

For large products

## X-ray Inspection System



**XR75**



Best suitable for large cartons, cases and bags.

## Advanced X-ray Technology and Simple Operation Contribute to the Enhancement of Product Quality

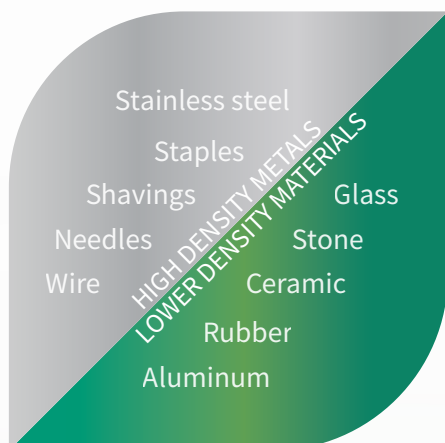
In addition to detecting metal contaminants, X-ray systems are capable of identifying shape defects, missing and broken products. The Anritsu XR75 X-ray Inspection System for large products is suitable for the inspection of products in large cartons, cases, and bags. The XR75 Inspection System for large products offers consistent and reliable inspection results on your production line with its outstanding detection sensitivity, ease of operation, and enhanced durability.





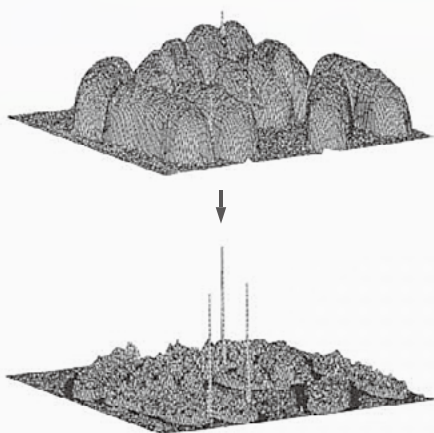
## Go Beyond the Metal

The XR75 provides accurate and repeatable detection of problematic foreign materials.



## Cutting-Edge Algorithms

Anritsu signal-processing technology and image-processing algorithms accurately capture contaminant signals. Advanced algorithms offer enhanced detection sensitivity, enabling the system to easily detect low-contrast contaminants such as bone and plastics.



## Intuitive, Time Saving Software

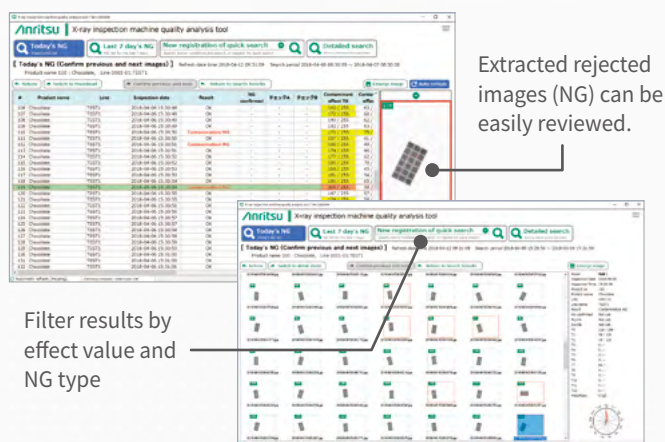


Example: Flour packed in a large bag

XR75 software helps operators work more efficiently, displaying reject images on the screen to easily identify contaminants.

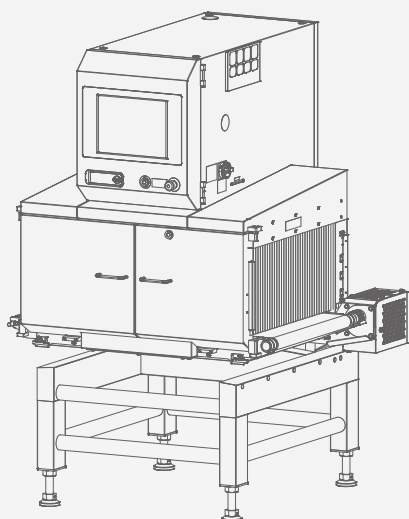
## Thorough Quality Control and Analysis

All the information is easily accessible from anywhere by using QUICCA 3, the overall quality management and quality control system. Each X-ray image during inspection is automatically saved for complete product traceability. The quality analysis feature allows a processor to view images both before and after rejected products on the screen, which helps find future problems before they occur.



