

SYMPLEX SIMKON

Inspection Technology for the Container Glass Industry



MODULAR SOLUTIONS

SYMPLEX MULTIKON is a modular built system which can be built up both as complete system (SYMPLEX MULTIKON-NCI) and subsystem (SYMPLEX SIMKON).

The inspection modules of SYMPLEX SIMKON are based on components which are also used at the SYMPLEX MULTIKON-NCI. Merely the complex bottle handling can be abandoned.

The SYMPLEX SIMKON without bottle handling offers the following inspections:

- Sidewall- and sidewall-stress-inspection ■ SIMKON-SW
- Dimension inspection ■ SIMKON-DW
- Finish inspection ■ SIMKON-FIN

The MULTIKON-NCI with bottle handling expands the function as follows:

- Base- and base-stress-inspection
- Mould number reading

INSPECTIONS MODULES

Dimension Inspection

Sidewall Inspection

Finish Inspection

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CENTRO
KONTROLLSYSTEME

STRATEC
CONTROL-SYSTEMS

SYMPLEX
VISION SYSTEMS

INSPECTION MODULES

The available inspection modules comprise a constantly widening range of inspection functions. If you can not find your required function in the list below, please feel free to contact us directly. We might already be working on exactly the feature you need.

For the new container inspection we offer the following single features:

- Side wall control finding stones, blisters, enclosures and cosmetic defects
- Side wall stress control finding tensions
- Finish control to detect surface defects, over-press finishes and others
- Dimension control finding deviations from the usual contour

Sidewall Inspection

Using a special optical system **MULTIKON-SIM-SW** can show the specimen from up to four different perspectives in on station. Applying two stations you get a seamless 360° view. Illuminating the specimen with a light source that sends its rays through the specimen, all the defects become visible as dark contrasts.

Stress Sidewall

A special dark field illumination concept makes tensions in the wall areas visible as bright spots. The corresponding containers are then removed from the production line. The defects are not visible in normal lighting conditions and, therefore, require a separate inspection.

Finish Inspection

At this station, the container finish is inspected from above. Using a dark field lighting the system detects all relevant defects such as chips. With a broad variety of tuning options, this function can be adapted to any kind of inspection requirement. Special algorithms, such as the LFO detection (line over finish), make this station the ideal tool for the quality assurance in the container glass industry.

Dimension Inspection

The dimensional control examines the containers from various perspectives. Comparing the contour to a reference the system can detect all kinds of dimensional flaws such as sunken sides, leaners and bent necks.



MONITOR

The inspection units are operated via a high-resolution colour touch screen. During operation, the screen displays current production data in the selected language. If necessary, the operator can switch the program language online. For monitoring and adjusting purposes, the display provides largesized images, either of the actual specimens on the production line or loaded from a pre-stored sequence of pictures. A context sensitive help function covers all the adjustment procedures. A variety of access levels protected by individual pass-



words makes sure that only authorised personnel carry out their designated tasks. All production data and parameter changes can be attributed to the person in charge over a period of one year. Furthermore, you can feed the production data into a data base. If a PC network is available, you can apply a separate software tool that turns any connected PC into a supervising workstation.

LED-LIGHTNING

All the camera stations use light-emitting diodes (LEDs) to provide optimum illumination conditions. This state-of-the-art lighting concept features advantages such as an even light distribution, minimum space requirements, long service life, and a reduced power consumption compared to other illumination methods. Moreover, they produce only little heat. This means that cooling devices are not needed in the stations.

BULL TECHNOLOGY

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