

Product Brochure

April 2023

Anritsu
Advancing beyond

XR75 DualX+

for Unpackaged Food Applications


XR75^h
Dual Energy

BEST-IN-CLASS FISH BONE DETECTION PERFORMANCE

Detecting fish bones has been challenging in the industry. Anritsu's DualX Fish greatly improves bone detection. It also has been completely re-engineered to better withstand the harsh environment of fish plants.

- **Industry Leading Bone Detection Capability:** Fish bones have low densities and do not usually appear clearly in X-ray images. Anritsu's newly developed HR Dual Energy Sensor makes fish bones "visible", and the proprietary detection algorithms reliably detects bones with high sensitivity.
- **IP69K/Sanitary Design:** The robust, open design promotes thorough drainage and allows accessible high-pressure cleaning. Sloped surfaces, full sealed welds, and sealed hygienic belt minimize harborage points for continuous sanitary operation.
- **Super Long Life Sensor:** The HR dual energy sensor adopts a structure that has very little deterioration of the element, and has a significantly longer life compared to conventional models, contributing to lower TCO.
- **XR75 Platform:** Products are easy to set up and operator-adjustable. The interface and electronics are common to Anritsu's other XR75 systems, giving users a shared experience across Anritsu's product lines.

Salmon fillet



Cod fillet



STANDARD FEATURES

- Super HD imaging dual energy sensor
- IP69K washdown rating
- Sanitary design
- Longer life generator & sensor
- Auto-learn product setup wizard
- Sealed sanitary belt
- Tool-free belt removal
- Image & reject logs
- 10+ software detection tools
- QUICCA capable

Sanitary Design Features

Fully sealed welded seams

Smooth, angled surfaces and rounded corners to promote water runoff and sanitation.

Front cover

The cover can be opened for cleaning the food contact area. When opened, it has the angled surfaces to promote drainage.

All solid (no tubular) members

No hollow areas in the rollers and frame.
Tool-free belt removal.

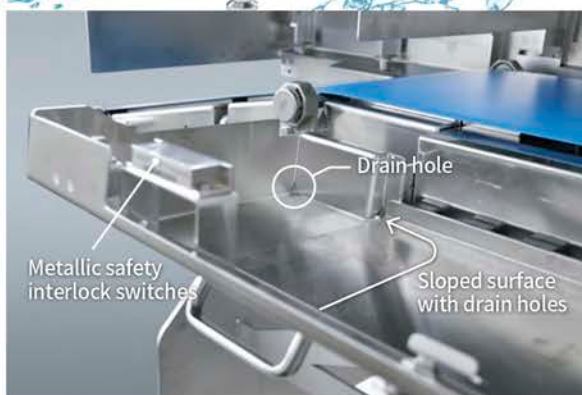
Open frame construction

Fully sealed feet (optional)

Minimize open niches. Also available with floor bolt mounting tabs.
Adjustment range: ± 30 mm.



Open access to food contact area



Smooth, sloped surfaces that resist liquid pooling and promote drainage



Hygienic conveyor belt

The belt is fully sealed with special coating that prevents the invasion of liquid or bacteria.



Protective screen cover

Safety in design

XR75 Dual Energy

Anritsu believes customer safety is of utmost importance.

Anritsu safety mechanism

X-ray ON/OFF key

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

X-ray irradiation display

The lamp is lit during x-ray radiation.

X-ray shield cover open/close sensor

Opening the cover stops x-ray radiation.

Stainless plates for leakage prevention

Although there are openings for product passage between the plates and the conveyor top surface, x-ray leakage is prevented with the conveyor structure as its entrance and exit areas are slanted.



Emergency stop switch

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

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.

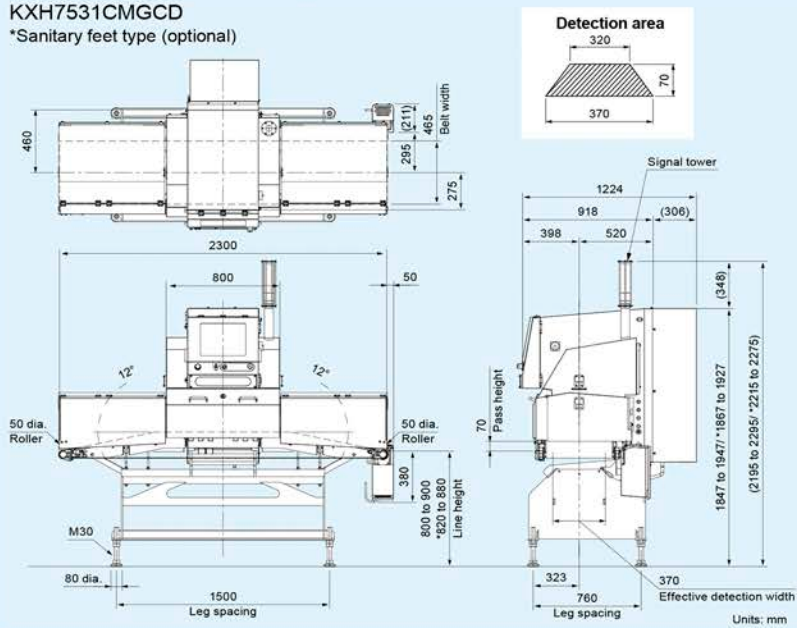
Note: Please follow the local laws and regulations regarding the installation and use of the x-ray inspection systems.



External Dimensions

KXH7531CMGCD

*Sanitary feet type (optional)



Specifications

Model	KXH7531CMGCD
X-ray output	Tube voltage 30 to 80 kV, tube current 0.4 to 10.0 mA, output 300 W
Safety	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)
Product type	Unpackaged food applications
Detection area ^{1,2}	Maximum width 370 mm, maximum height 70 mm
Belt width	465 mm
Preset memory	200
Belt speed ³ / Maximum product weight ⁴	10 to 45 m/min, maximum 25 kg
Power requirements ⁵	200 Vac to 240 Vac, single phase, 47 Hz to 63 Hz, 2500 VA or less (standard)
Mass ⁶	723 kg
Environmental conditions	Temperature: 0°C to 35°C, Relative humidity: 30% to 85%, non-condensing
Protection class	Conveyor: IP69K (maximum water temperature: 80°C) Other parts: IP69K (maximum water temperature: 60°C)
Exterior	Stainless steel (SUS304)

1: The product size should fall below the detection area. 2: The entrance and exit may require covers depending on the length of a product. 3: Variable depending on Product No. 4: Sum total of product weight on the conveyor. 5: Allowable power fluctuation range is $\pm 10\%$. 6: Mass without option.

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