring procedure and for the guidance of the measuring carriage. The necessary length of the inspection head bed depends on the width of the yarn sheet, which should be monitored. There are 13 standard lengths available. As specially designed model any length between 1200 mm and 4400 mm is available.

REQUIREMENTS FOR THE INSTALLATION OF A TENSOSCAN DEVICE

The operational principle of TENSOSCAN requires a parallel led yarn sheet in one level. If these conditions are not present, additional reeds and guide rods can be supplied. These accessories are installed directly to the TENSOSCAN inspection head bed.



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Since 1956 PROTECHNA has been producing, marketing and servicing opto-electronic thread control systems for the textile industry. Best quality lead to steady growth and resulted in our company being the market leader for monitoring textile machines.

Today the company is operational worldwide and has at its disposal marketing and service partners in all of the textile producing countries.

By using the latest technologies our technical department develops innovative monitoring devices for practical use in the textile industry.

A close and long-term cooperation connects us with the leading textile machinery manufacturers. For the requests and suggestions of our customers we always have an open ear. Only in this way real innovations can be created, which are highly beneficial for our customers.

At the contentment of our customers we measure the quality of our work and the success of our company.



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