Visual inspection system for the precision orientation of containers during the labelling and packaging process on automatic high-speed lines

Based on a single high resolution camera, BOS detects the singularities on the surface of a container of any material, regardless of the material and content, transmitting to the control system the angular position of any distinctive element with respect to a known reference point.

The Bottle Orientation System allows the reading of embossed features, logotypes, welding seams and "dots" on the bottom, to generate an angular reference for any type of container - with average accuracy of less than 1 degree - without the need to insert extra components in the inner part of the carousel.

BOS operates with line speed up to 30 thousand bottles per hour and its performance is fully insensitive to both the material of the container and the type of liquid contained.

The format change is automatic and does not require operator setup.

Bottle Orientation System is designed to work in combination with the control systems of labeling machines, cappers and in general with all applications that require the orientation of bottles.

KEY FEATURES
- HIGH RESOLUTION CAMERA
- FIXED POSITION OF CAMERA
- LIGHTING SYSTEM EXTERNAL TO THE ROTARY TABLE
- FULL INTEGRATION IN THE MACHINE HMI
- INTEGRATION IN THE MACHINE PC CONTROLLER

PERFORMANCES
- READING OF LOGOTYPES OR OTHER EMBOSSED ELEMENTS ON THE GLASS
- READING OF "DOTS" ON THE BOTTOM OF THE BOTTLE
- READING OF WELDING SEAM
- ORIENTATION ACCURACY: BELOW 1°
- SPEED: UP TO 30,000 BOTTLES/HOUR FOR SINGLE CAMERA