

YOUR QUALITY IS OUR VISION.



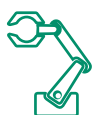
We see more.



VacuCheck

Camera System for the
Optical Detection of Seal Integrity
in Vacuum Pouch Packaging

www.clkgmbh.de/en



CLK GMBH

AUTOMATION. SIMPLE. FLEXIBLE.

Based in Altenberge, CLK GmbH has been your trusted partner since 1996 for intelligent solutions in industrial image processing and flexible robotics.

We develop, manufacture, and supply non-contact quality control and positioning systems for a wide range of applications, with a strong focus on the food and packaging industries. Our extensive experience in evaluating non-standardized products is second to none. Applications range from quality inspection to the handling of natural products such as meat, cheese, and vegetables.

Whether standard or customized solutions – we set new benchmarks by developing innovative automation solutions for complex challenges.



We help you optimize your production processes, eliminate potential sources of error in advance, and always keep a close eye on your product quality.“
Dr. Carsten Cruse, CEO, CLK GmbH



Dr. Carsten Cruse,
CEO



Industrial Image Processing

We detect more!



Robotics

Flexible and precise:
The robot in quality control.



Custom Solutions

Automation made easy.



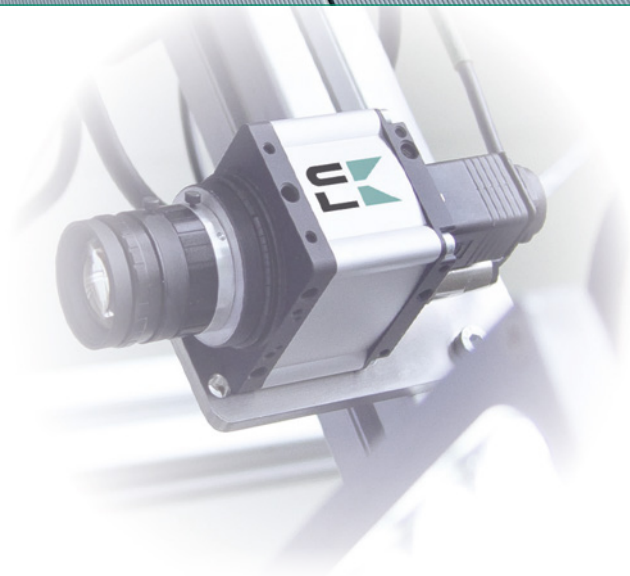
Special Solutions

The right partner for your
unique requirements.



Our many years of experience in food production enable us to offer innovative and reliably functioning solutions tailored to the unique challenges of this industry.

Get in touch with us!



YOUR QUALITY IS OUR VISION.



Learn more about
our services and
areas of
application
here



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LEAK DETECTION

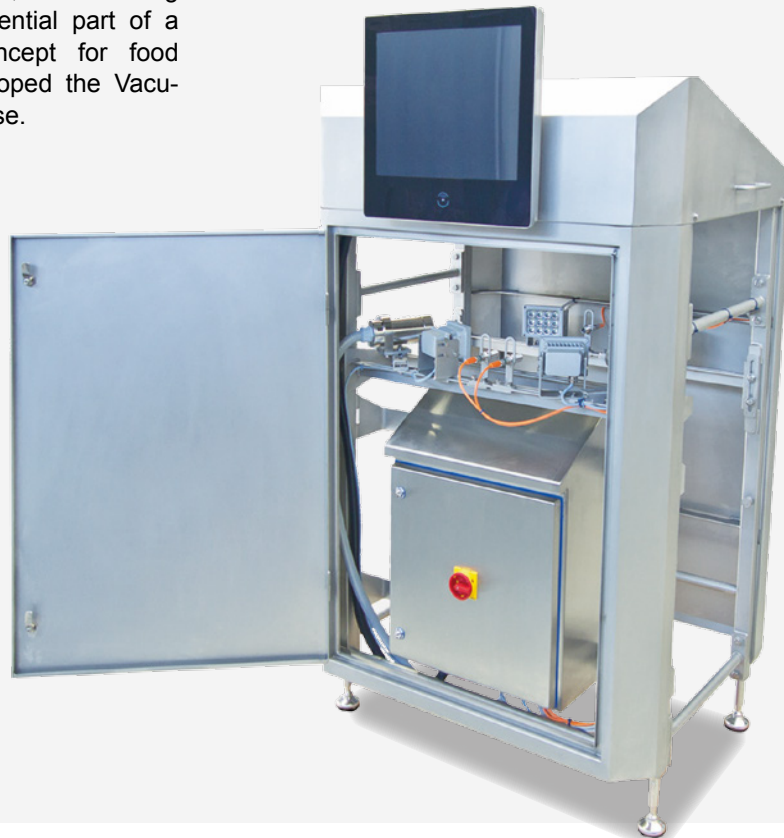
NON-DESTRUCTIVE, FAST, AND PRECISE!

