

End-of-line inspection miho TOP-Cam



Advantages

- Optical equipment control
- Inspection of features on closure, base or shoulder
- Inspection of the base when the container is turned upside down
- Special extensions for reflective containers, PET containers ...

Function

Free-flow camera illumination unit for inspecting container features located on the top, bottom or shoulder.

No container alignment is necessary.

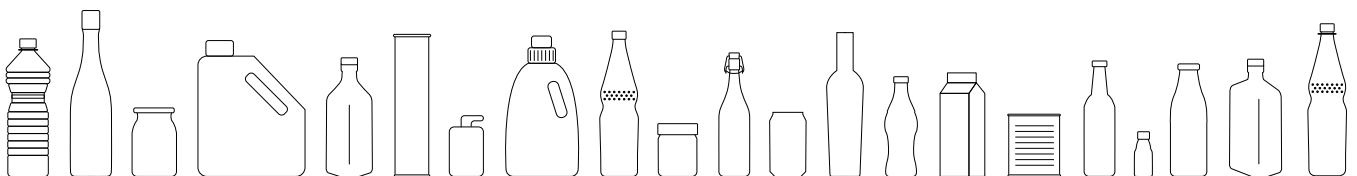
The inspection is carried out by a colour camera and an application-specific high-power LED lighting system.

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

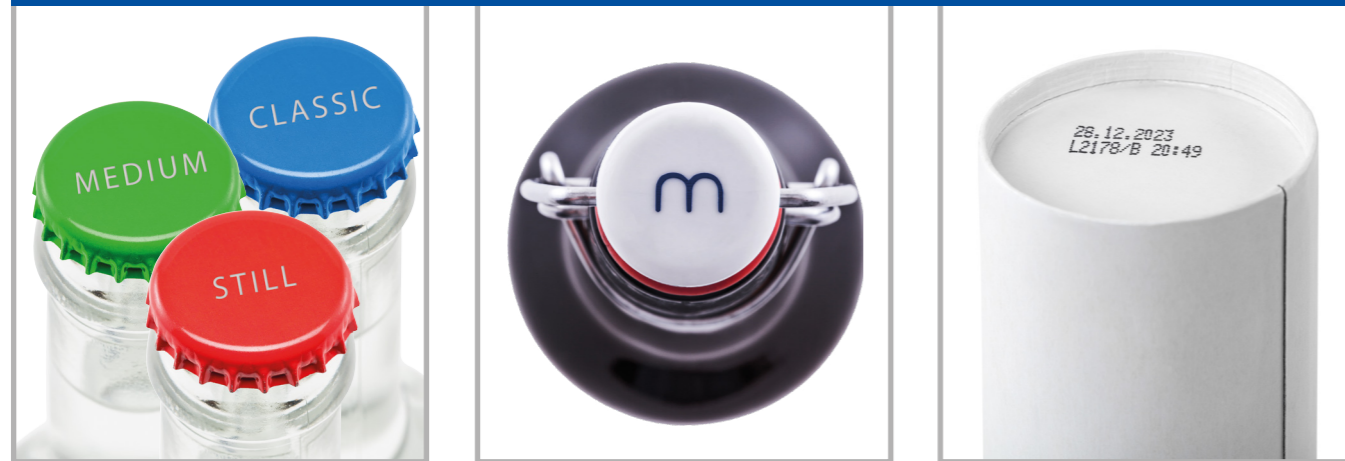
- Presence and completeness of the coding (MHD, LOT number) via serial defect detection.
- Colour recognition of the closure

Technology

- Stainless steel construction
- Easy accessibility, maintenance-friendly construction
- Closed electronic housing in IP 67 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



PET bottle with laser engraving on the bottle shoulder by means of UV fluorescence and pericentric beam path

Features on the container bottom



Feature recognition despite reflective surfaces by Cloudy day extension

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 10 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

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

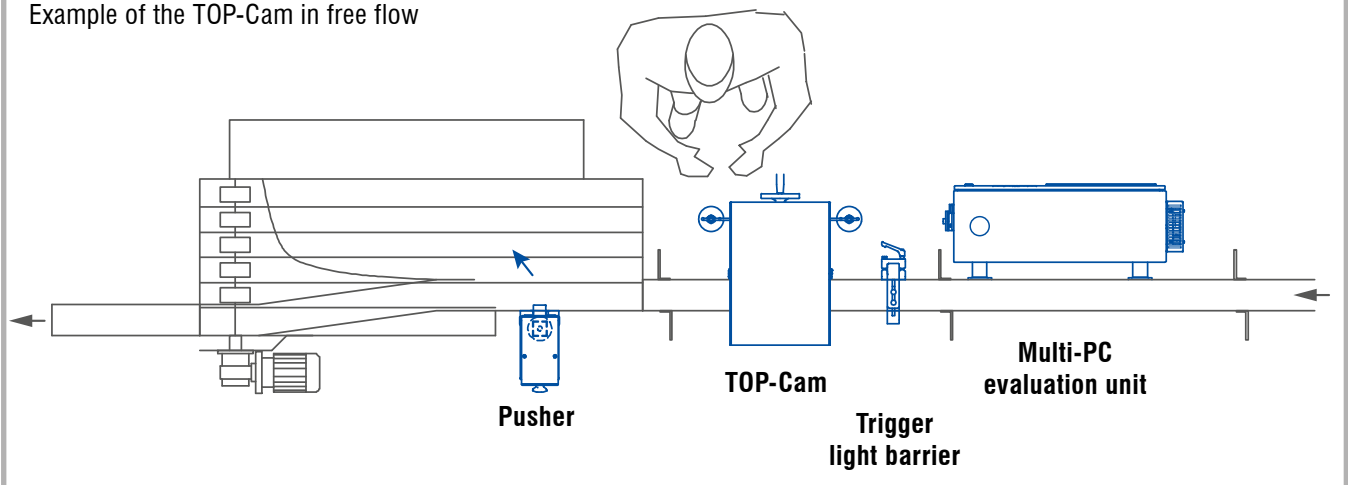
Reject systems

- High speed pusher for bottles miho HSP
- Multi-reject system for bottles miho HSPM
- Linear reject system for bottles miho Leonardo M

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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