

Marposs installs flexible gauging equipment at Verallia's VOA site

Eleonora Bordini* provides a case study of how Marposs equipment was installed in the Verallia VOA site in Albi and how it integrated with products from two other glass inspection companies.

Verallia's VOA plant in Albi, France is a historic French glass container manufacturer.

It was founded in 1896, employs 300 people and has two furnaces and six manufacturing lines that produce approximately 800,000 bottles a day.

It specialises in the development and production of high-end bottles mainly for wine, spirits and soft drinks, even in small batches, thanks to the flexibility of its manufacturing process. It recently invested €24M to modernise half of its production equipment (*Glass International, May 2017, page 10*).

Furnace number 1 is dedicated to high quality extra-flint and flint glass production and was completely rebuilt, together with its three production lines to gain flexibility and to strengthen its positioning on the small and medium-run high-end markets.

This investment also involved an innovative inspection line, including Marposs VisiQuick flexible gauging machine for measuring the dimensional and geometric characteristics of glass containers, on a sample basis.

Inspection line

The inspection line, installed in the cold end, near the glass container production line, included products from three companies: Marposs, Somex and Vertech. The inspection line is composed of:

- Marposs VisiQuick, flexible gauging machine with a special conveying system;
- Vertech SIL, production monitoring software; and
- Somex Roburst, automatic glass bottle pressure tester.



◀ Cameras and range of measurable containers.

The inspection line includes four input conveyors (a, b, c, d **Fig 1**), to house four sets of different articles.

Glass containers to be measured are manually loaded on the conveyors.

Containers present on the conveyors are delivered, one set at a time, in a sequence programmed on Vertech SIL, to a single input conveyor (IN) entering the VisiQuick machine.

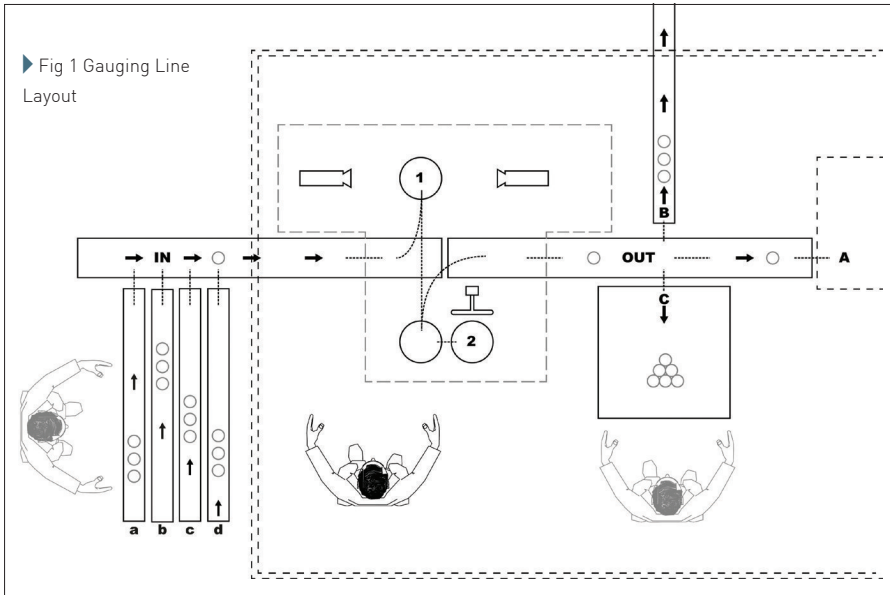
A pick & place device brings the containers from the input conveyor inside the VisiQuick machine where they are measured with cameras ⁽¹⁾, as far as external parameter are concerned (height, verticality, parallelism, diameters

on body neck and finish, long/short side and diagonals on non-round containers, angles, radiuses and many others), and subsequently with a bore gauge ⁽²⁾, measuring mouth internal diameter, at different depths, and internal profile.

The internal profile measurement is accurate thanks to the integration of a linear encoder, fully synchronised with the bore gauge readings. This feature is based on Marposs proprietary technology (the DigiCrown network system).

After being measured on the VisiQuick machine, containers are delivered to a

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single output conveyor (OUT) that can convey them alternatively to the Somex Roburst machine (A) for pressure test, to an accumulation table (C), or to a scrap chute (B).

The path the container will follow after the inspection on the VisiQuick machine is programmed on the Vertech SIL.

The advantage of this solution is that the inspection line doesn't need to be supervised all the time.

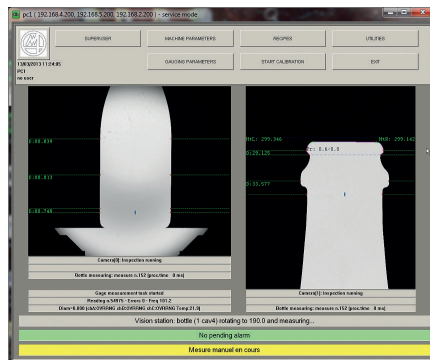
After placing four sets of containers on the four conveyors, the operator can dedicate himself to other activities, while containers are being measured.

The capability to measure four different articles, in sequence, without any human intervention, is possible because of the VisiQuick machine's full flexibility.

In fact, no retooling is required when the container to be measured changes, even though dimensions and shapes are

different. This feature is not present in any other glass container gauging machines available on the market.

Thanks to the communication protocol developed between Marposs and Vertech, recipes programmed on the SIL are sent to the VisiQuick machine. So the operator



▲ The software on display.

doesn't need to programme the recipes, relevant to the articles to be measured, twice, either on the SIL and/or the VisiQuick.

The inspection line was manufactured and installed in record time, just after three and a half months from the order, thanks to the close cooperation among all the parties involved in the project.

The VisiQuick machine has a modular structure and can include additional measuring stations.

For example stations to measure weight, push-up or glass thickness.

Marposs

Marposs is a specialist in precision equipment for measurement and quality control in the production environment. The company was founded in 1952 and has experienced continuous growth since then. It is present in 34 countries, almost everywhere with its own organisation, and currently employs 3100 people. Production is based at its headquarters in Bentivoglio, Italy and in other countries such as China, Germany, Japan, Korea, USA.

VisiQuick machines are installed in the plants of the main glass containers manufacturers such as Bormioli Luigi, Saverglass, Shandong Huapeng, Verallia and Zignago Vetro.

Most of these customers purchased more than one machine.

More information about the VisiQuick machine is available from http://www.marposs.com/product.php/eng/glass_containers_flexible

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