Extracted rejected images (NG) can be easily reviewed.

Filter results by effect value and NG type



## Improvements from previous models

### 1 Conveyance capacity

The XR75 for large products is equipped with a high power motor, which enables the system to convey a dry product up to 50 kg and a wet product up to 40 kg.

### 2 High rigidity of moving parts

The rigidity of moving parts such as a conveyor cover and a motor are enhanced by performing continuous testing using the intensity analysis.

### 3 More options available

Extension conveyor and extension cover can be chosen according to the product length as an option.

# Safety in design

Anritsu believes customer safety is of utmost importance.

## Anritsu safety mechanism

### Emergency stop switch

Cuts power to x-ray and drive circuits, stops the conveyor and x-ray radiation.

### X-ray ON/OFF key

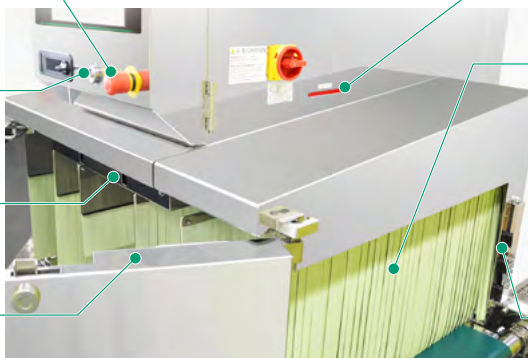
Turning the key to OFF stops x-ray radiation completely.

### X-ray shield cover open/close sensor

Opening the cover stops x-ray radiation.

### X-ray shield cover

Opened/Closed using the x-ray ON/OFF key. Opening the cover stops x-ray radiation due to the x-ray shield cover open/close sensor.



### X-ray irradiation display

The lamp is lit during x-ray radiation.

### Leakage prevention curtain

Prevents x-ray leakage. For unpackaged or bulk products, the standard lead impregnated curtains are replaced with SUS covers - preventing direct food contact with the curtains.

### Hand insertion sensor

Interrupting the sensor for a certain period of time stops x-ray radiation.

## Safety management

X-ray inspection system has been designed to fully satisfy the safe operation. However, to ensure even higher safety, use the safety procedures outlined below.

### ① Periodic measurement and recording of x-ray leakage data

### ② Management of operator working hours

### ③ Additional safety measures

Covers may need to be mounted on upstream and downstream conveyors instead of the shield curtains, depending on the shape, weight, and package of products.

### ④ No disassembly or modification

NEVER modify or disassemble the main unit, covers, x-ray leakage prevention curtains, safety covers, safety interlocks, etc.; otherwise, the x-ray leak-proof design may no longer be functional.

## X-ray radiation safety

### Safety of inspected products

According to the World Health Organization (WHO), "irradiation of any food commodity up to an overall average dose of 10 kGy presents no toxicological hazard and introduces no special nutritional or microbiological problems." \*

The maximum dose of x-ray radiation to the products moving through Anritsu x-ray inspection systems is 2.0 mGy, which is 5 million times lower than the WHO threshold.

\*Wholesomeness of Irradiated Food: Report of a Joint FAO/IAEA/WHO Expert Committee, 1980

### Safety of humans

The average U.S. resident receives a total radiation dose of 6.2 mSv/year (620 mRem). About one third (2.4 mSv/240 mRem) of that annual radiation derives from natural sources like the sun and soil. The rest comes from manmade sources like medical procedures (a typical chest x-ray generates about 0.1 mSv/10 mRem) or air travel (a round trip flight from New York to Tokyo is about 0.2 mSv/20 mRem). Throughout the world, most governments consider 20–50 mSv/year (2,000–5,000 mRem) to be safe for occupational workers.

