

# Does your QA System even come close?

If you can't see it, Sapphire can detect it. All at speeds impossible with the human eye and with detail and flexibility unmatched by any other Xray system.

## 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 checkmonitoring and production scheduling.

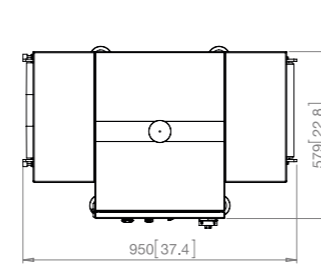
- Wash-Down and Easy Maintenance Design**

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.

## Technical Specifications

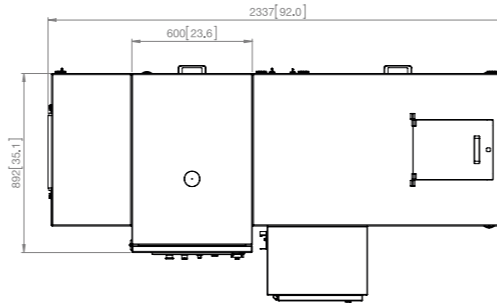
### G10 - Compact Xray inspection system

Technology:	Computer-controlled 'Low Energy' technology
Xray generator:	Various specifications from 40kV to 70kV
Conveyor:	0 - 100 m/min computer controlled
Detector array length:	up to 358mm
Maximum line rate:	4000 lines per second
Resolution:	4096 grey levels per pixel
Video display:	15" color touchscreen with real-time images
Calibration:	Self-Calibrating during normal operations
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 500VA
Dimensions (LxWxH):	1610 x 890 x 1475 mm or 2340 x 890 x 1475 mm



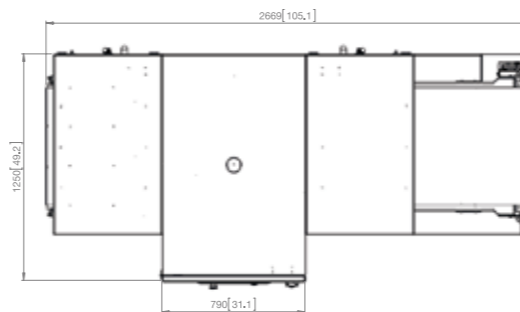
### G20 - High speed Xray inspection system

Technology:	Computer-controlled 'Low Energy' technology
Xray generator:	Various specifications from 40kV to 70kV
Conveyor:	0 - 100 m/min computer controlled
Detector array length:	up to 358mm
Maximum line rate:	4000 lines per second
Resolution:	4096 grey levels per pixel
Video display:	15" color touchscreen with real-time images
Calibration:	Self-Calibrating during normal operations
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 500VA
Dimensions (LxWxH):	1610 x 890 x 1475 mm or 2340 x 890 x 1475 mm



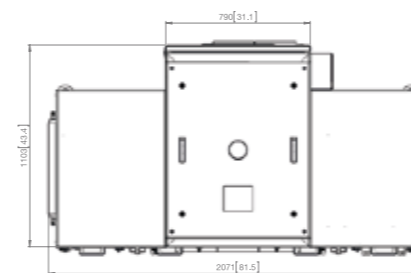
### G40 - Wide Format Xray inspection system

Technology:	Computer-controlled dual linear array
Xray generator:	Various specification from 80kV to 120kV
Conveyor:	0 - 100 m/min computer controlled
Detector array length:	358 - 614mm
Maximum line rate:	2000 lines per second
Resolution:	4096 grey levels per pixel
Video display:	15" color touchscreen with real-time images
Calibration:	Self-Calibrating during normal operation
Detection limit:	0.8mm stainless steel typically, dependent on product
Inspection rate:	Up to 600 packs/minute
Power requirements:	110 VAC or 200-240 VAC at 500VA
Dimensions (LxWxH):	2070 x 1250 x 1755 mm or 2670 x 1250 x 1755 mm



### G80 - Xray inspection system for large products and cases

Technology:	Computer-controlled 'Low Energy' technology
Xray generator:	Various specification from 80kV to 120kV
Conveyor:	0 - 60 m/min computer controlled
Detector array length:	Dual detector up to 2 x 614mm
Maximum line rate:	2000 lines per second
Resolution:	4096 grey levels per pixel
Video display:	15" color touchscreen with real-time images
Calibration:	Self-Calibrating during normal operation
Detection limit:	1.5mm stainless steel typical, dependent on product
Inspection rate:	Up to 150 cases/minute
Power requirements:	110 VAC or 200-240 VAC at 500VA
Dimensions (LxWxH):	2070 x 1100 x 1970 mm



