

Anritsu

XR76 Series

X-ray Inspection System



XR76

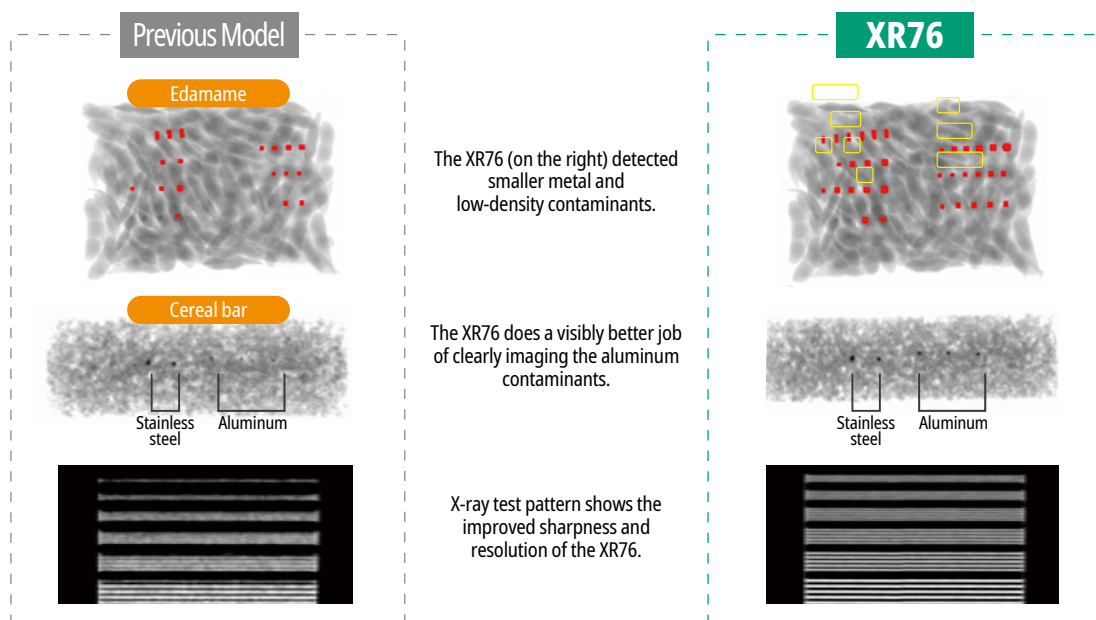


The XR76 Series sets a new level of performance, shaped directly by customer feedback. Designed for efficiency and reliability, this next-generation system delivers peace of mind through five key improvements: enhanced detection, fewer false rejects, a modern user-friendly HMI, simplified 1-step setup, and improved performance at high speeds. Whether you're battling labor shortages or aiming for higher throughput, the XR76 brings advanced operation and better protection to your production line.

Enhanced Detection Capability

A new high-performance X-ray sensor provides dramatically improved image resolution and clarity, boosting contaminant detection by up to 40%. This allows for high-precision detection of smaller metal and low-density foreign materials (e.g., stones and glass) that were previously difficult to identify.

PERFORMANCE COMPARISON



Efficiency & Sustainability

Anritsu's XR76 Series is designed to help food and pharmaceutical manufacturers overcome key industry challenges, including labor shortages, rising costs, and achieving sustainability goals by limiting food waste.

Labor-Saving Operation

- Intuitive, redesigned user interface
- Reduced false rejects, minimizing rework
- Simplified operation minimizes operator training and setup time

Maximize Uptime

- Durable, long-life components
- Less frequent servicing enabled by ALL (Advanced Long Life) technology

