

EasyInspect & EasyMeasure

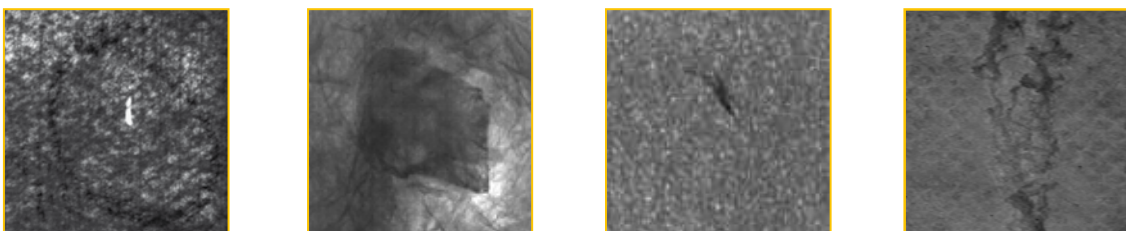


Automatic Process & Quality Control for Nonwoven Material Rolls



Nonwovens

The Complete Inspection Solution



EasyInspect & EasyMeasure

YOUR BENEFITS

Cost savings with superior technology

- Reliable defect detection and classification of all deviations from the base material through Multiple Image Defect Analysis (MIDA)
- Super-fast cameras = multiple optical channels in one camera line
- Small space requirements and cost savings through Twin-Line illumination – 2 optical channels in one illumination
- Reliable Streak Detector, unique defect detection through Histogram Evaluation

100% material monitoring

- Grammage monitoring: 100% of the material base weight can be monitored for user-defined material areas
- Formation monitoring: Individual local area characteristics like cloudiness and other irregularities can be detected in small and large material areas

Unparalleled user-friendliness

- Detailed production statistics both during and after production
- Simple adaptation to new materials onsite without programming or software knowledge



Dr. Schenk inline inspection for nonwoven materials

Nonwoven defects:

- Contaminations (oil stains, particles, foreign fibers,...)
- Irregular fiber distribution:
 - Thick spots /Thin spots
 - Holes
 - Fish eyes
- Streaks
- Wrinkles
- Defective coating (irregular, non-adhesive or missing)
- and many more...

Nonwoven technologies:

- Spunbond /Meltblown
- Carded:
 - Spunlace
 - Needlepunch
- Airlaid
- Wetlaid

Nonwoven applications:

- Hygiene
- Filters
- Automotive
- Medical care
- Geo-Textiles
- Composites
- and many more...

