

▶ A SERIES

Xray inspection system for packaged products



The A-series represents most innovative offering in the field of Automatic Inspection. It combines the advanced linear array technology of the most widely used model of the Sapphire range of Automatic Xray Inspection Systems, with advanced inspection algorithms for the most difficult inspections. Sapphire Automatic Xray Inspection Systems are unrivalled in the industry for sensitivity, speed and sophistication of detection. The result is a system that not only demonstrates superior performance in identifying contaminants, such as metal, stone, glass, bone and certain plastics, scanning for mass, missing or broken products, detecting packing voids and confirming fill levels. Results are consolidated to give a series of integrated reports. Parts may be rejected into separate bins for contaminant and check-weigh non-conformities.

These systems are deployed widely in the food processing industry, for packaged products such as confectionary, fresh and frozen products, bakery and ready meals. They are also ideal for loose product flows such as raisins, nuts and freeze-dried fruit. The Sapphire A series conveyor inspection system can inspect virtually any discrete packaged items or continuous bulk product flows that can travel by conveyor, guaranteeing your product and packaging integrity, so vital to commercial success and brand reputation.



Key features

- ▶ **Real time Analysis of Product on Packaging Lines**
The system displays each product inspected to confirm product integrity and indicate the location of the detected contaminants.
- ▶ **Monitoring of Product and Package Attributes**
Real time inspection of products to confirm count, mass, fill level and detect broken or damaged products and other reject conditions.
- ▶ **Detection and Elimination of Foreign Bodies**
Including metal, stone, glass, bone and certain plastics.
- ▶ **Multiple Configurations**
For inspection of any product format: trays, pouches, cases, bottles, cans and loose product
- ▶ **Designed for Food Industry Standards**
To comply with Vendor Certification programs and satisfy HACCP requirements, Sapphire inspection systems are available with a certified statistical process control package for automatic data collection. The system may be attached to Wireless or Ethernet networks for data collection, access to stored images, quality check monitoring and production scheduling.
- ▶ **Wash-Down and Easy Maintenance Design**
The stainless steel cabinet is designed for wash-down environments. This system has been created to easily fit into existing conveyor systems, and the quick release belt allows simple dismantling and cleaning. It is available in sealing standards from IP65 and NEMA4 up to IP69 and PW12.



A SERIES SPECIFICATIONS

Technology	Computer-controlled 'Low Energy' technology
Xray generator	Various specifications from 40Kv to 70Kv
Conveyor speed	0 - 60 m/min computer controlled
Detector array length	256 mm or 409mm
Maximum line rate	4000 lines per second
Resolution	4096 grey levels per pixel
Video display	15" color touchscreen with real-time images and diagnostics
Calibration	Self-Calibrating during normal operation
Detection limit	0.4-1.2 mm stainless steel typical, dependent on product
Inspection rate	Up to 400 packs/minute
Power requirements	110 VAC or 200-240 VAC at 200VA
Dimensions (LxWxH)	1600 x 800 x 850 mm

Why choose Sapphire?

Leading edge technology

The Sapphire team, the innovators of low energy inspection, today bring to the market the most advanced detector design for highest speed and sensitivity. This provides major benefits of high resolution, very low emissions and excellent thermal characteristics. Inspection of the product flow is achieved by the computer controlled family of low energy generators and the high performance computer image analysis system, making Sapphire inspection systems superior at detecting small statistical variations in the product that signal contamination or deviation from accepted specifications. Sophisticated image processing software provides immediate analysis, detection and rejection – automatically.

Global expertise tuned to your requirements

The Sapphire Alliance is a global network of companies at the forefront of Xray inspection technology, collaborating to provide the most reliable, best-supported systems on the market. Sapphire Alliance members share their years of expertise and learning, having a thorough understanding of the issues their customers face. This ensures that Sapphire Xray inspection products are at the leading edge in terms of technology, user friendliness and ability to meet the needs of the global marketplace.

With years of experience in your industry, Sapphire can advise on the machines from its range that are best suited to meet the inspection requirements of your product. Where necessary, special applications can be programmed that will provide you with an optimal solution.

Highest level support

The Sapphire team recognises that fast response is imperative in serving the needs of the industry. With machines available from stock and an extensive rental fleet, rapid support is available even if your application calls for a customised solution.

Installation and start-up services are available with training packages to suit all levels of staff. All Sapphire systems have remote support facilities enabled through secure hosting centers, and a world-wide team of service engineers will respond promptly when needed.

Distinctive features

- ▶ **User friendly operator control interface** with 15 inch touch screen display. The display accesses the interface and displays real-time images and colour diagnostic data for all inspected products.
- ▶ **Automatic calibration so no frequent calibration is required.** Detector calibration is a one-touch function that takes less than a minute. The system automatically analyses product variations to continuously achieve optimum sensitivity throughout production.
- ▶ **Automatic setup** as a result of the unique adaptive software algorithms. Sapphire pioneered systems that automatically recalculate parameters as each product is inspected to achieve optimum sensitivity – automatically.

