

Feature control **miho TOP-Cam**



Advantages

- Optical feature control
- Check of features closure, bottom or shoulder
- Bottom control with upside down containers
- Empty can inspection / Inspection of reusable cups: rim, inner sidewall, bottom

Function

Free-flow camera illumination unit.

- Inspecting container features located on the top, bottom or shoulder.
- Quality control of empty cans

No orientation of containers needed.

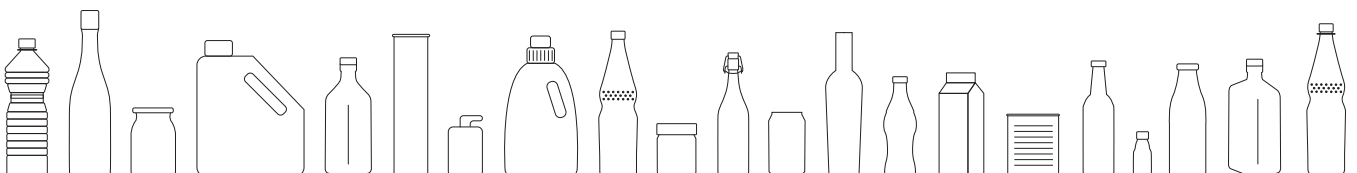
The inspection is carried out by a colour camera and an application-specific high-power LED lighting system.

The containers can be checked for the following criteria, among others:

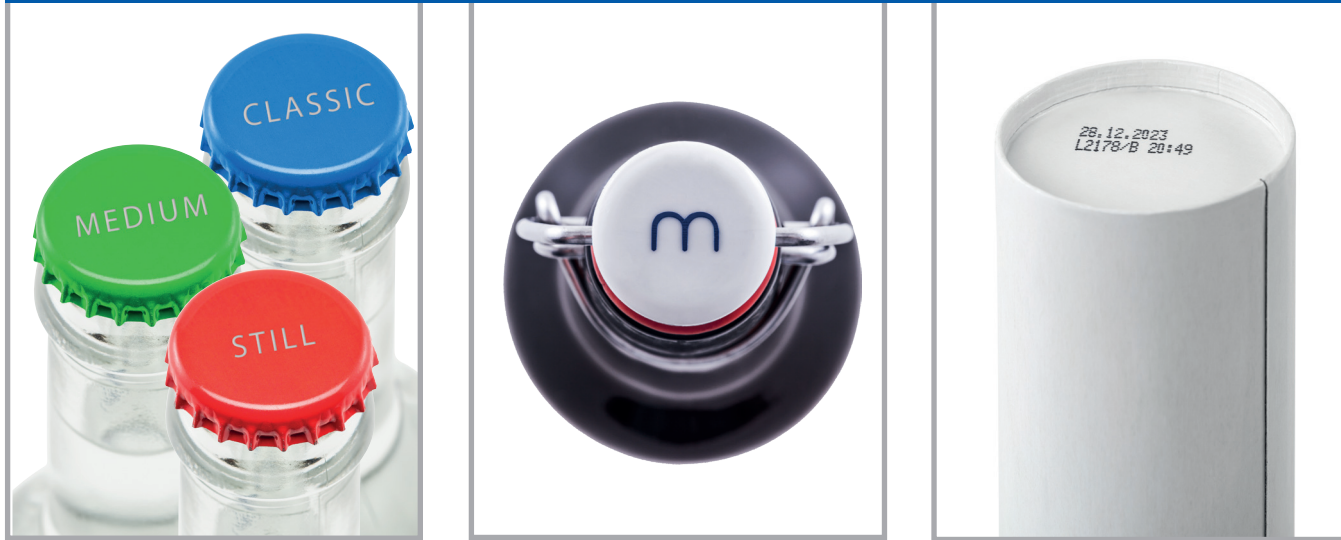
- Presence and completeness of the coding (BBD, LOT number) via serial defect detection.
- Colour recognition of the closure.

Technology

- Stainless steel construction
- Easy accessibility, maintenance-friendly construction
- Closed electronic housing in IP 65 design
- State-of-the-art, digitalised and flexible colour camera mirror system
- Low-loss, variable and maintenance-free high-performance LED illumination with polarisation filters using reflected light method
- Height adjustment for adaptation to different container heights