Anritsu cabinet x-rays are engineered to meet some of the strictest emission standards in the world. A typical Anritsu x-ray solution is designed for maximum dosage of 2.0 mSv/year (200 mRem) This is based on the improbable scenario of a worker continually being 2 inches (5.08 cm) from the x-ray machine 2,000 hours/year (40 hours/week × 50 weeks). For typical work environments, the actual radiation dose from the cabinet x-ray to the worker is negligible.

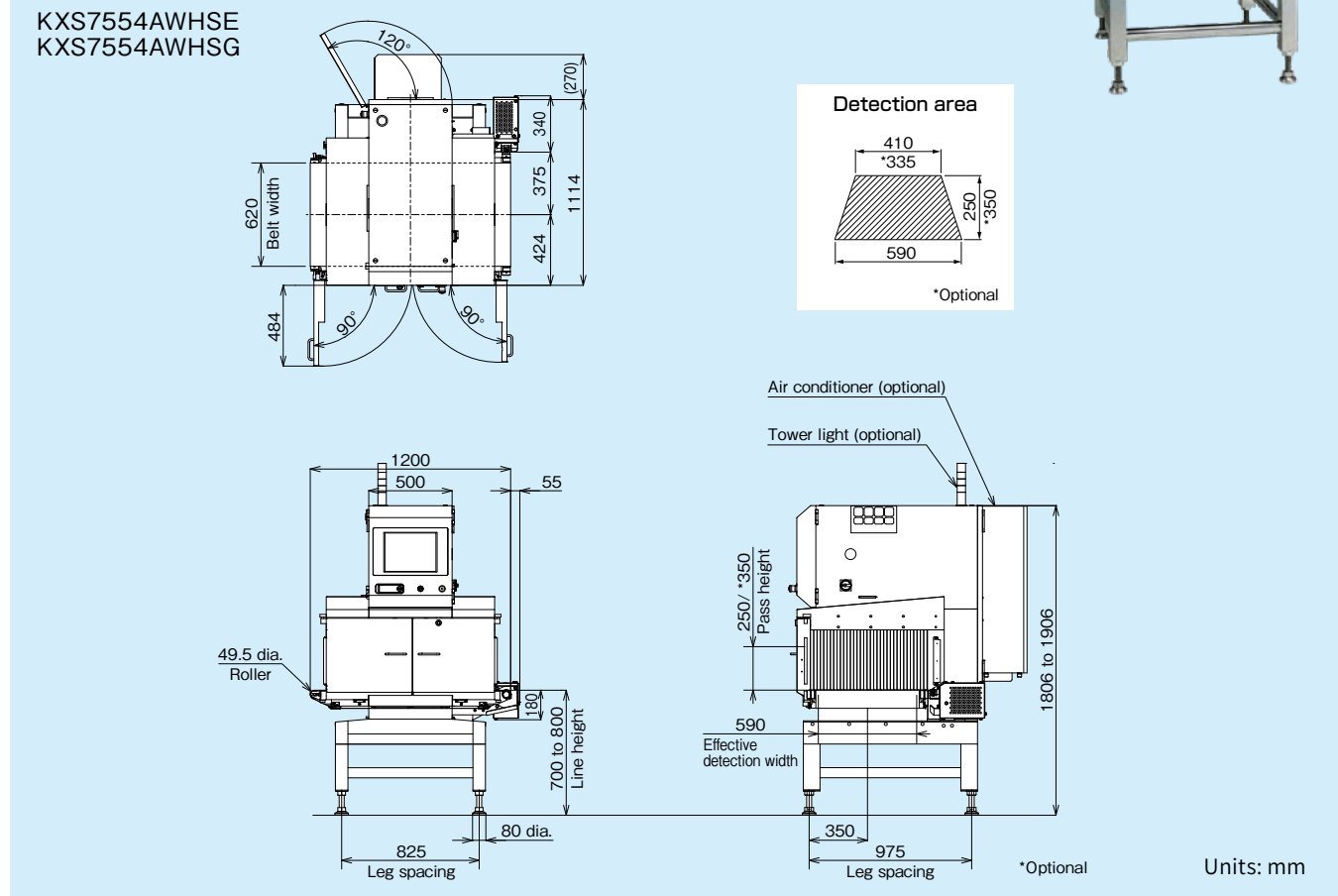
*Note: Please follow the local laws and regulations regarding the installation and use of the x-ray inspection systems.*

