

MicroSCAN - FX110

Interlace Measurement

Accurate measurement of Interlace level in all filament yarn processes is critical, yet laboratory techniques have major shortcomings, in the statistical significance of the data as well as the lag time between manufacturing and testing.

The **MicroSCAN** provides a revolution in Interlace measurement by providing an at line technique for accurate measurement of both:

- **Mean Interlace Level**
- **Short Term Interlace Variation**

Historically at line measurements have been considered to be less accurate than laboratory tests, but the **MicroSCAN** has been shown in production tests to be **MORE ACCURATE** than laboratory tests in measuring mean Interlace level, with the additional benefit of providing excellent data on variability due to the increased sample lengths.

As a result, the **MicroSCAN** offers substantial benefits in comparison to Laboratory testing:

Faster Feed Back

Immediate identification of faulty threadlines

More Accurate Statistical Data

Due to extended test lengths and accuracy of measurement

Lower Testing Costs

With a few seconds for a measurement a single technician can realistically test well over 100 threadlines per hour using the **MicroSCAN**

Much Lower Capital Costs

A single **MicroSCAN** has substantially greater measurement capacity than any Laboratory tester yet is a fraction of the cost



As a result of these benefits, using the **MicroSCAN** for Interlace Measurement provides:

- Reduced Off Quality
- Improved Downstream Process Performance
- Reduced Process Costs – Due to better control of the process

MicroSCAN Method of Measurement

Interlace measurements are made using the **MicroSCAN** together with the **FS220** and **FS230** Optical Probes. The probes operate by shadowing the running threadline against a photo sensor. Interlace is measured by using signal recognition technology (patented) to identify the Interlace nodes in the yarn accurately and at the same time ignore the effects of twist and tension changes that affect other measurement systems. The result is a very accurate Interlace measurement system that will operate at very high speeds – to over 7,000 m/min. The FS220 Operates over a titre range of 10 to 2,000 denier, and the FS230 from 500 to 12,000 denier.

For each measurement the Mean, and CV of the Interlace level, together with the Maximum Distance between nodes and the CV of distance between nodes are calculated and stored in non volatile memory on the **MicroSCAN**, data can then be viewed and printed as described overleaf.



MicroSCAN FEATURES

The **MicroSCAN** is an ultra portable, battery powered data acquisition unit designed specifically for intensive AT-LINE QC applications. The user interface of the **MicroSCAN** is a touch screen providing access to generate set point and data files and control the Data Acquisition sequence.

The Interlace Application incorporates state of the art data analysis routines, which together with ISO calibration provides extremely accurate measurements with a range of statistical data. The summary data is presented on the screen with the facility to download to the **MicroSCAN** PC Centre, which provides tabular and graphical summary formats and print options.

Up to 15 setpoint files and 20 data files can be stored in the **MicroSCAN**. During acquisition samples are automatically numbered, and up to 500 readings can be stored in each data file.

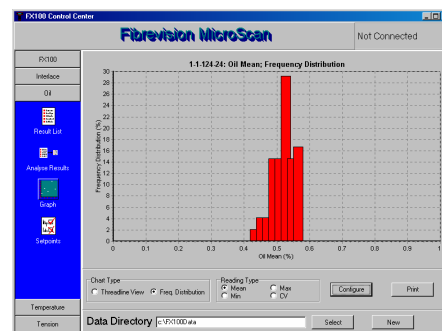
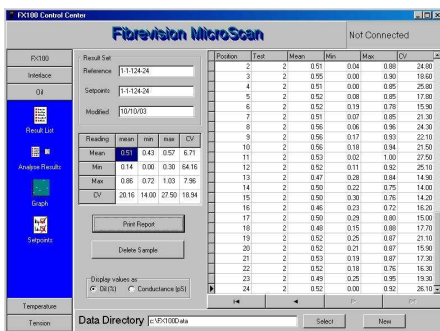
Each **MicroSCAN** has the capability to operate with two different types of probes, providing further At-Line QC potential. The other probes available include:

- Spin Finish
- Tension
- Yarn Temperature

MicroSCAN PC Centre

For printing and long term storage of data from the MicroScan, a Windows Based PC application is provided with each **MicroSCAN**. This allows the **MicroSCAN** to be connected by a standard RS232 serial link to the PC and for data to be automatically transferred. In addition to data presentation and printing facilities within the standard PC application data can be exported for analysis in spreadsheets and databases.

The PC link is also used to download software to the **MicroSCAN**.



MicroSCAN SPECIFICATION

Power Supply	4 NiMH rechargeable cells providing up to 6 hours continuous use.	
Internal Memory	Non Volatile memory (data is not lost when batteries are changed) - stores up to 15 setpoint files and 20 data files for each application, each data file can hold up to 500 records.	
User Interface	Touch Screen	
Applications	Two applications can be used on a single MicroSCAN (See Above)	
Data Output	Via PC application, with custom database for data presentation and printing. Facility for data export in format suitable for spreadsheets and data bases	
Calibration	MicroSCAN and Probes are supplied calibrated to ISO standards, a recalibration service is available. Optical probes include condition monitoring.	
Scope of Supply	FX110 MicroSCAN , 8 NiMH batteries, Battery Charger, PC software, Link Cable to PC, Operating Manual,	
FS220/230 Optical Probes	Denier range	FS220 = 10 to 2,000, FS230 = 500 to 12,000
	Calibration	ISO Calibration with automatic condition monitoring to warn when recalibration is required
	Sampling Frequency	Up to 50kHz