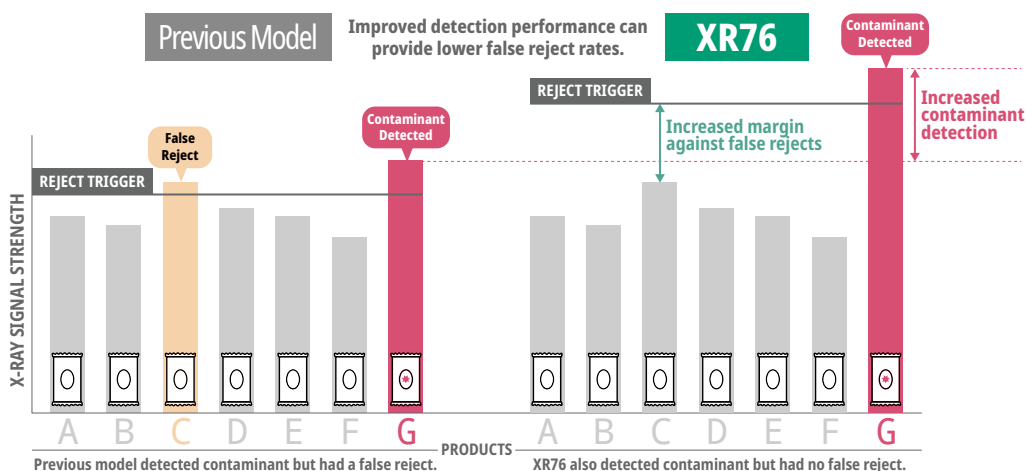
Lower Food Waste

Reduced false reject rate improves production yield and minimizes food waste, contributing to increased sustainability.



Reduced False Rejects

Enhanced detection allows you to easily balance false reject rates and detection sensitivity. Lower false reject rates improve yields, reduce costly rework (internal or external), increase operational efficiency, and minimize food loss.



Test Example

We compared false reject rates on over 5,000 product samples. The XR76 demonstrated a significant reduction in false rejects while also delivering improved contaminant detection performance.

XR76 reduced false rejects by over 80%.

Metric	Previous Model	XR76
Total Inspections	5318	
PASS count	5311	5317
Number of False Rejects	7	1
False Reject Rate	0.13%	0.02%

✓ 1-Pass Product Setup, 1-Touch Adjust

1-Pass Product Setup

Compared to the standard setup that requires 10 product passes, 1-Pass Product Setup allows you to create a product recipe in seconds. The 1-Pass feature does its best to balance performance and false reject rate. While 1-Pass offers a fast and efficient solution, a full learn is recommended for optimal performance.

Note: 1-Pass Product Setup is not available on KXS7620CVCTV, KXS7630CVCTV, and KXS7620DGBTV.



1-Touch Adjust

To adjust detection sensitivity, simply tap the 1-Touch Adjust button for an automatic recalibration. This quick fix is useful if you experience a false reject.

Previous Models

Longer adjustment time

XR76

Just press the "1-Touch Adjust" button, and everything is set!

Note that 1-Touch Adjust may impact detection performance. Users should confirm with their quality team that the system continues to comply with applicable HACCP specifications.

✓ Intuitive and User-Friendly Operability

The redesigned interface is highly responsive, offering smartphone-like operation. Users can pinch in and out to zoom, double-tap to enlarge, and swipe to navigate menus with ease.

