5 steps to your individual bottom and mouth rim inspection system

1. Material inspection
Sighting and assessment of your glass containers to be inspected

2. Defects specification
Determination of the type and size of the defects to be detected

3. Configuration of your BMF-5C
Compilation of your system with respect to your requirements (container size, amount of cameras etc.)

4. Installation
Installation into your production line, mechanical and electrical connection

5. Commissioning
Setting of all parameters to your first article

On request you can rent our BMF-5C and test it in your running production.

Container shapes, container sizes and glass colours
The BMF-5C has been developed for the automatic optical inspection and sorting of round and moulded articles made of clear glass and coloured glass.

**The shape or size of your container is not listed?
Simply contact us. We will find a solution. Telephone: +49 (0)3764 7791870**

Bottom and mouth rim inspection system

appropriate for mouth rim diameters of up to 120 mm
for the inspection of containers made of clear glass and coloured glass
for the inspection of round articles and moulded articles
with an inspection speed of up to 350 containers per minute

On-site installation, operation, service:
- Simple connection to an existing conveying belt
- Supply also with own conveying belt and discharge unit
- Connection to different line control systems and different data acquisition systems possible
- Self-test functions are installed
- Image evaluation with commercially available hardware

Technical data:
- Individual doors design for an adaptation to the space conditions
  Swing doors, horizontal sliding doors, vertical sliding doors
- Machine dimensions: 1,900 x 1,050 x 1,900 mm (W x D x H)

Optische Prüfsysteme Dr. Günther

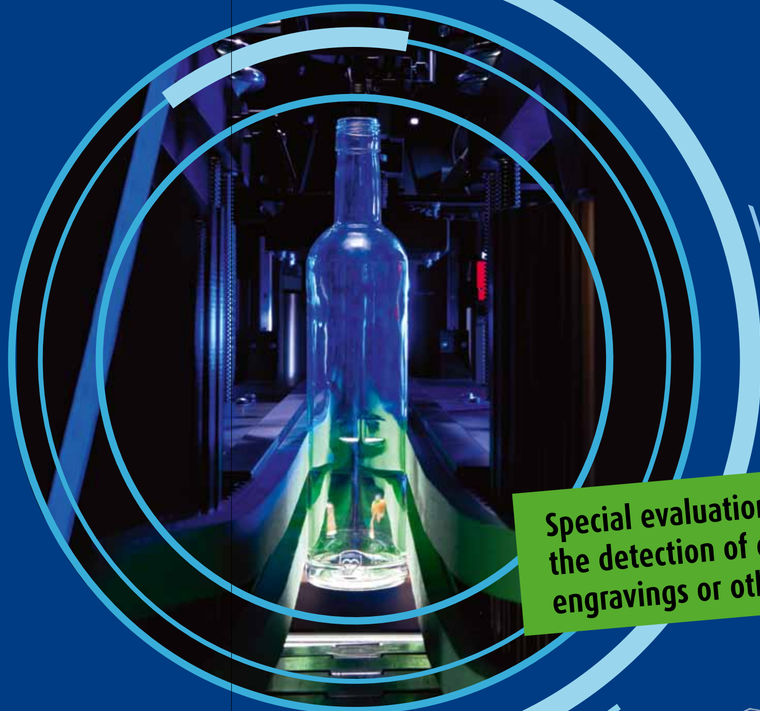
Lauenhainer Weg 3
D-08393 Meerane
Germany

Tel: +49 (0)3764 7791870
Fax: +49 (0)3764 7791899
Web: www.optical-inspections.com
Mail: info@optical-inspections.com

BMF-5C Automatic inspection and sorting of container glass

Optical inspection of bottom, bottom stress, mould number and 2 x mouth rim

Mouth rim diameter up to 120 mm
independent from changing light conditions and glass colours



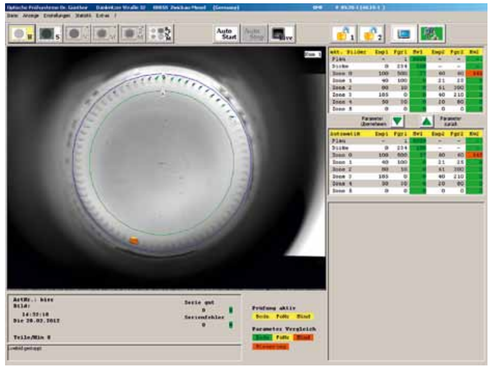
+ Detection of all known defect types in the bottom using the transmitted light method
+ Detection of stress defects in the bottom using polarised light
+ Detection of defects in round cams, engravings or other design elements with a special evaluation algorithm
+ Detection of defects in the container mouth rim
+ Reading of mould numbers in every rotation position
+ Inspection for bird swings