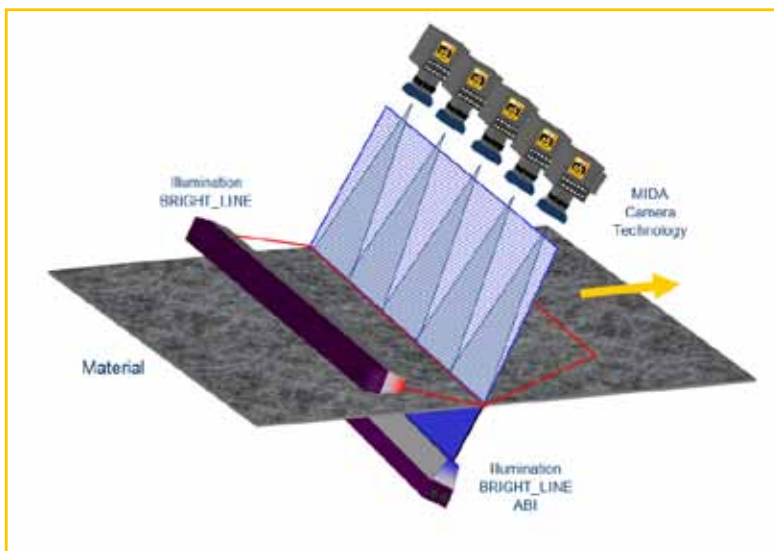


Ensures Quality, Improves Your Process

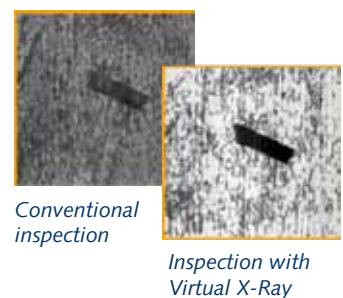
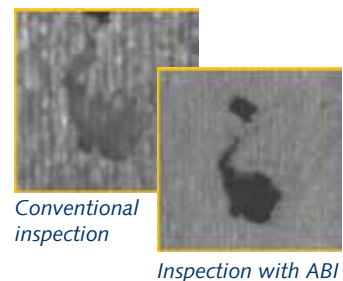
New Inspection Technology - Adaptive Background Illumination (ABI) and Virtual X-Ray

Inspection with *Adaptive Background Illumination (ABI)* is a completely new concept tailored specifically for the demands of nonwoven inspection. A background illumination in transmission is combined with a reflection illumination for optimal inspection results. The background illumination intensity can be adapted to every material density and characteristic, offering a perfect optical compensation of the material noise for all products. This leads to a significantly improved defect detection and classification based on a better signal-to-noise ratio compared to conventional inspection systems.

ABI can be combined with *Virtual X-Ray*, which offers an illumination with ultra-high light intensity using modern high power LEDs. This is especially effective for detection and classification of e.g. small foreign material inclusions (differentiation between material noise and neps) on top, bottom as well as inside the nonwoven material. Thanks to the Dr. Schenk MIDA technology (*Multiple Image Defect Analysis*), ABI and *Virtual X-Ray* can be used on the same scan line by multiplexing between them.



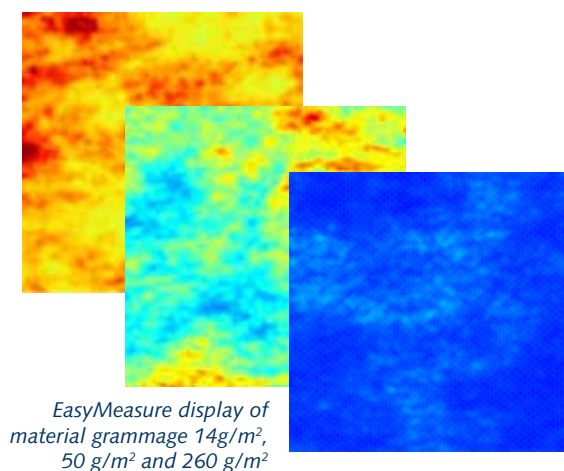
Optical Setup of Virtual X-Ray and ABI



EasyMeasure monitoring

Material homogeneity, grammage and formation are the most important material properties for a nonwoven material, being crucial for a low coefficient of variation (CV) in the production.

Dr. Schenk's EasyMeasure offers complete monitoring of these aspects for the full material width with more than 65.000 gray levels. For this, the material can be divided into areas of user-definable size, offering a scalable material resolution ideally suited to displaying large area issues like material cloudiness and other large-scale inhomogeneities in high resolution and great detail.



Your Reliable Partner



Dr. Schenk's production site

Dr. Schenk GmbH, established in 1985, is an innovative high-tech company based near Munich, Germany. Dr. Schenk develops, produces and markets optical inspection and measurement solutions for automated quality assurance and production process monitoring. This includes high-quality, customizable handling solutions. The systems are a key success factor in the making and converting of many materials, e.g. plastics, nonwovens, textile materials, paper, metal, or glass, or a multitude of markets like display glass, automotive, packaging, medical, renewable energy, and many more.

Throughout the world Dr. Schenk's 300+ employees continue to set new standards for inspection. Over 12,000 m² of modern, cleanroom-capable production and testing facilities are available to research, development and production to apply cutting-edge optics and electronics to customer applications.

Dr. Schenk offers extensive from-lab-to-fab knowledge. Customers benefit from the expertise in the translation of lab applications to large scale productions. Sophisticated handling solutions complete the one-stop-shopping experience.

The company's objective is complete customer satisfaction. This is achieved through innovative and practical solutions that can be implemented into new and existing production lines. Local sales and service facilities around the world ensure fast support, technical service, training and consulting at any phase of a project.

From modular standard units to highly customized systems – Dr. Schenk's solutions have precision in focus!

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