

Bucher Emhart Glass

TAKING A FRESH LOOK AT INSPECTION WITH FLEXINSPECT

THE FLEXINSPECT PRODUCT FAMILY

FleXinspect M

The FleXinspect M is the newest member of the FleXinspect product family, and the most flexible. It's a fully servo-driven rotary multi-function check inspector, originally designed to be a 'drop-in' replacement for existing inspection lines installed throughout the world. This gives users the chance to modernize their production area with only a modest investment and, in most cases, without having to modify their single-line conveying systems. However, the FleXinspect M is also an excellent choice for customers who are replacing their entire inspection areas.

FleXinspect M features full servo synchronization and high-speed operation for both round

Bucher Emhart Glass, the leading supplier of glass-container equipment, has been bringing some significant new product features to its FleXinspect inline inspection portfolio. We look at the most recent addition, the FleXinspect M, and explore the new handling capabilities of the flagship FleXinspect T.



and non-round containers. Built on Bucher Emhart Glass' proven FleXinspect electronics platform, it also lets users add more inspection elements as and when they're required – for example, bringing in additional vision technologies to control finish and base quality.

A unique feature is the FleXinspect M's flexible infeed delivery, which allows the machine to be easily switched in and out of the line. In normal operation, the infeed system (a dual servo screw) extends over

the existing single-line conveyor and transports the bottles from the single line on to the integrated inspection conveyor. Each container is driven directly into the star-wheel pocket at a 30° angle, giving a smooth, precise container load every time.

In bypass mode, the infeed assembly swings away from the single line and over the inspection conveyor, allowing containers to pass freely behind the machine. At the same time, bottles can be fed into the machine

from the inspection conveyor, allowing the operator to work on the inspection setup or handling.

ALL-IN-ONE SOLUTION

FleXinspect T

Bucher Emhart Glass' flagship inspection machine, the FleXinspect T, gives glass manufacturers a complete, 'all-in-one' solution for container inspection, integrating multiple inspection functions in a single machine. It represents the culmination of the firm's decades of experience in

designing innovative, technically superior inspection technology that makes it easy for manufacturers to achieve the very highest standards of quality.

FleXinspect T incorporates state-of-the-art inspection technology, an integrated conveyor, and a unique, highly innovative servo-driven handling system. Because everything is all in one, FleXinspect T can carry out inspection functions that previously required no fewer than three separate machines. It's a dramatic change for the industry – not least because customers only need to invest in a single machine rather than three.

Having only one machine to run means only one machine to maintain, which can help to reduce both maintenance and labour costs dramatically. The integrated design helps to minimize downtime, which previously could be caused by a fault with any of three different machines. And the compact footprint helps to free up some precious floor space on the production line.

However, none of these savings has been achieved at the cost of quality. FleXinspect T offers a plethora of possibilities to the operator, with a wide range of options that can be added to the machine. BEG believes that the FleXinspect T will be a clear favourite with glass manufacturers for many years to come.

IN THE RIGHT DIRECTION

Another advantage of modular design that sometimes goes unnoticed is the ability to handle a wide range of unusually shaped glassware – the sort of small, tall, wide, and narrow containers that are often seen on the top shelves behind a bar.

In order to inspect such unusual forms accurately, the machine must maintain control over the container at every phase of the process – which means handling

is absolutely crucial. The engineering team at Bucher Emhart Glass have devoted a great deal of time and effort to ensuring FleXinspect can deal with anything that packaging designers can throw at it.

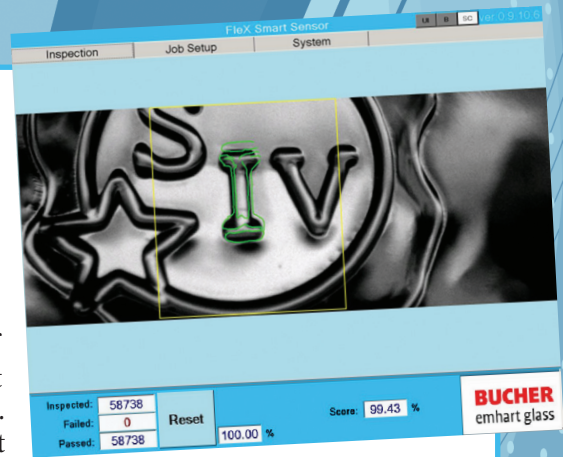
It's not just a question of inspecting the container, but preparing it to be inspected. As the high-end liquor market explores more distinctive shapes and heavily engraved bottles, orienting the container for inspecting becomes more and more of a challenge. FleXinspect T features FleX Orient, which uses intelligent camera imaging and precision servo-motor rotation to seek out a specific feature on the container (such as a raised letter or symbol) and use it as an 'anchor' to orient the container correctly for inspection. A vision-based verification system at the exit can also be added, to ensure the container is still correctly oriented ready for packing as it leaves the machine.

FleX Orient can be fitted to existing machines, giving them the same capability.

BANISHING THE BRISTLES

Traditionally, handling non-round containers within a rotary inspection machine has been something of an art form. Bristle brushes mounted and positioned within the machine would help guide or align the container on its journey to the next inspection station, or towards the exit from the machine.

Brushes offer gentle handling, but at a price: their bristles get bent, broken, and deformed during the production run. So the brush system still needs expert oversight from a production 'wizard' who knows how to fine-tune the handling for non-round containers. When the wizard clocks off and someone else takes over, handling steadily deteriorates, with less experienced operators



reduced to tinkering with brush positions by trial and error to keep the containers moving.

FleXinspect T offers a unique solution. Instead of brushes, it uses specially designed support rails. Unlike bristles, they don't weaken or break over time, and stay exactly where they've been set until it's time to change over to the next job. And that means no more replacing or adjusting brushes during the run. Instead of spending all their time trying to optimize handling, operators can put their skills to work finding improvements elsewhere.

It all adds up to a better, simpler, and ultimately more efficient way to guide containers through inspection to achieve higher quality standards with more sophisticated automation. ■

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