miho Allround Optical 360° Inspection



miho Allround I Functions

1.1 Overview of functions

- 360° inspection of a fully equipped bottle after filling, capping or labelling
- inspects up to 5 labels
- cap inspection.
- fill level inspection (with extention moduls, see 1.5)



1.2 Cap inspection (examples)





1.3 Label inspection







1.5 Fill level inspection



2 3 miho Allround I Technology I Advantages

2 Technology

- at least four side cameras with a mirror cabinet create a 360° view of a processed image of the entire bottle
- **top camera** for inspecting **the cap** (optional)
- connection to special miho Fill Level Inspection Units
- latest computer technology miho VIDIOS[®]. An operating system developed for special requirements with network distributed image-processing
- up to 60 000 bottles/hour
- remote maintenance via the internet
- operating data-processing ("Weihenstephan" standard)



- touchscreen: intuitive user interface
- integration of miho reject systems (e.g. the linear reject system miho Leonardo M that safely rejects bottles standing up)





The four individual images of the side cameras (above) and the completely processed entire bottle-image, completely equalized (below)

3 Advantages

- the simplest variant management: hundreds of configurations are easy to handle. For easy administration, three levels are available (see diagram on the right): 1: Type (factory default configuration) 2: Product 3: Variant
- guided and graphical set-up of new label designs based on the processed image of a reference bottle. Inspection characteristics are created by copying an appropriate predecessor and are adapted step by step intuitively
- inspection of the presence and accuracy of the EAN barcode and expiry date (laser and inkjet)
- quick-start-guide for rapid introduction
- hygienic design
- separate inspection system, downstream from the labelling machine: there is therefore no pollution and no misalignment of remote cameras in the labelling machine when making changeovers or changing bottle-type
- simple upgrades to existing bottling-lines with minimal space requirements as a complete and integrated solution
- fill level inspection: can be combined with an optical, high frequency, infrared or X-ray fill level inspection



Detection of "creased label" faults on the basis of the miho image-processing platform miho VIDIOS®

miho



Simple variant management



Easy teach-in of new reference labels

4 $\min o$ modular product system for the complete inspection between the filler and packer

	Machine/Module	Inspection Task
1	miho Allround / Basic machine	Labels, expiry date, barcode
2	miho Allround / Top camera	Сар
3	miho Allround / Vacuum	Vacuum (fruit juice - wide-neck bottles / glass)
4	miho Newton Optics 2	Fill level (foaming liquids), Cap (slanting cap)
5	miho Newton HF 2	Fill level (standard)
6	miho Newton X 2	Fill level (fill level obscured by label / in cans)
7	miho Newton IR 2	Fill level (after cooler)
8	miho Feeler	Sealing faults (PET)
9	miho UIP	Ultrasonic foaming machine for the sealing inspection (glass, PET)
10	miho MX	Filling pipe detection

Installation Example 1:

Reference layout for bottling beer in returnable glass bottles, 0.3L - 0.5L, crown cork cap, 36 000 bottles/hour



Installation Example 2: Reference layout for bottling fruit juice in PET bottles, hot-fill with cooler, 15 000 bottles/hour







Allround | 8.2016



5 Construction and dimensions

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