Features on the top of the container



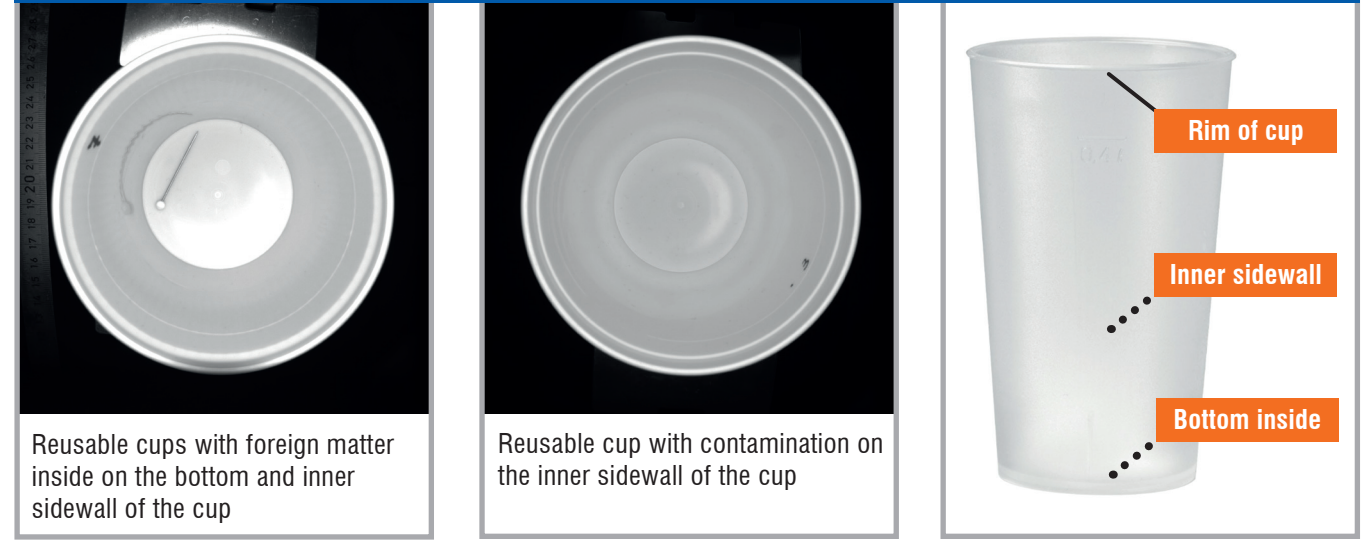
Features on the shoulder of the container



