



CASE STUDY

HOW MP FILTRI CUT OPTICAL INSPECTION FROM OVER A DAY TO ONE HOUR WITH SWIFT PRO DUO



MP Filtri is a global manufacturer specialising in contamination control and hydraulic filtration solutions. Headquartered in Italy, with operations across Europe, the UK, Asia, and North America, the company supports industries including construction, agriculture, and industrial machinery. MP Filtri's UK division provides hydraulic filtration products, contamination monitoring equipment, and specialist services to ensure system reliability and performance.

The Challenge

As part of a new project involving the introduction of optical components, MP Filtri encountered significant measuring challenges.

One optical component was particularly difficult due to its extremely small and intricate features. The part included a slot cut into the material coating, which appeared as a pin dot of light to the naked eye- its rectangular shape entirely unrecognisable.

Several microscopes and optical devices were trialled, but many lacked the edge recognition, magnification, sharpness, and image contrast required. MP Filtri needed a system that could measure these critical dimensions accurately and consistently, while supporting batch inspection.

The Solution

Vision Engineering's Swift PRO Duo provided the precise magnification and pin-sharp images required. The slot became clearly visible and measurable, transforming what appeared as a single point of light into a defined rectangular feature.

With the Swift PRO Duo, MP Filtri was able to:

- Inspect a batch of 50 components accurately and consistently
- Reduce the inspection time from more than a day to approximately one hour
- Achieve measurable time and cost savings for the business

Mark Rogers, Metrologist at MP Filtri, explains:

"We have been using our Swift Measure Scope for over eight years. With regular servicing and annual calibration, it continues to perform reliably. It does exactly what it says on the tin."

By adopting Swift PRO Duo, MP Filtri reduced the time to inspect a batch of 50 optical components from more than a day to about one hour, while maintaining accuracy and consistency.

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While there were less expensive options on the market, the Swift PRO Duo has proven to be reliable, flexible, and cost-effective. It now supports a wide range of measuring tasks and has become indispensable in the lab.

Why Swift PRO Duo was the right fit

- **Dual-mode flexibility:** Video mode for routine tasks, optical mode for low-contrast features other systems could not measure.
- **Sharp edge detection and clarity:** Delivered measurable images of features invisible to the naked eye.
- **Efficiency at scale:** Reduced inspection of a 50-part batch from more than a day to one hour.
- **Proven reliability:** Still in daily use after more than eight years with annual calibration.
- **Return on investment:** Long service life, reliable performance, and faster inspection offset the higher initial cost.

Frequently Asked Questions

Q: What types of applications suit Swift PRO Duo?

Swift PRO Duo is widely used for non-contact measurement of small, intricate, or low-contrast features in industries such as electronics, precision engineering, optics, plastics, and medical devices.

Q: How does dual-mode (optical and video) measurement improve results?

Video mode is fast and efficient for clear features, while optical mode provides high contrast and edge recognition for faint or difficult-to-measure details.

Q: How does the system improve productivity?

By combining optical clarity with repeatable measurement, Swift PRO Duo can cut inspection times dramatically - in this case from many hours to less than one.

Q: How long can Swift PRO Duo remain in service?

With regular servicing and calibration, the system can deliver reliable results year after year.

Q: Is it a cost-effective measurement solution?

Yes. While the initial investment may be higher than some entry-level systems, its dual-mode flexibility, long life, and proven reliability deliver excellent return on investment.