The Stretch Monitor ™

SHRINKAGE

FOR SIZING, SHRINKING AND FINISHING
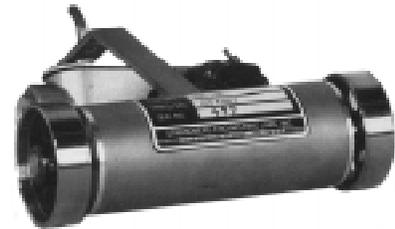
DISPLACEMENT SENSOR
TYPE R-90-200

In a place where just two percent extra stretch can shut the weave room down, there is one prime concern. And that concern is accuracy, accuracy on every set, every loom beam.

Optimal residual shrinkage represents quality to customers and the elimination of over-shrinking to the producer.

Strandberg Stretch/Shrinkage Monitors are accurate to one part in a thousand. They stay that way day after day, year after year.

Why? Because they are in touch... in touch with the thing they measure and control.

STRANDBERG ENGINEERING LABORATORIES, INC.

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-GENERAL INFORMATION-

The 1690e makes it easy for you to step up weaving efficiency and reduce fabric defects by controlling stretch on the slasher where another tenth percent can lose a whole percentage point in weaving efficiency. It also enables you to more accurately preset and control overfeed on your tenter frames, to monitor the consequences of excessive fabric tension that lose fabric width, causing weft distortions, and rip out seams.

Monitoring and controlling stretch and shrinkage on compressive shrinkage machines and compactors assures zero stretch going in and target shrinkage coming out. On tandem finishing/shrinking ranges, Strandberg's dynamic shrinkage control automatically compensates applied shrinkage for variations introduced in the finishing zone.

All it takes is a few speed sensors, surface or shaft driven, and up to four control motors, complete with chain and sprockets and push-button override to control your PIV's and other transmissions.

The 1690e is a digital indicating controller for sizing and finishing. It employs a big-figure LCD display that is readable across the room. It monitors stretch and shrinkage to the nearest tenth or hundredth percent from zero speed up. On slashers, one 1690e can monitor stretch from up to four size boxes and from the back of the creel to the front roll.

Just one 1690e can monitor various combinations of stretch and shrinkage in five or more increments in finishing processes by the use of any mix of surface and shaft speed sensors.

Its polycarbonate covered keyboard is watertight for wet processing areas. Its keyboard is used to enter set points and tolerances by style number.

An extension cable permits any two surface speed sensors to be temporarily run side by side on the same roll for a 0.0% accuracy check.

The 1690e makes it easy to use shaft speed sensors, because sprocket ratios need not be exact. The 1690e, itself, can be programmed to bring each ratio to a precision of one part in a thousand. Use Strandberg's new Spectrum 4 portable stretch/shrinkage meter to make sure there is no slippage.

The 1690e can operate four Control Motors, Type CM-92, for PIV's and Drive Speed Controllers, Type 6267, for other transmissions to keep stretch and shrinkage on target throughout the process.

There are voltages and current outputs for chart recorders, RS-232 for printers, and two-way RS-485 for higher-level systems to download set points and tolerances by style number and access performance data from this intelligent sensor.

-SPECIFICATIONS-

Power Requirements .... 115/230 volts a-c

Weights and Dimensions .... Indicating Controller, Model 1690e
12.0 lb (5.5kg), 12.5" (318mm) high, 10.9" (277mm) wide, and 6.25" (159mm) deep

Speed Senosrs
3.5 lb (1.6kg), 11" (280mm) long, and 7.6" (193mm) wide

Control Motors
14 lb (6.4kg), 7.25" (184mm) high, 5.6" (142mm) wide, and 7.4" (188mm) deep

Sensors .... Any mix of up to 10 surface or shaft speed sensors, Type Nos. R-90-200 and FM-90-200

Housing .... Fiber-glass NEMA-4X with hinged cover for use in wet processing areas

Principle of Operation .... Impulse, 200 per revolution of speed sensor, 1000/yard, and 1093.61/meter, impulse ratio over integration length determines stretch and shrinkage.

Range .... 0-100% stretch or shrinkage

Control .... Set points and tolerances in tenth percent steps by style number. Control Motor Set, Type CM-92, includes chain, sprockets, and override push-button control station.Drive Speed Controller, Type 6267. Output, standard 5k-ohm motorized potentiometer, speed increase/decrease relays, and override push-button control

Display .... Electro-illuminescent, 4.9" (124.5mm) x 3.7" (93mm)

Outputs .... 0-10 volts d-c and 4-20 mA for recorders, etc., RS-232 for printers and other serial devices, and RS-485 for networking

Accuracy .... ± 0.1% stretch or shrinkage