

# The evolution in the flexible inspection of glass containers

Eleonora Bordini\* discusses the evolution of Marposs's VisiQuick inspection machine, which is a flexible machine for dimensional and geometric inspection, on a sample basis.

**M**arposs began working in the glass industry more than 20 years ago. The company provides solutions for glass industry segments such as automotive, flat and glass containers.

The glass containers market was approached either with existing products, based on contact technology, or with flexible solutions (VisiQuick), based on cameras, developed specifically for the market.

## Evolution

Since glasstec 2008, when the first manual loading/unloading VisiQuick machine was introduced to the market, the product has undergone an evolution in terms of layout and features.

VisiQuick is now a flexible machine for dimensional and geometric inspection, on a sample basis. It can measure glass containers of any shape, dimension and colour without any retooling.

This is a characteristic that distinguishes the machine from other products on the market.

When the part to be measured changes, even though the dimensions and shape are different compared to the previous one, the operator just needs to programme or select the relevant recipe on the PC, enter the mould's numbers, load the container's batch on the input conveyor and push the start cycle button.

Containers are automatically loaded in the measuring stations and, after being

measured, they are automatically placed on the output conveyor where they can be manually removed.

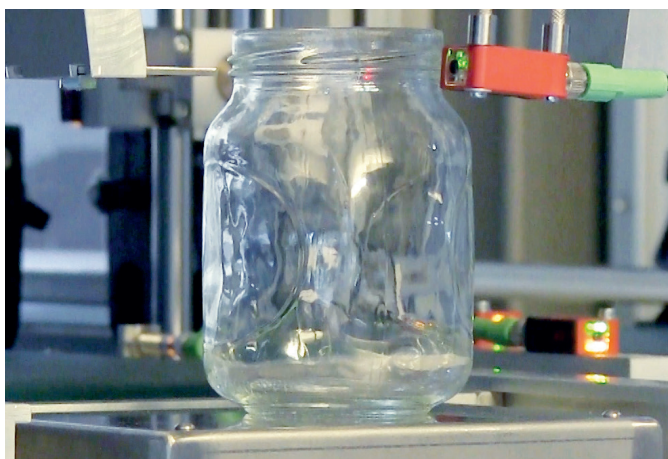
The VisiQuick includes a measuring station with two high resolution cameras, dedicated to body and finish respectively, with telecentric lens and collimated illuminators to measure the external characteristics on finish neck and body, such as: total height; partial heights;

verticality; planarity and parallelism of the mouth; external diameters on body, neck and finish; diagonals; long and short sides of non-round containers; thread diameter (interrupted threads and threads in depression are also managed); angles and radiuses, among others.

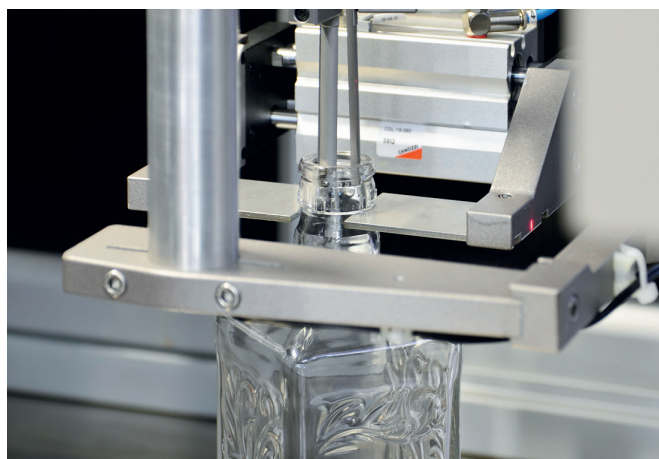
Continued>>



▲ VisiQuick 1.



▲ Scale for weight inspection.



▲ Cameras and bore gauge.

### Database

The measurements database has grown continuously, based on customers' requests.

With an optional bore gauge, mouth internal diameter and ovality can also be measured at different depths from the top. The bore gauge also doesn't need any retooling.

