

# Helping a Renowned Pharma Brand Detect Errors before They Reach the Market

## Problem

A renowned pharmaceutical company, widely recognized for producing diagnostic test kits for various diseases, approached us with a critical challenge. Their existing production line lacked a robust mechanism to identify and verify errors in the kits, such as incorrect labelling, missing components, or damaged packaging. These issues posed a serious risk of defective kits being distributed in the market, potentially compromising patient safety and brand reputation.

## Solution

We provided a comprehensive automation solution that included the deployment of a vision-based inspection system to accurately detect issues such as missing components, incorrect labelling, or damaged packaging. This system was seamlessly integrated with a PLC (Programmable Logic Controller) for process control and an IPC (Industrial PC) for high-speed image processing and data management.

Additionally, we designed and implemented a custom-engineered mechanical conveyor system to transport kits through the inspection area efficiently. To ensure only defect-free kits progressed to final packaging, we also integrated an automatic rejection mechanism into the production line, enabling real-time removal of any faulty test kits without disrupting the overall flow. This end-to-end solution significantly enhanced the client's quality control process and ensured compliance with industry standards.

## Result

- 100% inline inspection with zero manual dependency
- Instant rejection of faulty kits, reducing risk of field failures
- Enhanced regulatory compliance and batch-level traceability
- Reduced customer complaints and improved market confidence

## Product / Technology

Vision inspection system integrated with PLC, Sensors, IPC, and a custom mechanical conveyor featuring automated test kit rejection

## Conclusion & Future Outlook

This robust and scalable system not only solved a critical quality control challenge but also laid the foundation for future smart manufacturing initiatives within the organization.

## INDUSTRY PHARMACEUTICAL

