NONWOVEN INDUSTRIES

Advanced Web Gauging Solutions

The Measure of Quality
Successful nonwoven manufacture depends on producing quality fabrics efficiently. For example, accurate measurement translates into greater yield from the raw materials. It also reduces lost time and scrap during product change and at start-up. This all adds up to greater quality, productivity and efficiency that helps drive plant profitability.

NDC’s web gauging platforms represent an opportunity to assist the nonwovens business. Its sensors offer extensive measurement capability with form factors that provide process visibility from critical parts of the line. By combining controls that produce continuous quality and an operator interface that provides real time information, NDC’s solutions help ensure optimum line performance and a sound return on investment.

Customer Benefits:
- Higher quality and productivity
- Lower manufacturing costs
- Improved process visibility
Accurate Measurement Performance

A complete gauging portfolio for the entire nonwovens process

NDC’s Beta transmission gauges feature an ultra high-efficiency detection system and a minimized source activity for safety and performance.

Beta gauges measure the basis weight of airlaid carded and spunbond/SMS nonwoven products.

NDC’s NW710S Infrared sensor can measure the basis weight and moisture for specific nonwovens. Its unique optics collect forward-scattered light that has interacted with the nonwoven material.

Applications include PP spunbond and meltblown nonwovens.

NDC’s Gamma BackScatter (GBS) gauge family provides a cost-effective basis weight measurement. This compact sensor can provide valuable measurements from difficult process locations.

NDC’s laser gauges measure thickness via a distance triangulation computation of a laser beam.

Laser gauges are typically designed to measure thick nonwoven products. The thickness measurement range for NDC’s single-sided sensor is 50 mm, while the dual-sided range extends to 15 mm.

NDC’s X-ray transmission sensor’s energy source is tuned for optimum product measurement sensitivity to provide precise measurement of basis weight or thickness for nonwoven products.

X-ray transmission gauges typically measure PET and spunbond/SMS products.

The X-ray backscatter sensor’s compact footprint permits it to be installed in difficult measurement locations on the process.

The X-ray backscatter sensor is designed to measure the basis weight of spunlace, carded, airlaid & hybrid nonwoven products.
Company overview

Combining industry-best performance and reliability with a global support structure

NDC develops and manufactures gauging and analyzer systems for a wide range of process industries. The company manufactures in USA, UK and Belgium and has direct sales and support operations in China, Japan, Germany, France, Italy and Brazil, and support and distribution in over 60 countries worldwide.

Our global client base consists of some of the world’s most successful companies who rely on NDC to ensure that their product performance, process yield and quality meet the stringent standards demanded by their customers.

**NDC product groups:**

**NDC Systems:** web gauging systems for the converting, extrusion, calendering and nonwovens industries, providing real-time measurement of key product parameters such as coating or lamination thickness, basis weight and product thickness.

**NDC Sensors:** process instrumentation for the food, chemical and pharmaceutical, mineral and bulk materials and tobacco industries, providing on-line and at-line NIR (near infrared) measurements of constituents such as moisture, fat and protein content.

**IRM Metals Gauging Systems:** rugged in-process gauging systems for the steel and non-ferrous metals industries, delivering rugged measurements of key parameters such as thickness, width and flatness, and sinter permeability and oxidation state.

NDC is part of Spectris plc, the leading supplier of productivity-enhancing instrumentation and controls.
Rugged, Reliable, Maintainable Scanners

High performance intelligent scanners for fast, accurate measurement

NDC’s AccuTrak scanner can measure wide web widths required for geotextile applications.

NDC’s AccuTrak O-Frame scanner has been specifically engineered for today’s stringent quality requirements. Its rugged design utilizes a revolutionary head carriage bearing system that provides long-term precise, repeatable measurement performance.

This intelligent iFrame™ scanner delivers fast, accurate, reliable measurement that is tightly integrated into an intelligent distributed web gauging architecture from NDC. Spanning four decades of experience in the industrial measurement and control industry, the AccuTrak O-Frame scanner provides unmatched performance and a low cost of ownership.

NDC’s intelligent MiniTrak iFrame™ scanner family offers fast, accurate, reliable measurement that is tightly integrated into an intelligent, distributed web gauging architecture from NDC.

The MiniTrak O-Frame scanner supports up to two quality sensors, for example the intelligent backscatter, reflection and/or transmission iSensors™ from NDC. The 8” box section structure enables this compact scanner to fit into some of the most demanding process locations, while the top mount transport carriage prevents scanner debris from falling onto the sheet.

The MiniTrak S-Frame supports both the backscatter and reflection family of intelligent iSensors™ from NDC. This frame is compact, robust and supports up to two scanning intelligent iSensors. It requires minimal installation space and can provide critical measurements from difficult process locations.

...while NDC’s compact MiniTrak scanners provide cost-effective performance to deliver high-quality nonwoven products.
Proven, Capable Solutions

NDC nonwovens industry expertise
...a solution for each application

► Nonwoven Applications

Spunbond/SMS:
With 12 different sensor designs utilizing 5 different measurement technologies, NDC can provide the optimum measurement solution across the entire family of spunbond/SMS applications.

Spunlace:
NDC can combine its basis weight gauge (beta, gamma or X-ray) with one of its moisture gauges in order to provide a dry weight measurement. This combination is useful for monitoring and controlling the moisture content of certain medical and hygiene products.

Airlaid, Carded and Hybrid:
Application-matched NDC sensors provide most all of the on-line measurements that are required within the airlaid, carded and hybrid nonwovens markets. This includes basis weight, moisture, special treatments, coating, lofting density and film lamination.

► Nonwoven Controls

Machine Direction & Cross Direction Controls:
NDC control options include basis weight, moisture, thickness, treatments and coatings. These controls can be used to optimize raw material consumption, energy optimization and productivity.

► System Options

- FFT (Fast Fourier Transform) analysis
- SPC quality reporting
- 3D profile analysis displays
- System integration: NDC’s web gauging systems can be integrated with SCADA systems, metal detectors, web inspection equipment and OEM controls using OPC connectivity.