

Fibrevision - Fraycam Broken Filament Visualisation

Fraycam is the system that allows broken filament faults to be detected and captured at full production speed.

The Fraycam System

The Fraycam MV system consists of:

- Fraytec MV sensor,
- High speed camera
- Laptop computer

The Fraytec MV sensor identifies all broken filament faults, and as each event is detected, the camera is triggered to take an instantaneous needle sharp image, which is displayed on the laptop and is saved automatically together with relevant data.

The Fraycam provides reliable detection of individual broken filaments down to a fineness of 5 µm diameter at speeds up to 8,000 m/ min.

Both Individual broken filaments and larger “Slub” events are captured, allowing detailed analysis of faults.

Fraycam Applications

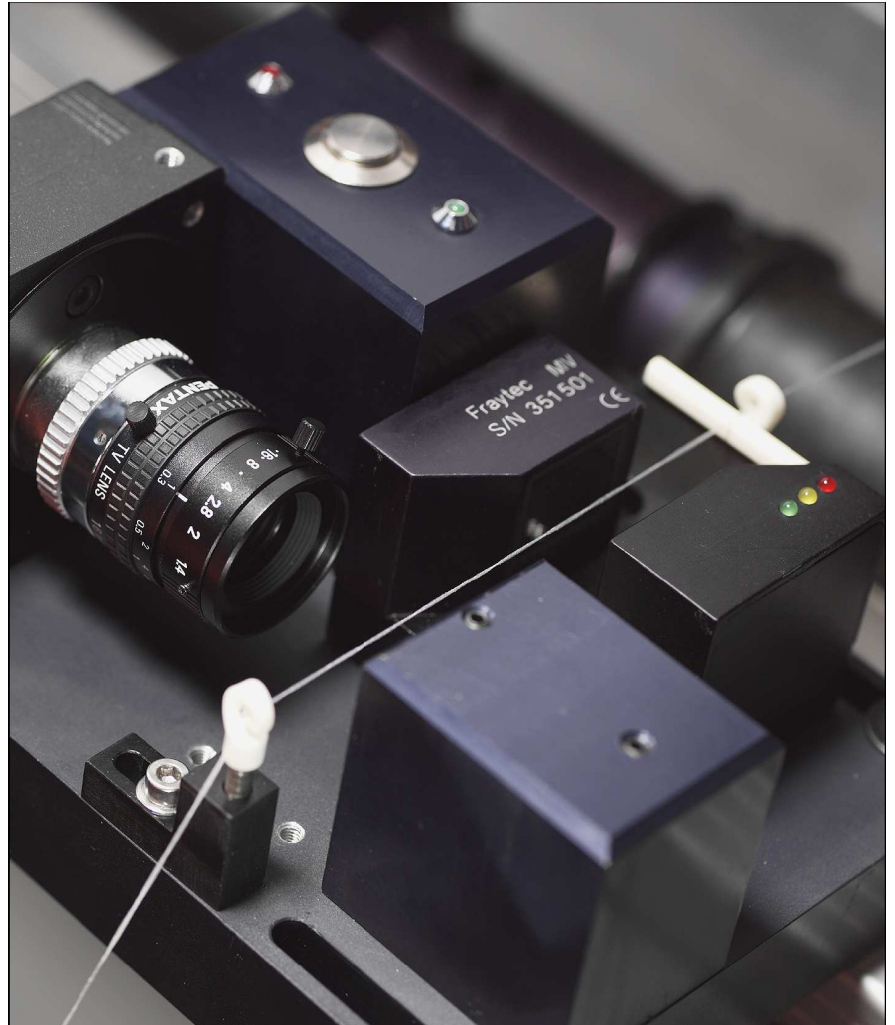
The Fraycam is designed for use both in R+D and production applications.

R+D

Fraycam capture of fault images provides invaluable insight in to the key aspects of both process and machinery during the development phase, allowing more informed decisions reducing costs and improving effectiveness.

Production

Fraycam image captures provide invaluable diagnostic data when problems are encountered, resulting in quicker identification and resolution of problems.



Technical Data

Fraytec MV Sensor

Detects broken filaments down to 5 μm diameter at speeds up to 8000 m/min. The sensitivity is adjustable by means of 6 light barriers at distances of 3, 4.5 and 6mm above and below the yarn path.

The detection is identical to the regular Fraytec MV, but instead of counting the filament breaks, it triggers the camera.

Camera

The Basler A311 takes up to 10 photos per second (659 x 494 pixels, black & white), accurately triggered through an IEEE 1394 FireWire interface.

With μs timing the High-speed Flash adds backlight to the photos, making the system independent of the yarn colour.

The system has its own rechargeable battery pack, allowing operation with access to mains power.

Example of Photos

