

## Fibrevision Unitens

### DTY Quality Monitoring

The requirement for On Line Quality Monitoring in the DTY process has been recognised for many years and Unitens is well established as market leader in this sector.

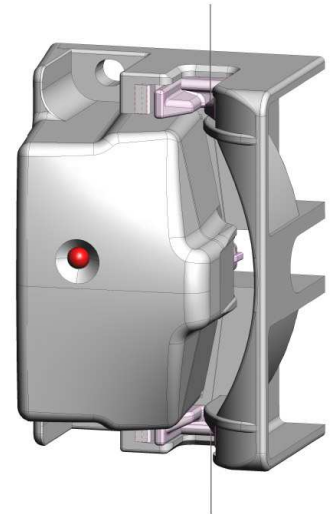
Fibrevision Unitens now takes Quality Monitoring in the DTY process to new levels, by offering this market leading system for all DTY machines.

#### Unitens – Tension Measurement

It is widely accepted that the most important quality parameter in texturing is the correct yarn tension measured directly after the twisting unit (T2).

Abnormal tension levels and peaks result in both bulk and dyeing faults which can be avoided with Unitens Tension Monitoring through identification of faulty packages by:

- Recording of tension faults
- Quality grading on individual packages based on the number of faults
- Display of fault events for error analysis



#### Unitens Sensor Technology

The **Unitens** tension sensor is the heart of the tension monitoring system and completely differentiates Fibrevision Unitens from any competitive system. The well proven **Unitens 5** sensor technology features:

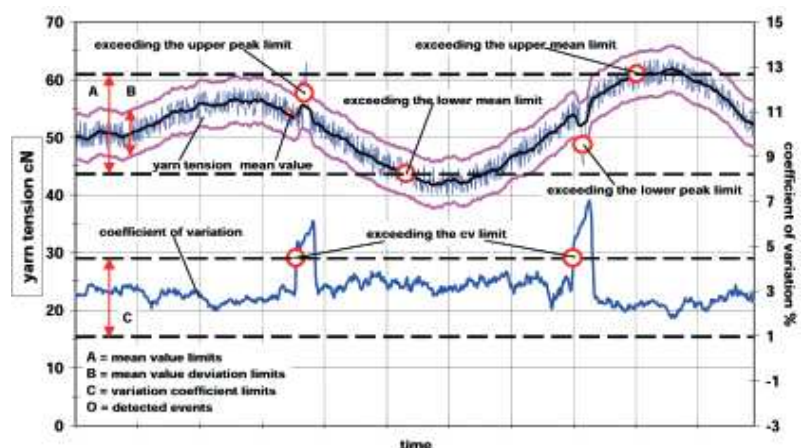
- **Accurate and stable measurement system** that operates from 0 to 150cN and does not require on machine zeroing or calibration and is not affected by yarn friction.
- **Minimum of guide wrap** (less than half of competitive systems) and low guide contact pressure - ensures suitability for processing at high speeds or with sensitive yarns and minimises guides wear even when processing abrasive yarns.

#### Unitens – Full Machine Integration

Unitens provides optimum monitoring through full integration with the machine detector and cutter system enabling:

- Package start and stop to be accurately identified, for both grading and package length measurement
- Cut on Ply Break and Cut on Reject to be implemented
- Doff Timing to be provided

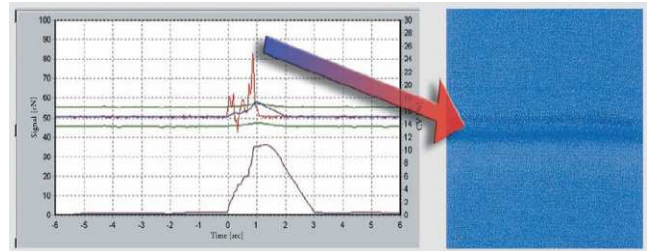
This integration is achieved with dedicated serial communication link from the **Unitens** Sensor rail to the machine detector and cutter system.



**Unitens - QUALITY DATA**

The data from the **Unitens** Sensor is processed in distributed “sections” located inside the Sensor Rail.

Quality fault and summary data is passed to the **Unitens** PC which stores this data for each package produced. This data is provided in user-friendly reports with full package grading as well as extensive facilities to aid process improvement, reporting includes:



**Current Data**

Full details for each threadline  
Real time views  
Process Improvement tools including “worst” threadlines  
Details of off quality events

**Package Data**

Full quality reports on every package produced  
Mean and variability data for each monitored parameter  
Details of any off quality events  
Capture graphs for transient events

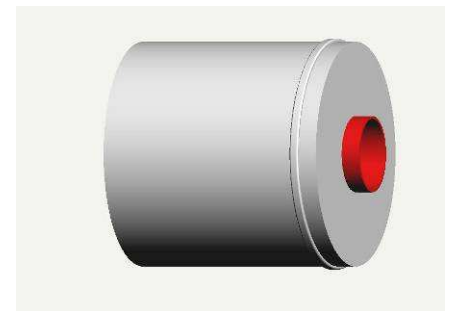
**Historical Data**

Trend data for each monitored parameter is available for each threadline and each merge group to allow assessment of both long and short-term process trends.

**Unitens – Options**

**Metered Length**

Guaranteed metered length packages are uniquely guaranteed with a “belly band” automatically wound on to the package at doff, ensuring that all metered packages are clearly identified, making segregation at packing / testing straightforward.



**Plant Integration**

A range of plant integration facilities are available including centralised access through a MMC (multi machine controller) and data export.

**Unitens – System**

The **Unitens** System comprises rail mounted sensors, with distributed electronics also located in the rail. This arrangement provides for easy installation and maximum reliability as connections and cables are fully protected.

Connections from the sensor rail are very simple with moulded cables providing plug/socket connection for each of the following:

- Machine detector / cutter interface
- Machine PC via an Ethernet switch
- Section Doff switch / Indicator