Sensors used in the bore gauge are designed and manufactured by Marposs. They are accurate but sturdy at the same time. In fact, they are also extensively applied for in-process measurements of metal parts during the machining (grinding) process.

Both cameras' measuring station and bore gauge are calibrated using a master, manufactured and certified by Marposs's accredited metrology lab.

The master can be manually loaded or it can be housed permanently inside the machine and automatically moved in the measuring stations when a calibration is required.

Other optional measurements include weight, push-up and glass thickness.

### Purpose

The VisiQuick provides real-time, accurate information about geometry and dimensions of the containers, helping customers to monitor the manufacturing process, for example evaluate the status of the moulds and decide if they have to be replaced. On-line inspection machines cannot provide such accurate information, so they cannot replace the inspection on sample basis.

### Reasons for success

The main reason for the success of VisiQuick machine is that it has been designed closely with glass container manufactures. Marposs has listened to

their needs and requirements and used its know how and experience in metrology to find the best solutions to their gauging problems. Marposs does not propose an 'as it is' standard machine but a modular system that can be adjusted to different needs in terms of performance and budget.

The VisiQuick can provide measurement results compatible with the Vertech SIL system, but an interface to other proprietary production monitoring systems has also been developed. Another reason for its success is the support that Marposs provides to its customers from the definition of the specifications up to the after sales service.

Marposs is not just a supplier, but a company able to build a real partnership with customers, leading to a mutual growth.

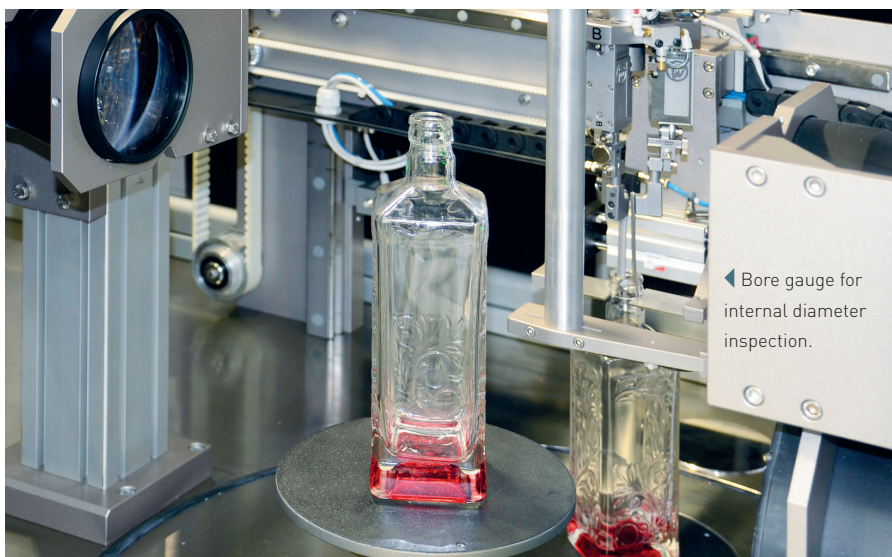
Recently Saverglass, manufacturer of luxury containers, received the prestigious 'Productivez' award, promoted by the French association SYMOP. The award is conferred to French companies

who have invested to improve quality and competitiveness. In the case of Saverglass the investment is related to two VisiQuick machines, which contributed to it winning the prestigious award.

Marposs is a worldwide company in precision equipment for measurement and control in the production environment. The company was founded in 1952 and, since then, has experienced continuous growth. Marposs is present in 33 countries, almost everywhere with its own organisation and has 2800 employees. Production is based at its headquarters in Bentivoglio, Italy and also in other countries such as China, France, Germany, Japan, Korea and USA.

More information about the VisiQuick machine is available from: [www.marposs.com/product.php/eng/glass\\_containers\\_flexible](http://www.marposs.com/product.php/eng/glass_containers_flexible) ■

\* Glass Industry - Product Manager, Marposs, Bentivoglio, Italy.  
[www.marposs.com](http://www.marposs.com)



◀ Bore gauge for internal diameter inspection.