



RCI Counting and Inspection

Automated quality control





Product inspection – automation for controlled quality

The RCI (Reusable Crate Inspection) is employed for automated anomaly and multi-feature detection of containers or boxes in various designs. Areas of application are inspections after automated cleaning processes, for example.



Tunnel vision system

The tunnel enables the rapid collection and sorting of defective or contaminated containers of reusable packaging in distribution logistics.

Manual sorting is reduced, process reliability in quality control is significantly increased and the dispatch of containers in NOK status is reduced to a minimum.

The inspection tunnel can be integrated into existing conveyor technology to save space without having to interfere with its control system. The system continuously and quickly determines the condition of the containers at very high speeds and ejects these in conjunction with a pusher system for post-processing.

The tunnel can also be fed manually. Depending on the task, the inspection tunnel can also be equipped with different camera systems to carry out further inspection tasks.

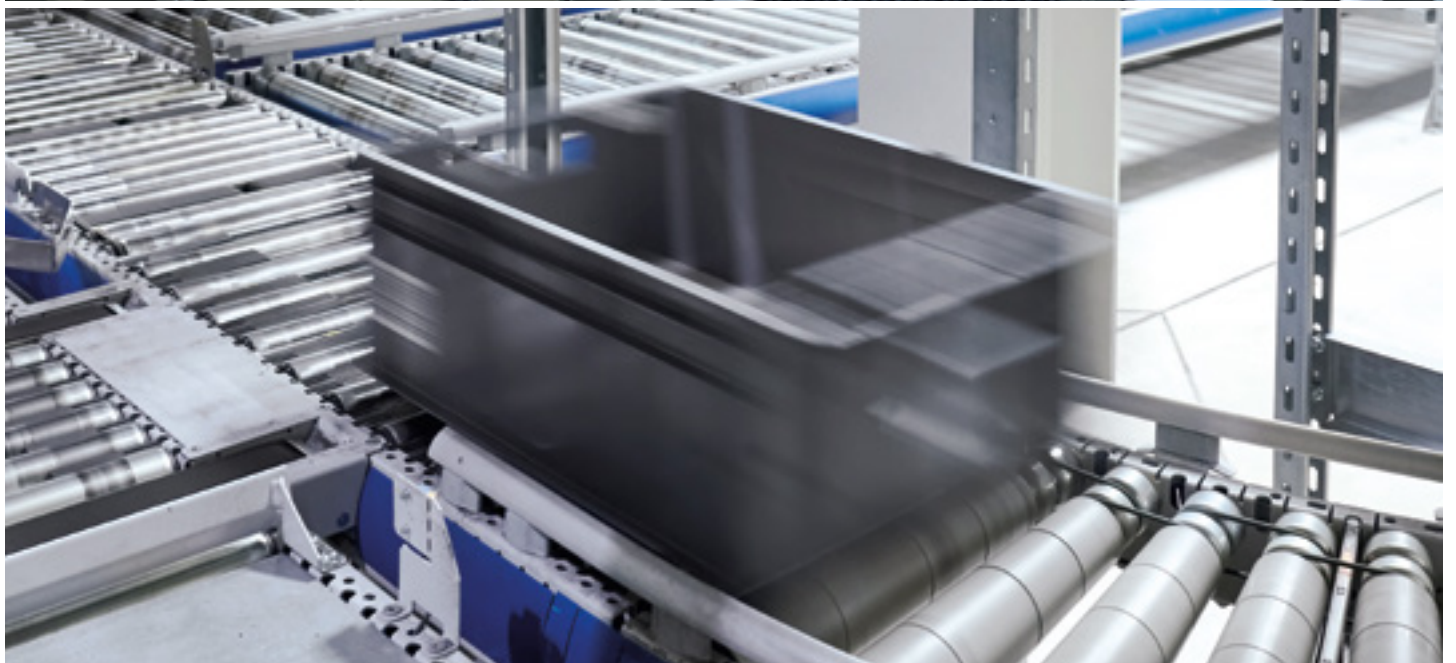
The system meets the current requirements for application in the food industry.

Data exchange with higher-level IT systems is possible.

Your benefits

- Increase in process-reliable defect detection
- Multi-feature inspection
- 100 % control
- Reduction of manual input errors
- Reduced workload and cost savings
- Adjustable tolerance limits
- Clear, fast counting of containers
- Documentation and traceability
- Paperless processing





Features

Goods carriers/goods to be picked

- Container boxes, food, industrial products

Assembly dimensions

- Customized

Characteristics

- Housing with integrated cameras and lighting, depending on application
- Protection class: depending on customer specification
- Decentralized visualization of error messages
- Signal light for status messages on the system
- Remote access via remote maintenance access (optional)
- Connection to higher-level systems such as ERP, LVS, MFS (optional)
- Independent installation above existing conveyor technology
- No intervention in the conveyor system's control technology required
- Machine learning software

Reading conditions

- Isolated feeding of inspection goods
- Vibration and shock-free conveying



Reusable Container Inspection – 100% inspection done quickly

Even the basic model of the RCI is equipped with numerous basic functions. It can be expanded with additional mechanical and software modules and adapted to your reading and evaluation requirements.

RCI – Basic model

The basic model consists of a reading tunnel with high-intensity power LED panels to avoid panels equipped with high-performance inspection cameras to avoid stray light.

With this system, you can improve your quality control through a fast and continuous inspection process for your products.

Depending on the available conveyor speed and application task (number of anomalies), up to 3,800 objects per hour can be subjected to a quality check.

The data history can be saved either locally on the integrated PC or at a central storage location.

RCI – Expansion modules mechanics

- Camera adaptation to changed reading requirements/inspection objects

RCI – Expansion modules Software

- Interface to an ERP, e.g. SAP
- Interface to an MFS or document archive
- Interface to conveyor system
- Analytics software for analysis and tracking



Digital optimization of your quality processes

- Traceable history of your inspection data and analysis values
- Transparency of logistics processes
- Display of errors and malfunctions
- Network connection to your IT solutions
- Future-oriented software through AI-based image processing

Your benefits of using an RCI

- 100 % control of all objects
- Configurable hygiene and quality criteria
- Comprehensive documentation of your inspection results through paperless image and data storage
- Improving the inventory
- Error prevention by minimizing manual processes
- Increasing process reliability
- Reduction of complaints in the event of delivery of defective containers or goods
- Low assembly and installation costs thanks to delivery of a pre-installed system
- Reduction of shrinkage
- Short training and maintenance times
- Short commissioning time
- Simple integration into your production process



About us

The Wiesbaden-based Eckelmann Group is a full-service provider for industrial automation and digitalization. Our vision is a world without wasting manpower, raw materials and energy. To achieve this, Eckelmann engineers offer system integration from a single source: consulting, individual hardware and software solutions, turnkey automation systems, lifecycle management and smart service.



Sites & partnerships – national & international
480 + employees



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