Pinch in to zoom in

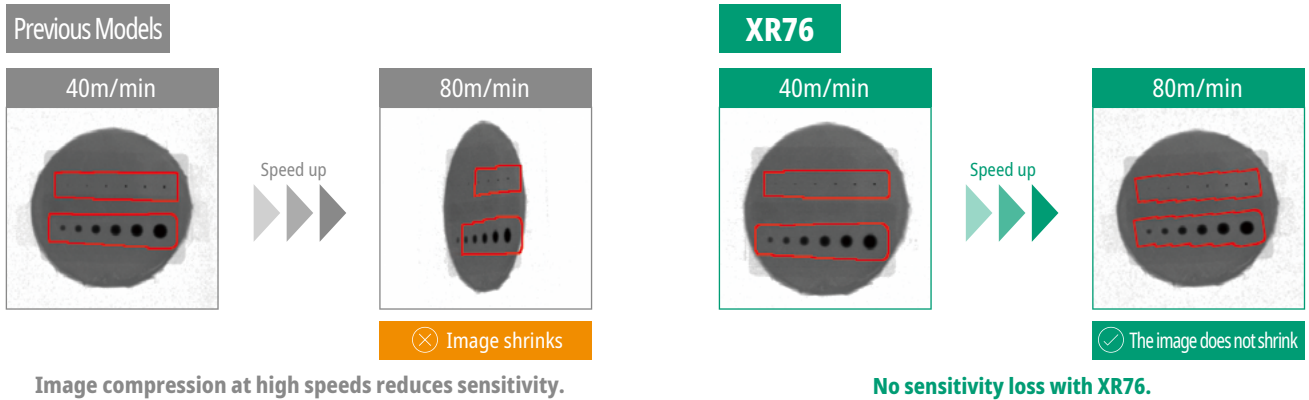
Pinch out to zoom out

Double tap

Enlarge the image focusing on the foreign object

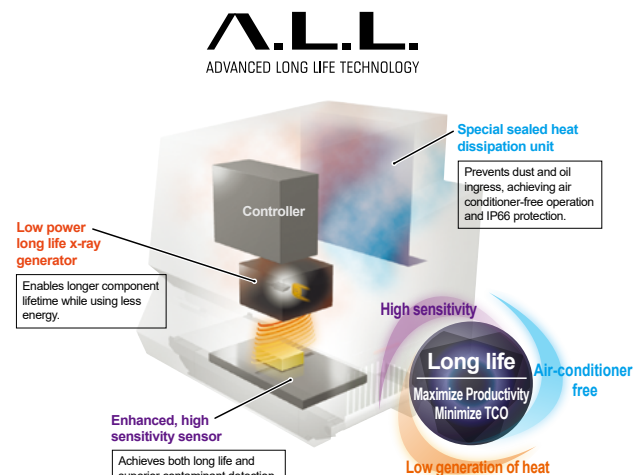
Improved High-Speed Performance

XR76 performance enhancements, driven by an improved sensor scan speed, allow full detection sensitivity at up to 80 m/min with no image compression. This makes it perfect for today's increasingly higher line speeds.



A.L.L. Technology: Minimizing TCO and Downtime

Building upon the highly regarded A.L.L. (Advanced Long Life Technology) from the XR75 series, the lifespan of the X-ray source and sensor has been dramatically improved, achieving over 2.5 times the longevity of previous models. This figure, based on preventive replacements, suggests that actual lifespan is even longer, ensuring stable performance over extended periods. Furthermore, the adoption of a specialized sealed structure has reduced the failure rate of key electrical components to approximately one-third. By decreasing the frequency of component replacements and failures, both lifetime costs and downtime are effectively minimized.



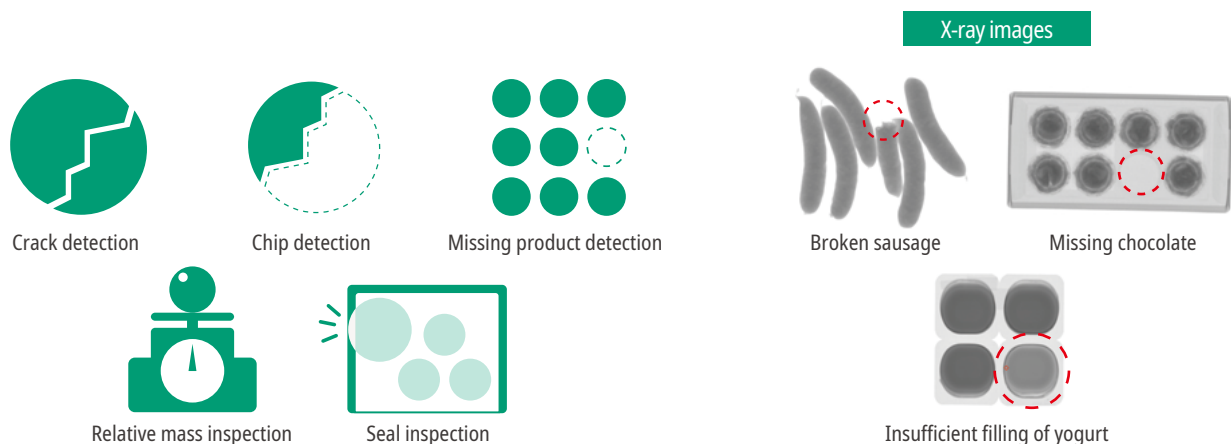
Achievements of A.L.L.

(Comparison with the KD74 Series)

X-ray generator, X-ray sensor	Major electrical components
Average Lifetime Over 2.5 times longer	Failure Rate approx. 1/3 reduction

Additional Capabilities

In addition to detecting contaminants, the system can simultaneously perform tasks such as shape analysis and identifying missing products. In the XR76 series, shape recognition capabilities have been significantly enhanced to support high-speed production lines.



Safety in design **XR76** Series

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

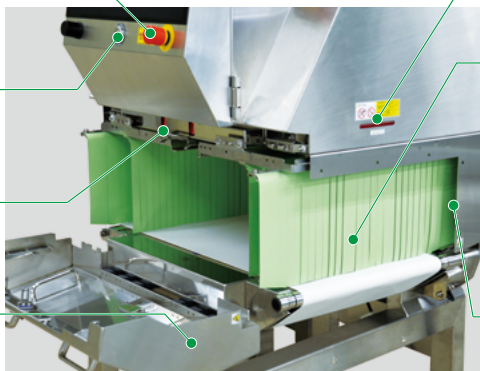
Turning the key to OFF stops x-ray radiation completely.

