



ELCOUNT

Pick Counter System

Continuous pick- and course-detection and control

ELCOUNT – Maximizing your Process Performance

What is ELCOUNT?

This system utilizes the smart sensor technology of CCD Matrix cameras to monitor and control, by non-contact means, the pick- or course-count online.

Benefits of the new camera

- + highest resolution
- + very compact design
- + IP 65 protection
- + digital zoom
- + no mechanical moved parts
- + wide temperature range

Automatic Optimization

ELCOUNT automatically compares the actual data with preset limit values. If there are deviations, ELCOUNT generates controlled variables to initiate the system actuator.

Process Optimization

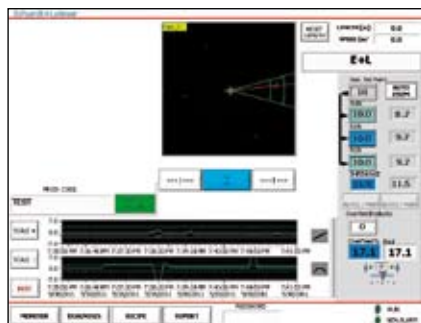
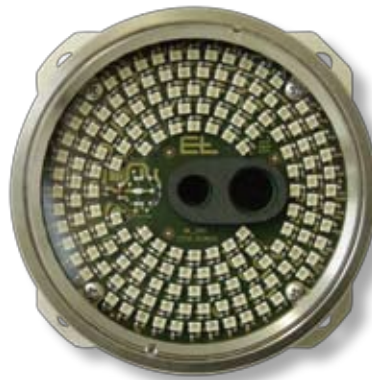
is the automatic comparison of given customer parameters (target) to the actual process data.

Real time display

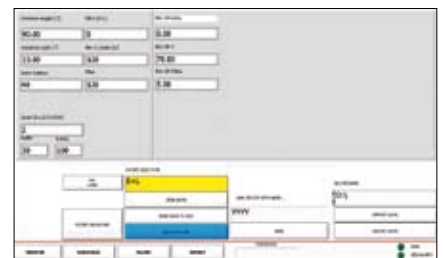
The touchscreen display makes real time values available for the operator in freely scalable coordinates. Images of the weft structure of the current product can be seen, as displayed in the screen shot below.

Example:

The main screen makes all important values available to the operator. All settings, control values, historical data, as well as current data are combined in one screen.



Monitor



Recipe



Diagnosis



Report

Erhardt+Leimer – Smarter Vision Solutions

Technology

The highly sophisticated CCD Matrix camera, together with intelligent algorithms embedded in the ELCOUNT system offer many unique opportunities to its users.

A modern Ethernet architecture has been selected for easy integration and installation in existing lines as well as new lines. The single-sided non-contact measurement also allows the camera to be installed onto very delicate and sensitive materials.

System Configuration

The standard configuration for ELCOUNT is equipped with an electronic cabinet and integrated touch screen monitor. One Giga Bit high resolution CCD Matrix camera is connected via APIX-link for pick or course count detection. An additional camera can be adapted at any time for feed forward and feed back control. Combining it with a printer package and host computer interface seamlessly archives and documents your production.

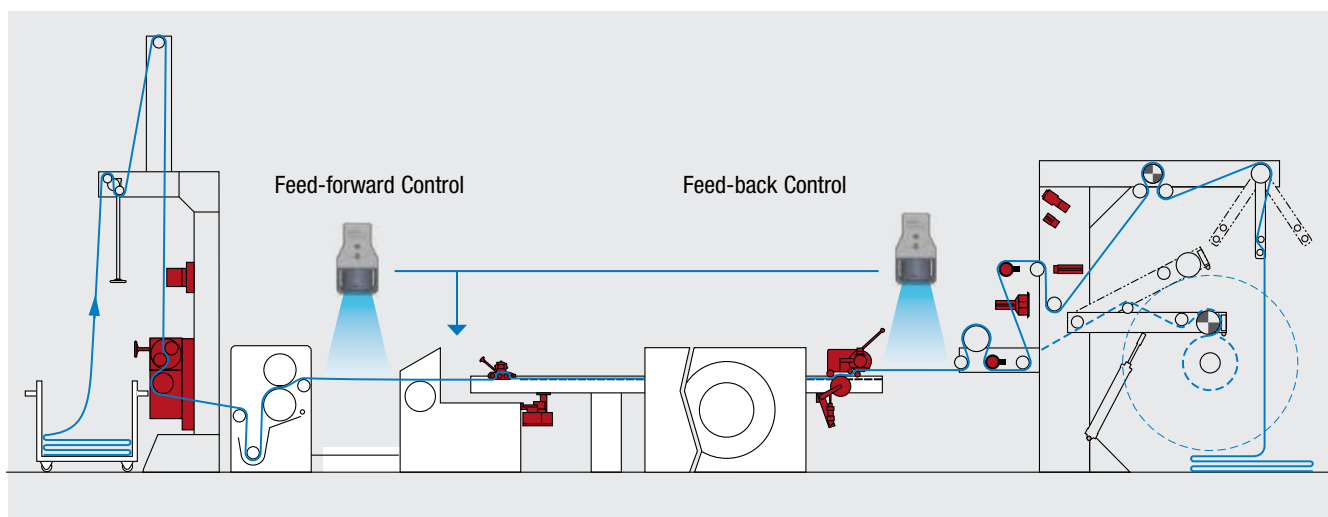


Control Loop

With ELCOUNT, a special control loop combination has been introduced to the industry. Two control loops interact and complement each other to optimize the web weight.

At all times, the ELCOUNT camera detects the actual pick/course density without physical contact and compares it with a target or set point.

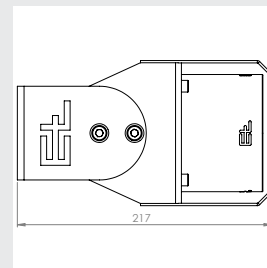
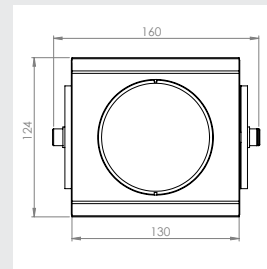
A smart combination of feed forward and feed back control has been integrated into the ELCOUNT system. The feed-forward control is responsible for instant adjustment, which compensates for any incoming errors. This reduces the response time. The feed-back control is used for fine tune correction, adding another layer over the initial control loop.





Technical data

Detection system	High resolution CCD matrix camera (2x 5 megapixel), digital zoom (50x)
Detection area	max. 96 x 96 mm
Distance camera to web	150 mm
Industry PC	12 inch touchscreen
Dimension of camera (W x H x D)	160 x 124 x 217 mm
Dimension of cabinet (W x H x D)	600 x 600 x 300 mm
Power supply	100 – 240 V AC; 6 A
Measurement range	2-250 picks/cm 5-625 picks/inch
Maximum speed	150 (164) m/min (yard)
Temperature range camera	10-65°C



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Subject to technical modifications without notice GRU--250801-EN-04 08/2011

