

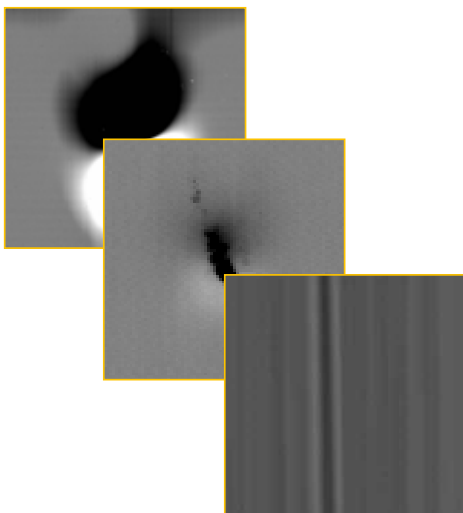
Glass Inspect



Float Glass Inspection and Measurement
for Highest Quality and Optimized Yields



Float Glass



The Number 1 in
Glass Inspection

Glass Inspect

YOUR ADVANTAGE - OUR TECHNOLOGY

Optimal production yield through supreme inspection capabilities:

Cameras

- Detects defects twice and ensures higher accuracy for low-contrast defects (Dual Line, 12-bit camera = 16 x higher resolution than conventional 8-bit cameras)

Illumination

- 10x more light than conventional systems through Dr. Schenk SLT technology
- Water cooling ensures failsafe operation at maximum LED brightness and all factory temperatures
- Highest detection performance for clear and tinted glass of extremely low transmission grade

MIDA

- Powerful and accurate defect detection with MIDA (Multiple Image Defect Analysis)

Scalable

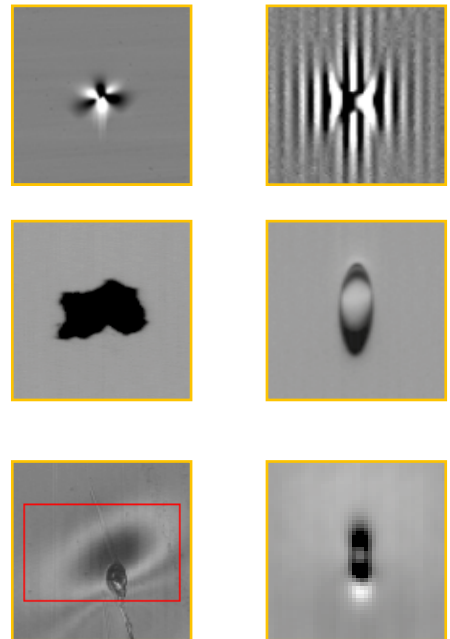
- Ideal for typical applications; with dedicated core channel or dedicated optical channel (*Essential*)
- Combining both systems for cutting-edge requirements (*PRO*)

Smart Cameras and SLT Illumination

To be better than the competition, one needs a technological advantage - which is provided by Dr. Schenk's SLT illumination and the 12-bit Smart Camera. SLT uses ultra-bright, long-term stable LEDs. In combination with the outstanding accuracy of the Smart Cameras, this results in a significant increase in detection, superior transmission grades, and the ability to multiplex between different optical channels (MIDA) and provides brilliant detection and classification.



Versatile Defect Detection



Dr. Schenk offers the right inspection setup for all types of float glass defects



Complete MIDA solution

Dr. Schenk's MIDA (Multiple Image Defect Analysis) technology allows unique defect detection for the requirements of float glass production. During a single scan pass, multiple images are generated for comprehensive defect analysis. By switching between different camera channels and illuminations, multiple images of a defect can be taken, analysed and finally classified with a much higher grade of accuracy than systems with a single defect image can.

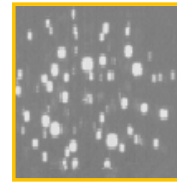


The No. 1 in Glass Inspection

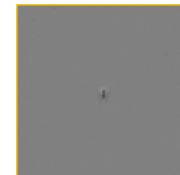
GlassInspect *Essential*

The GlassInspect *Essential* package is optimally suited for the detection and classification of all relevant glass defects like for example bubbles, knots, reams and more. GlassInspect *Essential* offers the following features:

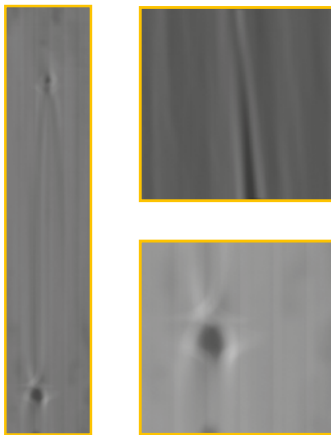
- High-resolution gray images for exact physical representation of defects
- Supreme inspection capabilities for glass transmission grades as low as 10%
- Optional Reflection channel for tin detection and for precise defect depth recognition (top, bottom and inside the glass)



Top and bottom tin defects



Core channel



Two Versions

One version of GlassInspect *Essential* offers a dedicated core channel as its main feature:

- Best measurement and analysis of size, contrast and shape of glass defects
- Innovative detection of ream knots

Another version of GlassInspect *Essential* offers a dedicated optical channel as its main feature:

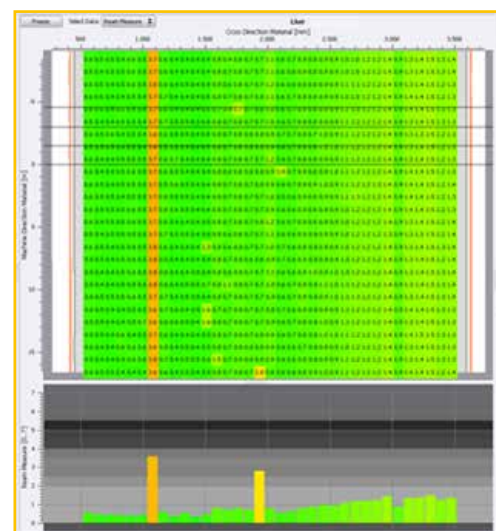
- Exact measurement of mdpt values for reams and drawlines, as well as "Zebra-Test" and the projection method integrated in software
- Detection of distortions and refraction defects like reams and ream knots

Reams and Refractions

GlassInspect *PRO*

GlassInspect *PRO* is the only solution for float glass inspection that offers the combined advanced detection of both *Essential* versions for an allround solution for all types of float glass.

With twice the number of high-speed and high-resolution cameras, combined with dedicated LED light sources with SLT technology performing at the highest light intensity available on the market, Dr. Schenk GlassInspect *PRO* offers an unreachable and unrivaled quality level for automated optical inspection (AOI) systems.



Optical refraction measurement shows large-scale ream in Material Map



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 more than 300 Dr. Schenk employees continue to set new standards for inspection. Over 18,000 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 your material in focus!

For more information: www.dr.schenk.com

YOUR MATERIAL IN FOCUS

*Advanced Machine Vision
Solutions for Quality Control*



**Dr. Schenk GmbH
Industriemesstechnik
Headquarters**

Bussardstr. 2
82166 Graefelfing
Germany

Phone: +49-89-85695-0
Fax: +49-89-85695-200

www.dr.schenk.com/contact.html