The VacuCheck

To prevent product complaints, leak testing of vacuum pouches is an essential part of a comprehensive packaging concept for food manufacturers. CLK has developed the VacuCheck specifically for this purpose.

Using state-of-the-art image recognition and artificial intelligence, the system enables non-destructive detection of even the smallest leaks-fully automated and integrated into the packaging line, in accordance with hygienic design standards.

Placed directly above the conveyor belt, the VacuCheck ensures the inspection of every product in real time.



Product Protection

Vacuum-sealed pouches offer optimal protection and are used wherever long shelf life and freshness of food products are essential. If the packaging is not 100 % leak-proof, the quality and safety of the products are at risk.

The result can be costly product recalls. To reliably detect packaging defects and sort out faulty pouches, food manufacturers depend on highly precise inspection systems.

Fully automated and integrated into the packaging line, the CLK VacuCheck handles this task-at speeds of up to 70 products per minute. Thanks to advanced camera technology and AI-based image processing, the CLK VacuCheck identifies nearly 100 % of all leaking packages.

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We see more.

Fully Automated Inline System

Detection Rate Close to 100 %



★ Your Benefits

- ✓ Detection rate: nearly 100 %
- ✓ Objective evaluation with consistent criteria – superior to human inspection
- ✓ Can be linked to an automatic rejection unit
- ✓ Easy integration into existing production lines
- ✓ Designed in accordance with hygienic design guidelines
- ✓ System adaptable to local production conditions
- ✓ Automatic email notifications in case of faults



◀ You can find more information here

SEAMLESS INTEGRATION INTO YOUR INDIVIDUAL PROCESS CHAIN

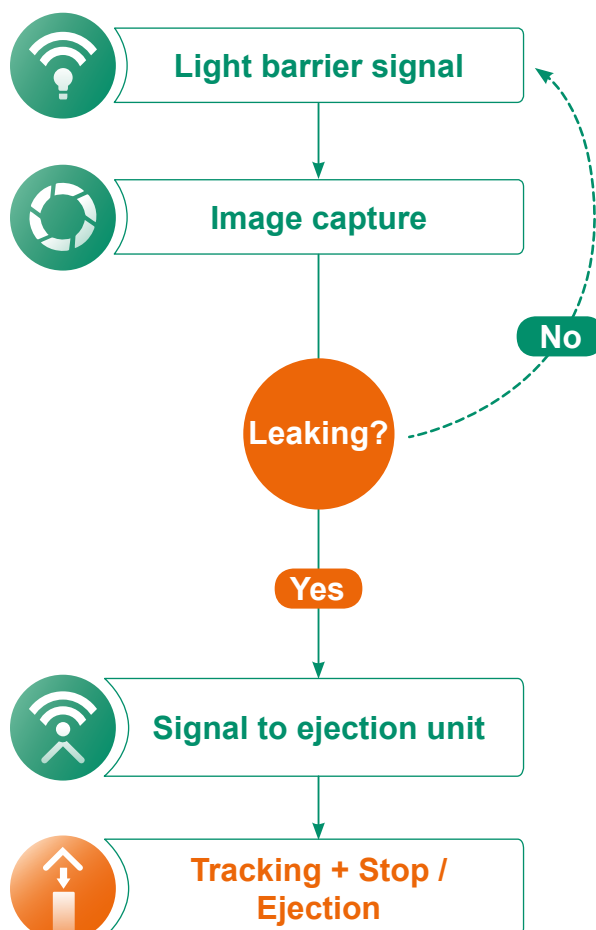
✂ Easy Integration Into The Production Line

The CLK VacuCheck can be installed to suit local production conditions. The camera system is mounted above the conveyor belt and can be dismantled in just a few steps, allowing access even to hard-to-reach areas of the production line. A rotary encoder is mounted on the conveyor belt to synchronize the rejection process. The system can be retrofitted into existing lines with minimal effort.



💡 How It Works

When a product passes through the integrated light barriers, cameras capture images of both the front and back of the packaging. These images are then analyzed using AI-supported image processing, and the results are stored in an internal database. If a leaky package is detected, a signal can be sent to an ejection unit.



Continuous Defect Detection – How Does the Inspection Work?