## Major specifications

# XR75

For large products

## External Dimensions



## Specifications



Model	KXS7554AWHSE	KXS7554AWHSG
Detection sensitivity <sup>1</sup>	Fe sphere and SUS sphere 0.4 mm dia.	Fe sphere and SUS sphere 0.5 mm dia.
X-ray output	Tube voltage 30 to 80 kV, tube current 0.4 to 10.0 mA, output 350 W	
Safety	X-ray leakage maximum 1.0 $\mu$ Sv/h or less, prevention of x-ray leakage by safety devices	
Display	15-inch color TFT LCD	
Operation method	Touch panel (with touch buzzer)	
Detection area <sup>2, 3</sup>	Maximum width 590 mm, maximum height 250 mm (Pass height of 350 mm is available as an option.)	
Belt width	620 mm	
Preset memory	200	
Belt speed / Maximum product weight <sup>4</sup>	Dry environment	10 to 30 m/min maximum 50 kg 31 to 40 m/min maximum 40 kg 20 to 70 m/min maximum 20 kg (optional)
	Wet environment where water or oil is scattered on the conveyor	10 to 30 m/min maximum 40 kg 31 to 35 m/min maximum 30 kg 36 to 40 m/min maximum 20 kg 20 to 60 m/min maximum 20 kg (optional) 61 to 70 m/min maximum 10 kg (optional)
Power requirements	100 Vac to 120 Vac $\pm$ 10% or 200 Vac to 240 Vac $\pm$ 10% (However, switch the tap of a transformer), single phase, 50/60 Hz, 1.2 kVA (1.9 kVA with optional air conditioner), rush current 70 A (typ.) (40 ms or less)	
Mass <sup>5</sup>	480 kg (525 kg with optional air conditioner)	
Environmental conditions <sup>6, 7</sup>	Temperature: 0°C to 35°C (0°C to 40°C with optional air conditioner), relative humidity: 30% to 85%, non-condensing	
Protection class	Conveyor: IP66 <sup>8, 9</sup> Other parts: IP40 <sup>10</sup>	
Exterior	Stainless steel (SUS304)	

1: Actual sensitivity depends on the physical properties of products (contents and shape) and on the environmental conditions. 2: The product size should fall below the detection area. 3: The entrance and exit may require covers depending on the length of a product. 4: Sum total of product weight on the conveyor. 5: Mass without option. 6: The air-conditioner option may be required depending on the operating environment. 7: The air conditioner can be used without a filter (standard); however, the filter option is recommended for use in dusty environment. When using the filter option, the temperature range in the operating environment of the x-ray system is limited. 8: Waterproof protection class is equivalent to IPX6. 9: Dustproof protection class is equivalent to IP6X excluding negative pressure condition. 10: Waterproof and dustproof protection class is designed in accordance with IEC60529.



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- Some products shown in this catalog may not be available in your country or region. Contact our sales representatives for details.
- To ensure proper operation, read the Operation Manual before using the machine.
- In addition to daily inspection, a full maintenance inspection should be completed annually.

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