

# PharmaScan™ Lyo Automated Visual Inspection Systems



## MOVE FROM 100% MANUAL TO 100% AUTOMATED INSPECTION

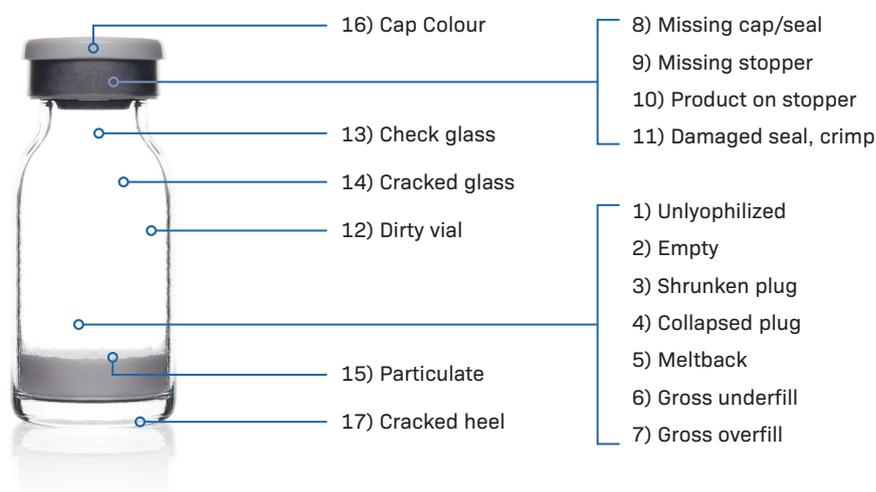
Utilize AI and ML technologies to learn and validate defects based operator-categorized images. Utilize deep learning techniques for image processing tasks not currently well-handled by classic machine vision techniques.

Conduct 35 unique inspections on lyophilized product and glass vial container.  
Detect: Particulate to 50 um, Appearance variations, Debris, Cake textures, In-batch and batch-to-batch variations, Container cracks, and capping.

# For Producers of Lyophilized Pharmaceuticals and Parenteral Drugs



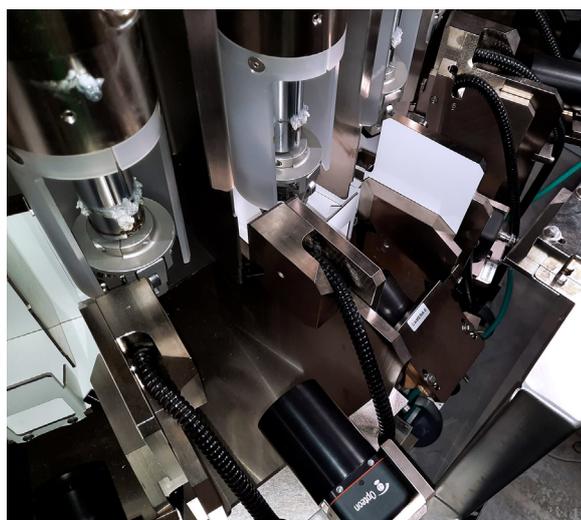
Suitable for applications using operators for difficult-to-classify defect detection. Addresses common lyocake challenges such as detecting the difference between a cake crack and particle. Near 100% accuracy in a single pass up to 425 ppm. Ability to save 100% of 3 – 30mL vial images for AI/ML training library. Minimize false rejects; maintain reject images while in production.



## ATS has developed thousands of Machine Vision applications

- High processing speeds
- Highly-accurate sub-micron inspections
- Multiple camera systems
- Infrared or ultraviolet lighting
- Vision-guided motion systems
- 3D positioning for robotics applications
- Systems in radioactive environments
- Area Scan and Line Scan systems

Validated AI/machine deep learning algorithms and low false reject rates; process analytics to quickly identify and trend faults. 21 CFR Part 11 compliant data handling and archiving. Custom solutions for unique or prototype products.



**A built-in-North America AVI solution with local support and world-class serviceability.**



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