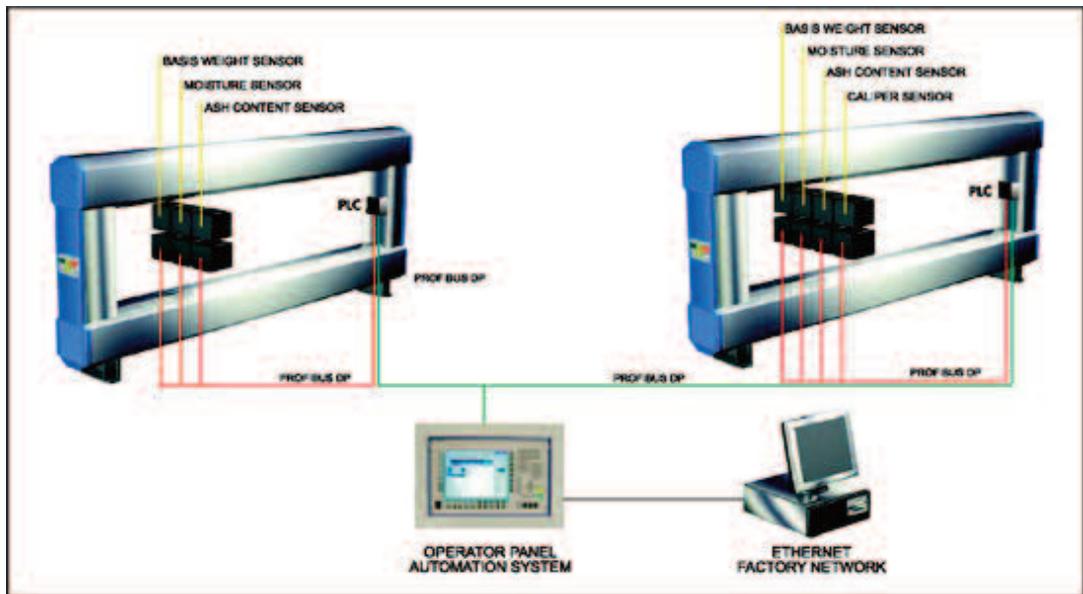


# SCIENTA QCS SYSTEM

## *Scienta QCS System for Paper and Converting Applications*

**SCIENTA QCS SYSTEM** utilizes the latest measurement, data processing, and communication technology with advanced scanners to offer easy-to-use process control tools which allow clients to maximize their process performance on web based machines. Scienta QCS System is tailored to customers' specific requirements utilizing a modular hardware designs. All components are based on open standards to ensure affordability and to guarantee future flexibility. The System is designed and solidly built to withstand heat, dust, resin, etc. and relies on 50 years of measurement experience. Data from the QCS scanning sensors is processed with high performance 32-bit RISC processors to get the performance needed to do real-time floating-point calculations in the sensor board. Furthermore, the whole electronic part of the sensor is fitted on a single PCB board, which is embedded into the sensor mechanical structure. Component count as well as the number of spare parts is minimized.



### **SCIENTA CONCEPT IS BASED ON FIELDBUS TECHNOLOGY**

Scienta has pioneered the use of processor controlled measuring heads capable of real-time linearization of the measurement signal. Thanks to Fieldbus connection the output signal can be easily and accurately interfaced to all sorts of computer and PLC equipment.

The Fieldbus connection enables monitoring of diagnostic data available inside the measuring head and controlling of the head in manners not possible with analog systems.

The sensor electronics are built into the receiver body making it a highly compact unit. Temperature compensation as well as the Chamber gas pressure monitoring are part of the extensive functionality of the Scienta developed sensors.



## CONTROL STRATEGIES - STABILIZING THE PROCESS

Scienta offers basic machine control strategies including Decoupled Weight Control, Dry stock Flow Control and Decoupled Moisture Control. Further controls such as Consistency control and CD controls may be implemented using actuators and sensors as needed. The basic control strategy is a Machine Direction (MD) type of control but Scienta has also implemented many profile control applications. Each machine and process type need to be evaluated for the best control strategy to implement.

Process variable reports include long term trends with Reel, Shift and Day reports in standard format. Connection to existing databases has been done using OPC interfaces and tailored to each customer's specific needs. The reports may be easily changed and adapted to the clients' data gathering needs. Reports may be printed or stored in various standard forms such as Excel and PDF.



### TECHNICAL SPECIFICATIONS:

**Construction:** 160 x 160mm (6.3in. x 6.3in.) electro plated I-beam steel construction bolted onto 20mm (0.8in.) thick end plates.

### PHYSICAL DIMENSIONS:

**Scanner Width:** 6800mm (268in.) max

**Beam Width:** 6000mm (236in.) max

**Machine-Direction:** 372mm (14.6in.); With three sensors at 0° pass angle: 600mm (23.6in.)

**Scanner Height:** 1170mm (46in.)

**Weight:** 1000kg plus, 100kg/m (2000lbs plus 100lbs per ft)

**Maximum Sheet Width:** 5100mm (200in.)

**Scanning Speed:** Scanning speed is governed by an inverter assuring smooth operation of the heads. Normal scanning speed is 100-200mm/second (4in./second).

**Head Positioning:** The heads use web edge detectors to seek out the web and automatically adjust for width and web position changes.

**Single-Point Positioning Accuracy:** + 3mm (+ 0.12in.)

**Maximum Ambient Temperature:** 55°C (130 F) standard

**Power Requirement:** 110-230 VAC, 50/60 Hz, 1 kW

**Drive Belt:** Steel reinforced polyurethane timing belt

**Scanner Drive:** 120 W AC motor with heavy duty tooth wheel gear box.

**Guiding system:** 10 large diameter 80mm (3.15in.) neoprene covered wheels supported by a machined and tempered I-beam.

**Instrument Air:** 6 bars (90psig) oil free (0.01 µm filter) 100 l/min.

### Manufacturer:

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