

RECONFIGURABLE GAUGING BENCH FOR GLASS CONTAINERS

dimensional and geometric
inspection of round bottles



MARPOSS

DESCRIPTION

It can be used to measure the following characteristics:

- external diameters on neck and body
- straightness of the generatrix, on the body, in the labelling area

It is composed of:

- a mechanical system, to refer and rotate the bottle, with a motorized rotating plate and an idle tailstock
- one or more measuring sections, with Red Crown™ linear sensors, that can be quickly vertically repositioned and arranged for bottles having different external diameters
- a Gage Pod™ data acquisition system
- an E9066™ Industrial PC with Quick SPC™ software
- a push-button box for cycle management and emergency button.



MESURING CYCLE

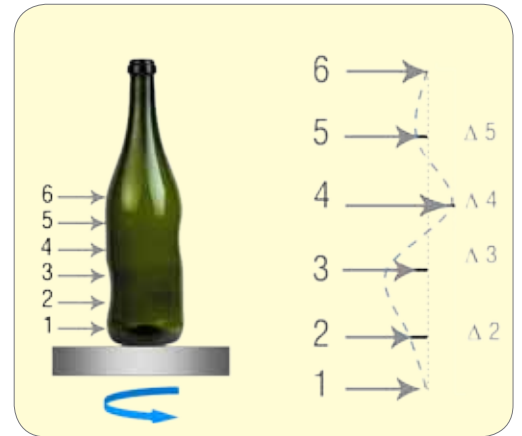
The bottle is manually loaded and referred between the plate and the idle tailstock.

When the part is referred, it is manually carried in measuring position by means of a pivoting arm.

The inspection is started by pushing the start-cycle button on the push-button box.

The bottle rotates. During rotation, measurements are continuously acquired.

Cycle time for the inspection of one bottle is, on average, less than 15 seconds, including loading / unloading.



CALIBRATION

To calibrate (zero) the measuring system it is possible to use a master or a CMM certified bottle.

The master (or certified bottle) is inserted manually on the bench.

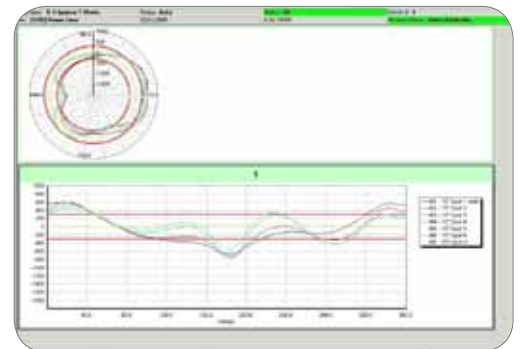
Calibration can be easily carried out by selecting a specific page in the Quick SPC™ software.

STRAIGHTNESS OF THE GENERATRIX IN THE LABELLING AREA

To check the straightness of the generatrix, in the labelling area, a straight line is defined by the first and last linear sensors.

For each other intermediate sensors, the deviation with respect to this line is calculated.

The measurement is performed during the rotation of the bottle.



GRAPHIC INTERFACE

The readings of the sensors can be displayed in a polar diagram, to obtain an image of the shape of the bottle, in correspondence of each measuring section.

Straightness measurements can be also displayed in a Cartesian diagram.

TECHNICAL SPECIFICATION

Dimensions of the measurable bottles	Total height=200-345 mm
	External diameter=50-120 mm
	Inside mouth diameter (to insert the idle tailstock) = 16-28mm
Measurements	External diameter on body and neck
	Generatrix straightness on the body in the labelling area
Cycle time	About 15 sec. including part loading/unloading
Repeatability	≤10% of the tolerance
Data output	.csv or .dfq (QDAS®)

For a full list of address locations, please consult the Marposs official website

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