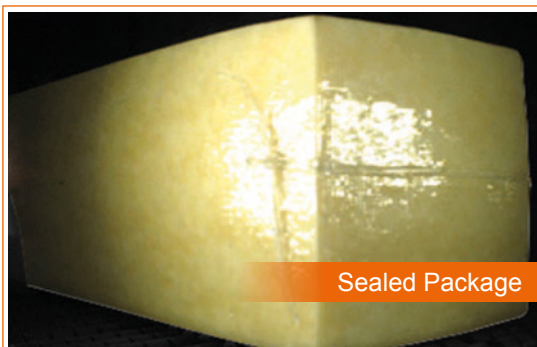
With state-of-the-art camera technology and AI-supported image processing, the CLK VacuCheck identifies nearly 100 % of all leaking packages-fully automated within the packaging line. A properly sealed vacuum pouch exhibits a characteristic surface pattern, whereas a leaking one does not. If the image recognition detects a

deviation from the defined target condition, this information is passed on within the system and the defective package is automatically ejected. A major advantage of the CLK VacuCheck is its inline operation above an existing conveyor belt, making it well-suited for high-speed production lines.

Sealed or Leaking? The Evaluation Principle

Vacuum-sealed products exhibit characteristic patterns under specialized lighting, which indicate whether the packaging is properly sealed.

The software of the CLK VacuCheck reliably analyzes these patterns using artificial intelligence, enabling accurate and dependable assessments of the packaging's condition.



POWERFUL IMAGE PROCESSING SOFTWARE

✓ Hygienic Design

Designed according to the principles of hygienic design, the CLK VacuCheck meets the daily requirements of cleaning and disinfection that are standard in the food industry. The system features smooth, hygienic, and easy-to-clean stainless-steel surfaces. Its geometry is carefully designed to prevent the accumulation of dirt or residue. Thanks to its optical detection method, there are no product-contacting components involved.

The system also meets the stringent requirements of protection class IP69, making it ideal for use in hygiene-sensitive environments. The CLK VacuCheck is designed in full compliance with hygienic design standards and is entirely accessible for cleaning and maintenance.



Learn more about the
benefits here

👉 Intuitive Operating Concept

The clear and user-friendly interface gives you a constant overview of the key metrics in your production process. The system status is continuously monitored, and any faults are immediately detected and can be communicated via email.

The intuitive interface also allows for easy management of your product settings. If a leaking package is detected, a signal can additionally be sent to an ejection unit.



On a control screen located directly on the production floor, employees can view the inspection status of the maturation pouches (Photo: Molkerei Ammerland)

AUTOMATION. EASY. FLEXIBLE.

Automation Made Easy.



Detection of Leaks Before Maturation

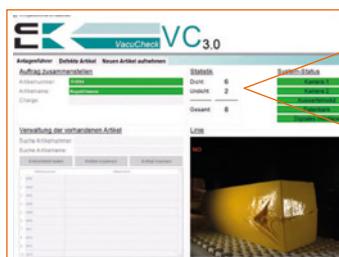
Objective and Optical Quality Control

Powerful Software



Statistik	
Dicht:	6
Undicht:	1
Gesamt:	7

Immediate Detection of Defective Packaging



Statistik	
Dicht:	6
Undicht:	2
Gesamt:	8

Marking of Leaking Cheese Packages

- ✓ High Speed
(up to 70 products per minute)
- ✓ Effortless selection of packaging design via touchscreen, with optional automatic design switching
- ✓ Multiple password-protected user levels for production staff, quality assurance personnel, and administrators
- ✓ Live display of inspection results at the terminal
- ✓ System status monitoring in real time
- ✓ Optional result archiving in the CLK database

OPTIMAL SOLUTIONS TAILORED TO YOUR NEEDS



Versatile Configurations


The CLK VacuCheck has the potential to significantly enhance both efficiency and product safety in cheese packaging.

Thanks to flexible hardware and software, we can easily adapt our systems to your specific requirements or design changes.

We also offer an optical leak detection system for Euroblocks, based on a similar principle, which delivers the same advantages as the standard version. It's also possible to combine both inspection types within a single system.

Get in touch with us! We'll be happy to advise you and develop a turnkey solution tailored to your needs.



 You can find more information here

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Technical Data

Technical Specifications	Feature Specification
Maximum Cycle Rate	70 packages / minute
Operating Temperature	0° C to +30° C
Relative Humidity	Max. 95 %
Housing Materials	Stainless steel, aluminum, coated acrylic glass, silicone seals
System Dimensions	Standard version: 1230 x 890 x 1780 mm ³
Lighting Unit	Individually replaceable LED modules
Protection Class	Camera unit: IP69 Control cabinet & operator panel: IP69
User Input	Touchscreen or remote connection
Operating System	Windows 10
Data Transmission	10 GB network cable
Interface Options	OPC UA, Digital I/O (ejection signal, result output, fault notifications)
Power Supply	230 VAC / 50 Hz
Typical Power Rating	250 W



LET'S SHAPE THE
FUTURE TOGETHER!



VacuCheck


QUALITY IS OUR ISSUE.
DON'T LET IT BE YOURS.



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