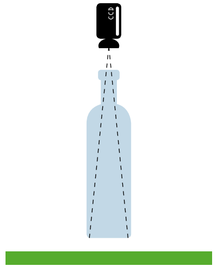
Special evaluation algorithm for the detection of defects in round cams, engravings or other design elements

Optische Prüfsysteme Dr. Günther

15 – 120 mm bottom and mouth rim inspection system

Detects defects in cams, engravings and design elements using a special evaluation algorithm



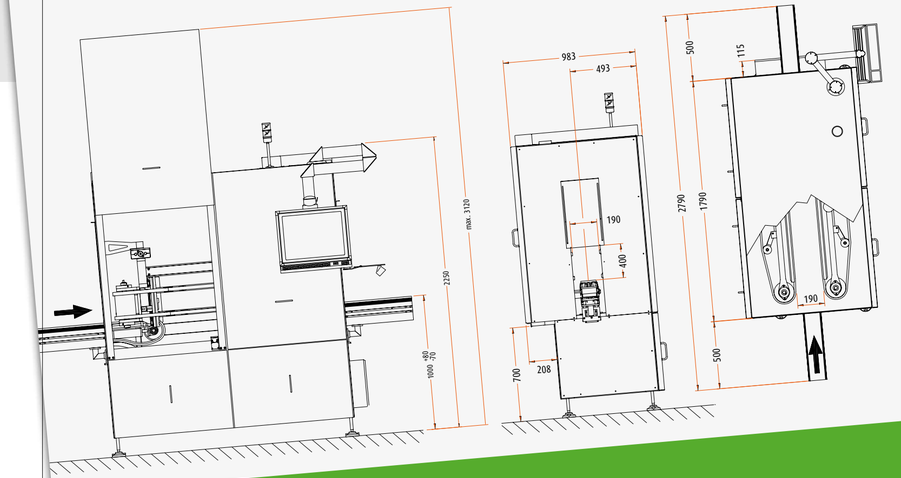


The desire for special design elements for glass containers becomes increasingly frequent. This represents production and sorting challenges to the glassworks.

Optical features:
- The full version includes 5 test stations for bottom, bottom stress, mould number and 2x mouth rim
- Image recording with industrial CCD cameras, 1 to 5 cameras are used according to customer requirements
- High light output, low energy consumption, long lifetime and best optical conditions due to LED flash illumination

Inspections characteristics:
- Inspection in a lifter with side wall conveyor belts
- Minimum detectable defect size on case of bottom defects down to 0.2 mm depending on article condition
- Mouth rim inspection at bottles, wide-neck jars and all other common container glasses
- Inspection independent from changing light conditions and glass colours
- The rejection of the NOK parts is controlled by an encoder

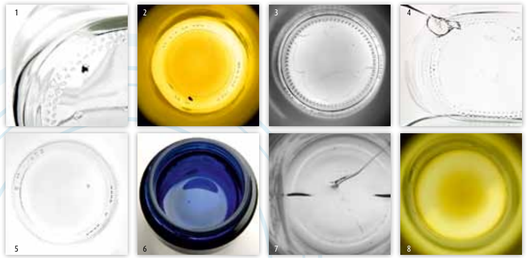
Operation and evaluation:
- Several testing zones with different sensitivities and thresholds for the OK-NOK-determination can be set at the container
- All inspection parameters can be changed during running automatic mode
- Observation adapted to the mouth rim diameter
- Mould number tracking across several machines and a random number of mould numbers can be set as rejectable
- Multiple statistic evaluations available, also mould number related



On-site installation:
Simple connection to an existing conveying belt, supply also with infeed and discharge belts and ejection station

Detection of all known defect types in the bottom and the bottom transition area

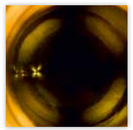
using the transmitted light method



1 Inclusion of foreign matters
2 Stones
3 Folds
4 Cracks
5 Bubbles
6 Glass splinters
7 Spikes
8 Thin bottoms

Detection of stress defects in the bottom

using polarised light



Detection of defects in round cams, engravings or other design elements

using special evaluation algorithm

Detection of defects in the container mouth rim

1 Line-over-finish
2 Overpressed borders
3 Damage
4 Open bubbles
5 Incomplete mouth rims
6 Sugar rims
7 Oval mouth rims

Reading of mould numbers

in every rotation position

Inspection for bird swings

outside the focusing range of the bottom camera