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Sapphire  
INSPECTION SYSTEMS

Intelligent Xray Inspection Systems

SEALPAC UK

# 600 ppm?\*



## How quickly can your systems identify potentially catastrophic food contaminants?

### Can you afford the potential brand damage and product recall?

Sealpac UK and the Sapphire team, are the innovators and World leaders of low energy inspection, and today bring to the market the most advanced X-Ray detector design for highest speed and sensitivity. This provides major benefits of high resolution contaminant assessment, fill level, fat analysis and seal integrity in packaged, pumped and loose food product. (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.



Xray is the perfect solution for the detection of unwanted fish bones.

- **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.



### ► G10 Compact Xray inspection system

The G10 conveyor inspection systems are the most compact in the Sapphire series including both mass and contaminant checks. They represent an entry level solution including both mass and contaminant checks.

The series is designed for simple and efficient operation, with fully adaptive inspection and exceptionally easy to understand operating procedures. Only 6 parameters are needed to give full inspection control of contaminant and mass inspection.

Like the larger and faster machines of the G20 and G40 series, G10 systems are deployed in the food processing industry for packaged products such as confectionary, frozen products, bakery and ready meals. They are also ideal for loose product flows such as raisins, nuts and freeze-dried fruit. G10 systems can inspect virtually any discrete packaged items or continuous bulk product flows that can travel by conveyor. Using advanced linear array technology, the G10 exhibits superior performance in identifying contaminants such as metal, stone, glass, bone and certain plastics. It also effectively scans for product mass and detects underfill and overfill conditions to guarantee your product and packaging quality.



### ► G20 High speed Xray inspection system

The G20 represents most innovative offering in the field of Automatic Inspection. It combines the advanced linear array technology with inspection algorithms proven for the most difficult inspections.

The result is a system that not only demonstrates superior performance in identifying contaminants, such as metal, stone, glass, bone and certain plastics, but also excels at scanning for mass, missing or broken products, detecting packing voids and confirming fill levels. Results are consolidated to give a series of integrated reports. Products may be rejected into separate bins for contaminant and check-weigh non-conformities.

These systems are deployed widely for packaged products such as confectionery, 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 G20 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. to guarantee your product and packaging quality.



### ► G40 Wide format Xray inspection system

The G40 series has been designed for large packaged products and cartons, bearing many design and functional similarities to the widely used G20 series.

G40 systems are deployed in the food processing industry for packaged products such as multi-packs of snack foods, dairy products, bulk foods and trays of meat. Advanced linear array technology enables the G40 series of Xray systems to demonstrate superior performance in identifying contaminants, such as metal, stone, glass, bone and certain

plastics, scanning for missing or broken products, detecting packing voids and confirming fill levels.

The Sapphire G40 conveyor inspection systems can inspect virtually any discrete packaged items or continuous bulk product flows that can travel by conveyor.

Guarantee your product and packaging integrity, so vital to commercial success and brand reputation.



### ► G80 Xray inspection system for large products and cases

The Sapphire G80 series of Inspection Systems is designed for inspection of large products and cases.

The systems can inspect virtually any discrete packaged items or continuous bulk product flows that can travel by conveyor, up to 400mm high by 400mm wide.

The G80 series is deployed in the food industry for large cases and blocks of products, including snack-foods (chips, nuts, extruded products), dairy products (blocks of cheese, fats, liquid cheese) and tobacco products.

The G80's dual linear array technology ensures that every part of the product is fully inspected, right up to the top corners. A unique dual beam geometry ensures that full coverage is achieved so that contaminants which are not visible in one direction will be detected in the other orientation.

The G80 series demonstrates superior performance in identifying contaminants such as metal, stone, glass, bone and certain plastics. It also scans for missing or broken products, detecting packing voids and confirming fill levels, to guarantee your product and packaging integrity. The series is designed for simple and efficient operation, with fully adaptive inspection and easy to understand operating procedures.

This system will guarantee your product and packaging integrity, so vital to commercial success and brand reputation.



\*Up to 600 packs per minute using G40 Dual Lane technology