



BBULL Tilted Position Detection

Ultrasound "Tilted position detection" for screw caps, independent of alignment, colour and cap material

PRODUCT SPECIFICATION



General

The safeguard of the product quality is of primary importance of every bottling company.

Spoilt products or poor quality causes annoyance to the customer and loss of image.

The correct position of the lid is an essential factor in ensuring, that the product reaches the consumer with its indicated shelf life.

Demands for increasing bottling speeds and the growing use of screw caps, means that the inspection of the correct cap position gains ever increasing importance within the quality assurance process of a bottling line.

Particularly with the use of plastic screw caps, the most frequent error is, that the cap is cross threaded by the closing machine.

This has a variety of consequences. Besides the optical impression, the leak at the top can produce poor quality and undrinkability.

BBULL offers with the patented „Tilted position detection“ a new method of inspecting screw caps for errors.

The system works on the latest ultrasound technology and inspects the bottle at full production speed.

Faulty bottles are reliably detected and

transferred to a rejection system, which removes them from the production process. Optionally an acoustic or optical alarm can be activated. The operation of the system is easy. The „Tilted position detection“ can be easily mounted on existing installations.

Application

Inspection of screw-type caps according to tilted position within bottling lines.

The reliable inspection is independent of colour, material of the cap or inaccurate bottle heights.

Application mainly in the:

- beverage industry
- food industry
- chemical industry
- pharmaceutical industry
- detergent industry
- packaging industry

Mode of Operation

The system consists of a sensor bridge for tilted screw-type cap inspection and a control unit for the evaluation of the fault signal.

The control unit carries out various jobs,

such as the transition of the faulty bottle to the rejection system and the updating of the bottle counters.

The sensor bridge „Tilted screw cap inspection“ can be combined with different **BBULL** Control units.

From our series of 8- different control units (the systems are functionally graduated) the appropriate combination of inspection functions according to any special requirement can be selected.

For a simple application there is also an operation without additional control unit possible.

The system is easily mounted above the conveyor and can be adjusted in height for different bottle types by means of a spindle.

During the measurement an ultrasound sensor, which is centrally mounted in the sensor bridge, continuously emits ultrasound impulses.

The returning echo's, reflected by the cap are evaluated by the sensor.

A tilted position of the cap is reliably detected, independent of its alignment, colour and cap material.

BBULL Control Units

- **BBULL FEM**
(Filling and labelling monitoring for bloc installations)
- **BBULL FM**
(Filling monitoring)
- **BBULL EM**
(Labelling monitoring)
- **BBULL FE**
(„Small“ filling and labelling monitoring for bloc installations)
- **BBULL F**
(„Small“ filling monitoring)
- **BBULL E**
(„Small“ labelling monitoring)

Technical Data

Rated speed in bottles per hour: _____	90.000
Measurement distance in millimeter: _____	90 - 110
Detected slope in degree: _____	1,5 - 9
Diameter of the cap in millimeter: _____	min. 12 max. 50
Physical structure of the cap: _____	planar
Material/colour of cap: _____	irrelevant
Height tolerance of the bottles in millimeter: _____	+/- 20
Distance from cap to cap in millimeter: _____	12
Voltage supply in volt/volt/ampere: _____	19/29/1 max.
Fuse in ampere: _____	1T
Power supply in watt: _____	2,4

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