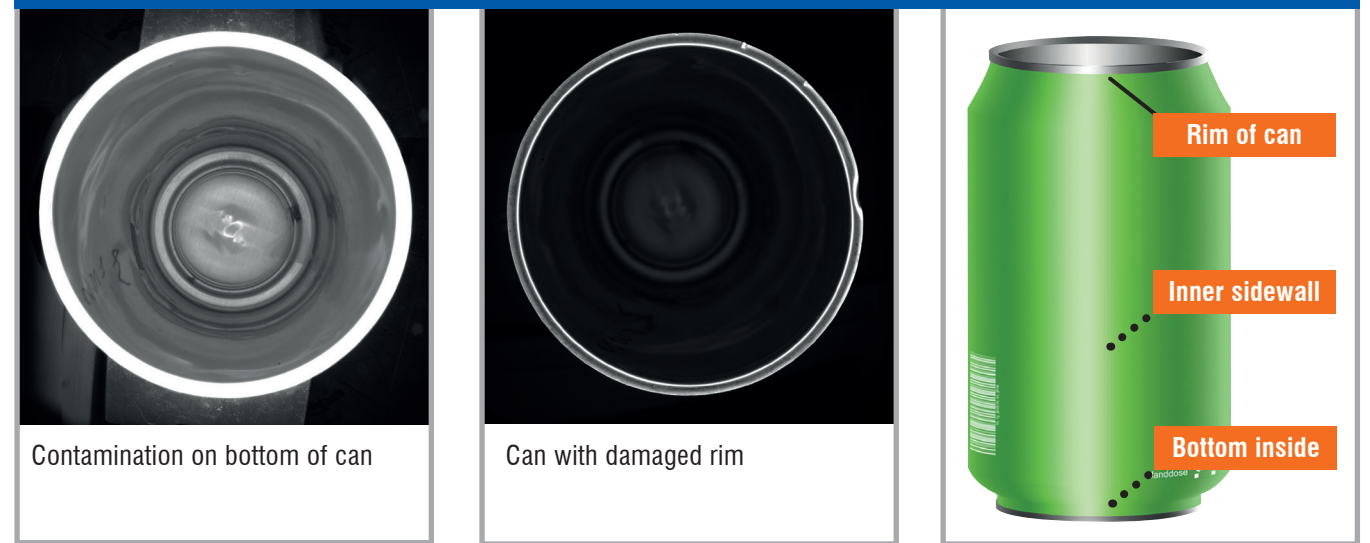
Features on the container bottom



Inspection of empty reusable cups

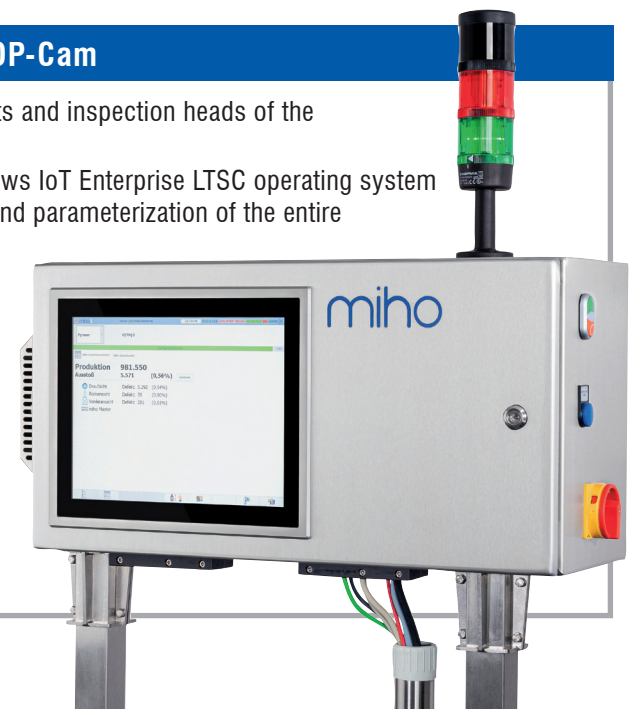


Inspection of empty cans



Evaluation unit of the Multi-PC product family for TOP-Cam

- For control, evaluation and visualization of various inspection units and inspection heads of the miho product family.
- PC technology with touch controls based on the Microsoft Windows IoT Enterprise LTSC operating system and image processing miho VIDIOS_SC®. Intuitive visualization and parameterization of the entire machine package with inspection units and reject systems.
- Compact electronics housing made of stainless steel with 15-inch multi-zone colour touch display, IP 55 version.
- Control of one or more miho camera lighting units or other inspection heads from the miho product range.
- Evaluation of the camera images by several individually parameterizable evaluation zones.
- Remote maintenance functionality with all the necessary software licenses (Open VPN).
- Separate miho AWeS production data acquisition, interface according to Weihenstephan standard.



miho TOP-Cam modular product system

Device / Module	Inspection task / function
miho TOP-Cam / Inspection head	For the detection of features on containers, e.g. BBD and lot no.
miho TOP-Cam / Extension Cloudy day	Especially for reflective surfaces like e.g. cans made of aluminium on presence, completeness
miho TOP-Cam / Extension UV	Especially for PET containers via fluorescence (laser engraving) for presence, completeness
miho TOP-Cam / Extension Pericentric	Especially for containers with a feature on the side of the seal or the container shoulder
miho TOP-Cam / Extension can	Dual camera system for the inspection of cans and reusable cups

Overview of the Multi-PC Family

Depending on the requirement profile, several camera lighting units can be connected to the multi-PC evaluation unit.

Up to 4 digital miho camera lighting units can be processed simultaneously by the real-time image processing miho VIDIOS_SC®

Inspection machines of the multi-PC family:

- Fill level inspection miho Newton HF, miho Newton X2P, miho Newton X2Z or miho Newton IR2
- Vacuum detection miho VacU
- Sealing inspection for PET bottles miho Feeler 2
- Label inspection miho EC-Cam

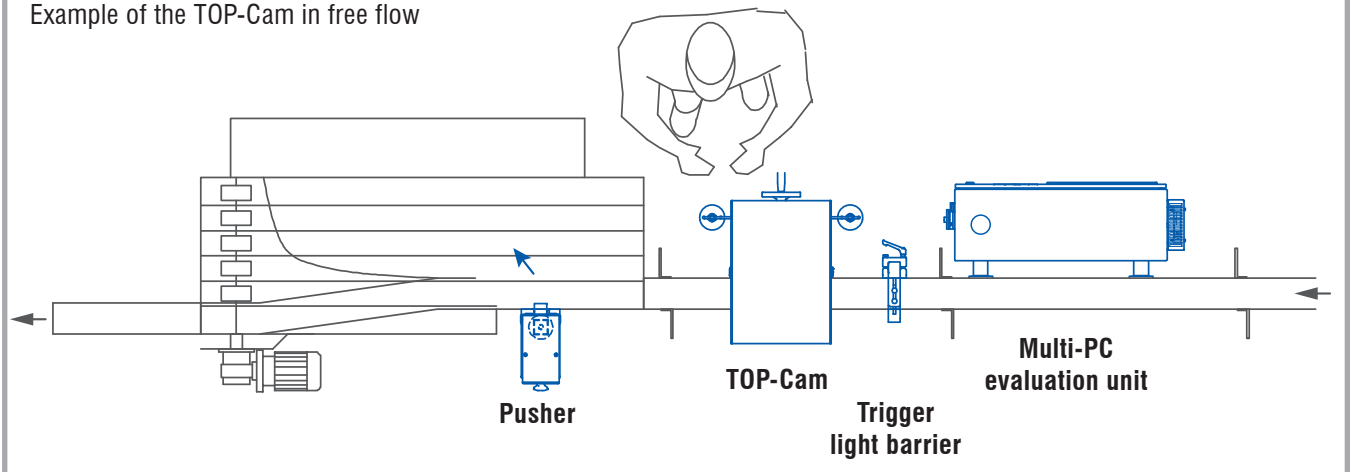
Reject systems

- High speed pusher for container miho HSP
- Multi-reject system for container miho HSPM
- Linear reject system for container miho Leonardo M
- Curve reject system for container miho Leonardo SFM

Network integration

- Diagnosis and online help through separate remote maintenance module
- Production data acquisition miho AWeS via Weihenstephaner Standard

Example of the TOP-Cam in free flow



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