Product Brochure

October 2022

Anritsu

For large products

X-ray Inspection System



XR75



Best suitable for large cartons, cases and bags.

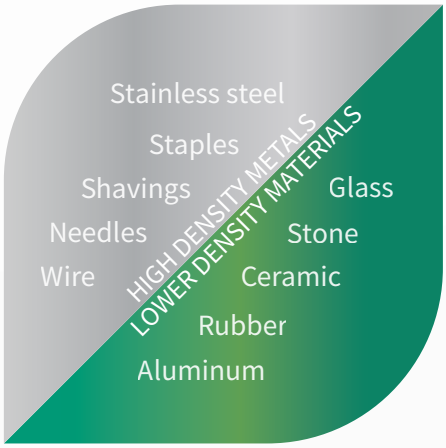
Advanced X-ray Technology and Simple Operation Contribute to the Enhancement of Product Quality

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.



Intuitive, Time Saving Software

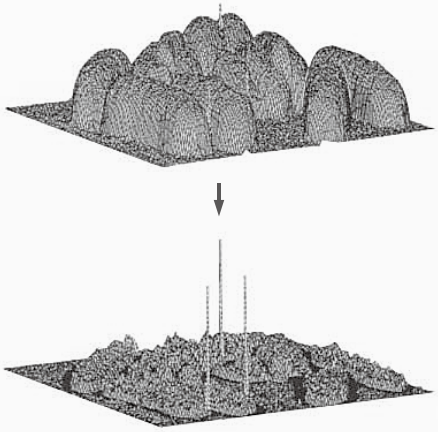


Example: Flour packed in a large bag

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

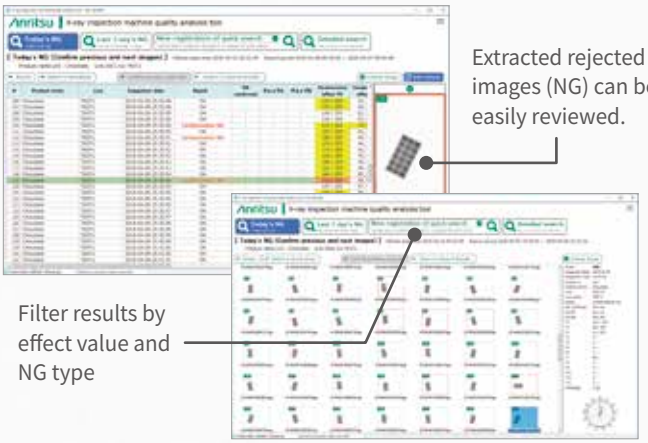
Cutting-Edge Algorithms

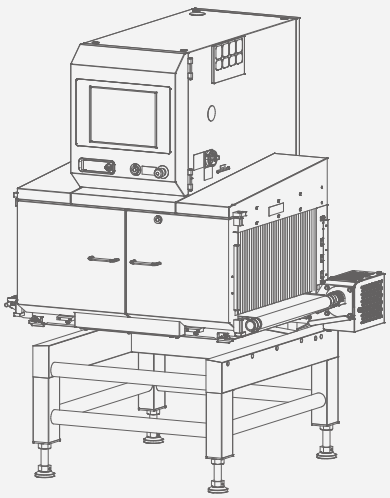
Anritsu signal-processing technology and image-processing algorithms accurately capture contaminant signals. Advanced algorithms offer enhanced detection sensitivity, enabling the system to easily detect low-contrast contaminants such as bone and plastics.



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.





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.

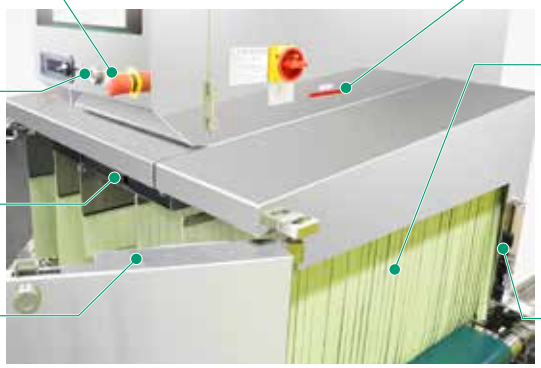
Anritsu safety mechanism

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.

❶ Periodic measurement and recording of x-ray leakage data

❷ Management of operator working hours

❸ 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.

❹ 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 / 10mRem) 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

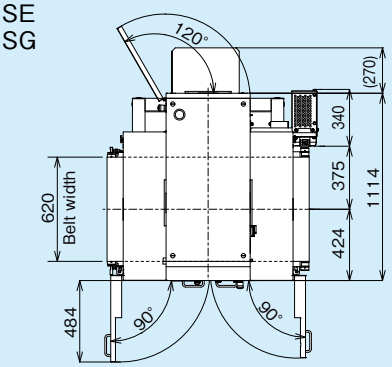


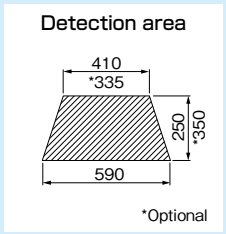
XR75

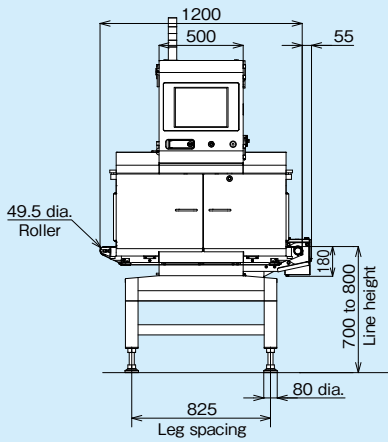
For large products

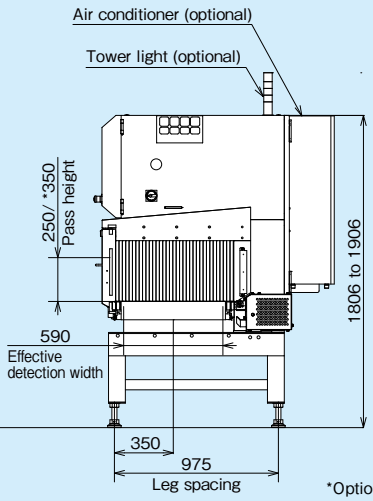
External Dimensions

KXS7554AWHSE
KXS7554AWHSG









Units: mm

Specifications

Model		KXS7554AWHSE	KXS7554AWHSG
Detection sensitivity [1]		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 μ 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 [2, 3]		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 [4]	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 ±10% or 200 Vac to 240 Vac ±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 [5]		480 kg (525 kg with optional air conditioner)	
Environmental conditions [6, 7]		Temperature: 0℃ to 35℃ (0°C to 40°C with optional air conditioner), relative humidity: 30% to 85%, non-condensing	
Protection class		Conveyor: IP66 Other parts: IP40	
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 bellow 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.

Anritsu

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ISO14001, ISO9001 Certified

- 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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