X-ray shield cover open/close sensor

Opening the cover stops x-ray radiation.

X-ray shield cover

Opened/Closed using x-ray Irradiation 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

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.

② Management of operator working hours

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.

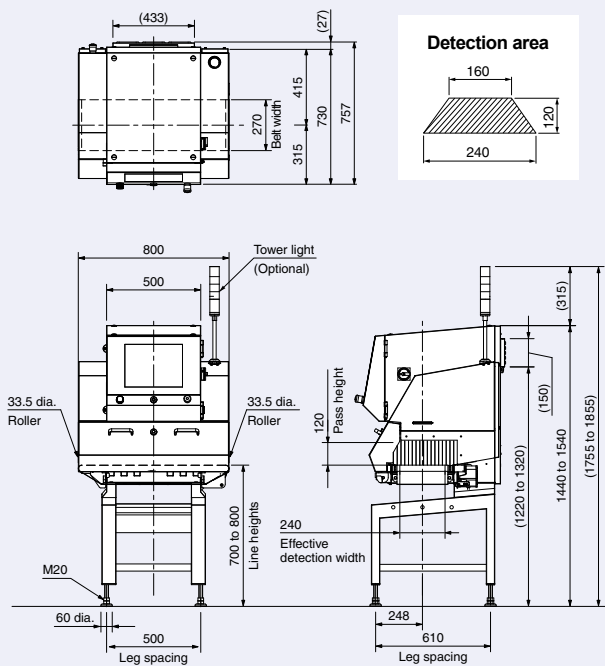
Specifications **XR76 Series**

Standard models

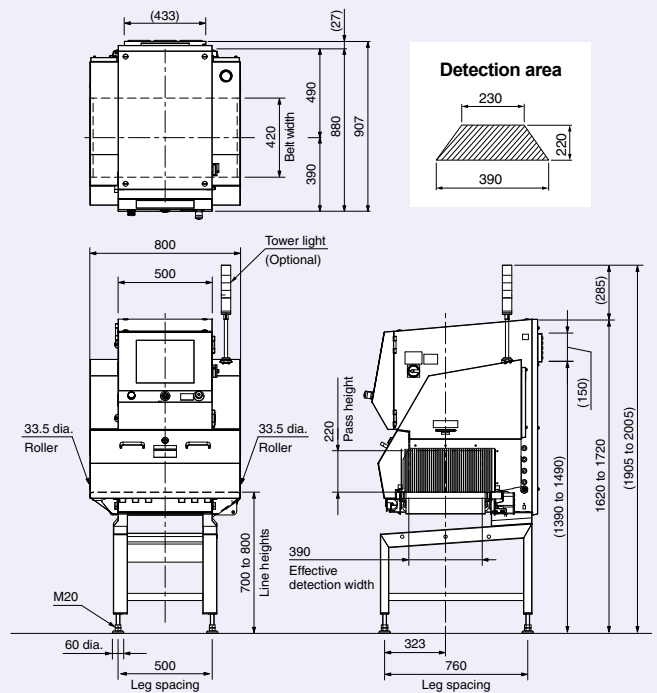
For small or medium sized packaged products.



KXS7622AVCTV



KXS7634AVCTV



Units: mm

Model	KXS7622AVCTV	KXS7634AVCTV
Detection area ^{1, 2}	Maximum width 240 mm, maximum height 120 mm	Maximum width 390 mm, maximum height 220 mm
Belt width	270 mm	420 mm
Conveyor speed/ Maximum product weight ³	10 to 60 m/min, maximum 5 kg 61 to 90 m/min, maximum 2 kg	10 to 60 m/min, maximum 5 kg
Mass ⁴	230 kg	290 kg
Display	15-inch LCD with capacitive touch panel	
Exterior	Stainless steel (SUS304)	
Preset memory	200 or 999 (Switchable)	
X-ray output	Tube voltage 30 to 80 kV, tube current 0.4 to 3.3 mA, maximum 100 W	
Safety	X-ray leakage maximum 1.0 μ Sv/h or less, prevention of x-ray leakage by safety devices	
Environmental conditions	Temperature: 0 °C to 35 °C, Humidity: 30 % to 85 %, non-condensing	
Power requirements	100 Vac to 240 Vac, single phase, 50/60 Hz, 700 VA or less, Allowable power fluctuation range ± 10 %	
Protection class	IP66 ⁵	

1: The product size should fall below the detection area shown in the above external dimensions.

