Case Study

Baty FV-5040 cuts complex component inspection from a full day to just 10 minutes at Bluemay Weston

Customer
Bluemay Weston Ltd

Industry
Precision Engineering

Challenge
Limitations of existing measurement equipment meant complex components could take up to a day to inspect.

Solution
Baty Venture FV-5040



Application Background

Bluemay Weston Limited specialises in the manufacture of non-metallic punched, pressed and water jet cut components, producing intricate parts with complex profiles for applications where precision and consistent quality are critical.

Operating to the AS9100 Rev D quality management standard, the company maintains rigorous inspection procedures to ensure its components meet demanding customer specifications.

With some parts requiring more than 200 individual dimensions to be verified, inspection had become an increasingly time-consuming stage of production. Limitations with the company's existing measurement equipment meant particularly complex components could take up to an entire working day to inspect.

To address these challenges, Bluemay Weston invested in a Baty FV-5040 Vision System from Bowers Group in February 2026. The investment has transformed its inspection process, with certain complex inspections now completed in

approximately 10 minutes, significantly improving efficiency and increasing inspection capacity.

The Problem

Before investing in the Baty FV-5040, Bluemay Weston relied on its existing VuMaster system, supplemented by manual measurement where required.

As component designs became increasingly complex, restrictions on the size of parts that could be inspected, alongside difficulties obtaining accurate measurements for certain features, meant additional manual checks were frequently necessary.

This placed considerable demands on the production team's time and resources, creating potential delays while maintaining the accurate dimensional verification and reliable inspection records required by the company's quality procedures.

Bluemay Weston therefore needed a solution that could accommodate a wider range of component sizes, simplify the measurement process and significantly reduce inspection times without compromising accuracy or traceability.

The Solution

Bluemay Weston selected the Baty FV-5040 Vision System from Bowers Group to overcome the limitations of its existing equipment and improve the efficiency of its inspection operations.

Part of the Baty Venture FV range, the system combines field-of-view measurement technology with automatic feature detection and inspection software. Its 20-megapixel camera, double telecentric optics and LED lighting support the accurate measurement of detailed components, while its larger measurement capacity allows the team to inspect parts that previously exceeded the capabilities of its existing system.

Now integrated into daily manufacturing operations, the FV-5040 is used for first-off, in-process and last-off inspection, enabling dimensional accuracy to be verified at key stages of production.

By bringing more measurements together into a single inspection process, the system has reduced the need for supplementary manual checks, helping the production team work more efficiently and consistently.

"With the FV-5040, inspections that previously took up to a full day now take approximately 10 minutes. It has also made recording results much easier, allowing us to increase inspection capacity and reduce production delays."



The FV-5040 also offers automatic feature detection, part recognition and programmable inspection routines, which Bluemay Weston uses selectively depending on the requirements of each inspection.

Another important improvement has been the system's reporting functionality, which has simplified the recording and management of measurement results. This provides greater efficiency in maintaining inspection records and supports the company's established quality procedures.

Together, these capabilities have enabled Bluemay Weston to streamline dimensional inspection, minimise production delays and increase throughput while continuing to meet the demanding quality requirements of its customers.

Comment

The production team at Bluemay Weston Limited, said: "The FV-5040 has helped us address the challenge of measuring complex components efficiently. Some of our parts contain more than 200 dimensions and, previously, certain components could take up to a full day to inspect because measurements had to be completed manually alongside our existing VuMaster system.

"With the FV-5040, inspections that previously took up to a full day now take approximately 10 minutes.

It has also made recording results much easier, allowing us to increase inspection capacity and reduce production delays.

"The system is now used daily by our production team for first-off, in-process and last-off inspection, providing a much more efficient way to manage our measurement requirements.

"We were very happy with the help, service and advice we received from Bowers Group. The support throughout the process, including the installation of the FV-5040, was excellent and helped ensure everything was set up smoothly."

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