2: The entrance and exit may require covers depending on the length of a product.

3: Sum total of product weight on the conveyor.

4: Mass without option.

5: Waterproof protection class is equivalent to IPX6, excluding the duct. Dustproof protection class is equivalent to IP6X excluding negative pressure condition.

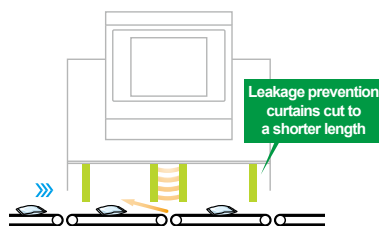
Note: The noise level of the KXS7622AVCTV is 72 dB(A) in terms of A-weighted sound pressure level. The noise level of the KXS7634AVCTV is 70 dB(A) in terms of A-weighted sound pressure level.



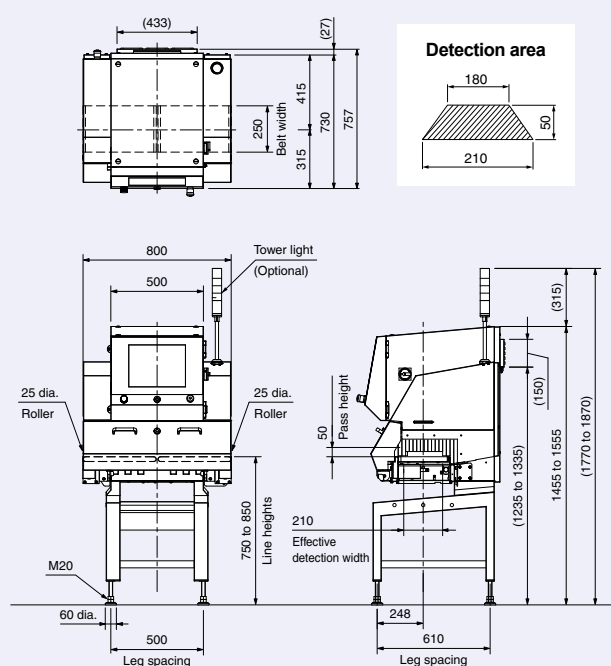
Specifications **XR76** Series

Split conveyor (beam pass-through)

For high-speed lines handling small, lightweight packages.
Compact machine footprint (800 mm long).



KXS7620DGBTV



Units: mm

Please note the following specification limitations for this model:

- Detection sensitivity may vary due to lower X-ray output.
- Maximum product weight is 2 kg.
- Conveyor section is not waterproof.
- 1-Pass Product Setup is not supported.

For further details, please contact our sales representative.

Model	KXS7620DGBTV
Detection area ^{1,2}	Maximum width 210 mm, maximum height 50 mm
Belt width	250 mm
Conveyor speed/ Maximum product weight ³	10 to 90 m/min, maximum 2 kg
Mass ⁴	235 kg
Display	15-inch LCD with capacitive touch panel
Exterior	Stainless steel (SUS304)
Preset memory	200 or 999 (Switchable)
X-ray output	Tube voltage 50 kV, tube current 0.4 to 0.5 mA, maximum 25 W
Safety	X-ray leakage maximum 1.0 μ Sv/h or less, prevention of x-ray leakage by safety devices
Environmental conditions	Temperature: 0 °C to 35 °C, Humidity: 30 % to 85 %, non-condensing
Power requirements	100 Vac to 240 Vac, single phase, 50/60 Hz, 700 VA or less, Allowable power fluctuation range $\pm$ 10 %
Protection class	Conveyor: IP40 ⁵ , Other parts: IP66 ⁶

1: The product size should fall below the detection area shown in the above external dimensions.

2: The entrance and exit may require covers depending on the length of a product.

3: Sum total of product weight on the conveyor.

4: Mass without option.

5: Waterproof and dustproof protection class is designed in accordance with IEC60529.

6: Waterproof protection class is equivalent to IPX6, excluding the duct. Dustproof protection class is equivalent to IP6X excluding negative pressure condition.

Note: The noise level is 72 dB(A) in terms of A-weighted sound pressure level.



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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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