X-ray Foreign Object and Defect Inspection Solution



Increase productivity

Improve product quality

Reduce manufacturing cost

Flexible customization

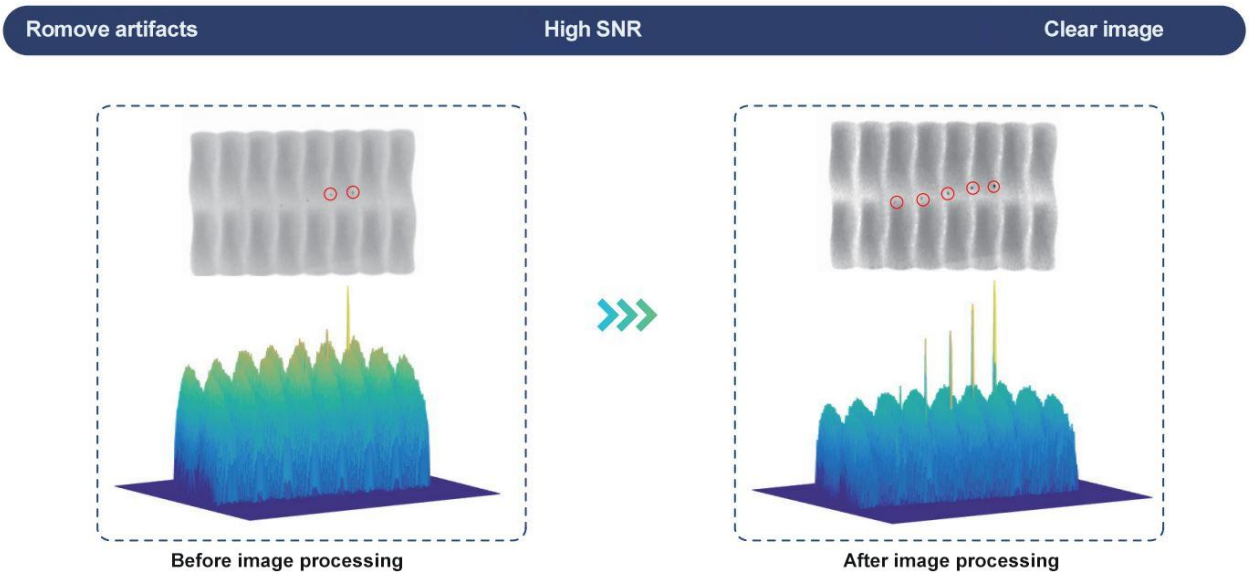
Dongguan Coso Electronic Tech Co., Ltd.

The X- ray inspection system has the function of both foreign object detection and defect inspection. It can detect unwanted physical impurity such as metal, glass, bone, ceramic and stone mixed with products or raw materials, regardless of their shape or location.
It can also inspect the defect of products such as incomplete, fracture, crack, broken and overlap.
Also, it's equipped intelligent algorithm that can be trained to flag defect that's hard to detect to achieve automatic alarm.

Advantage

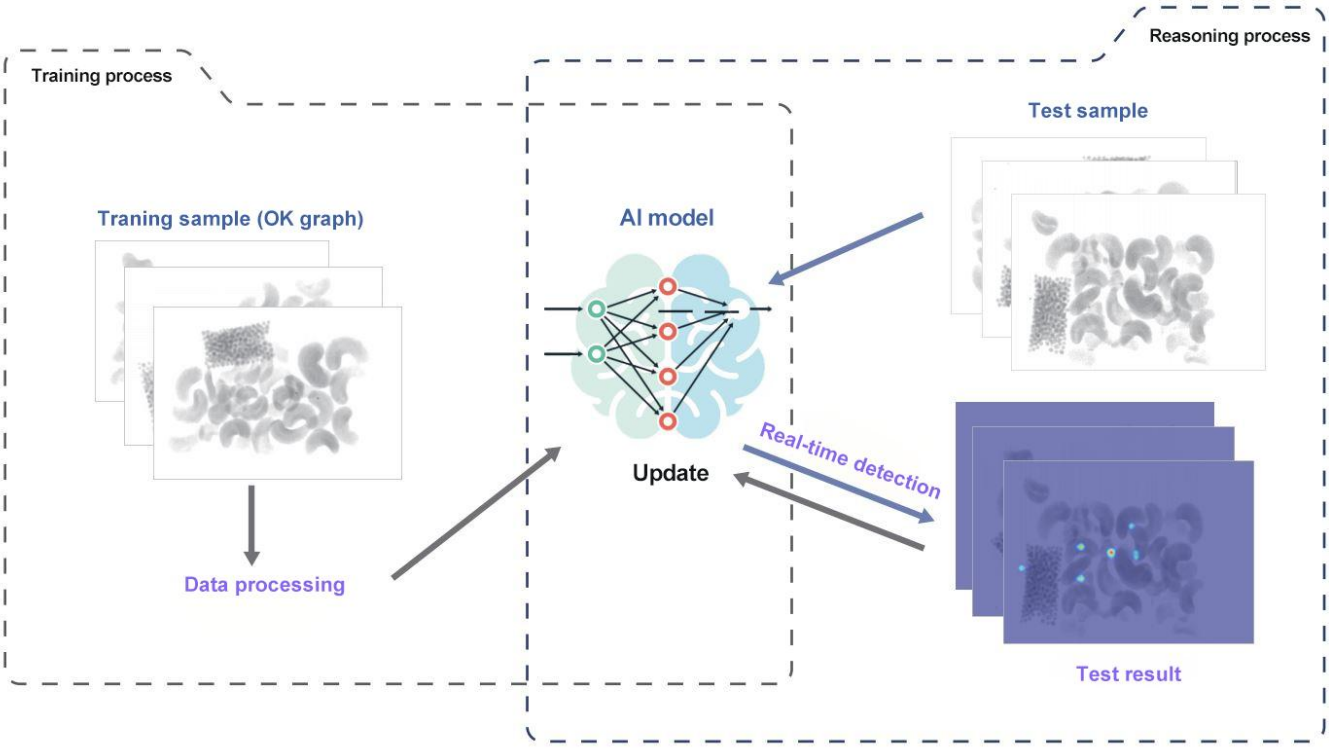
Image Program

The new image enhancement engine makes detailed imaging clearer, which has greater advantages in improving the detection rate of foreign objects and defects and reducing the false alarm rate.



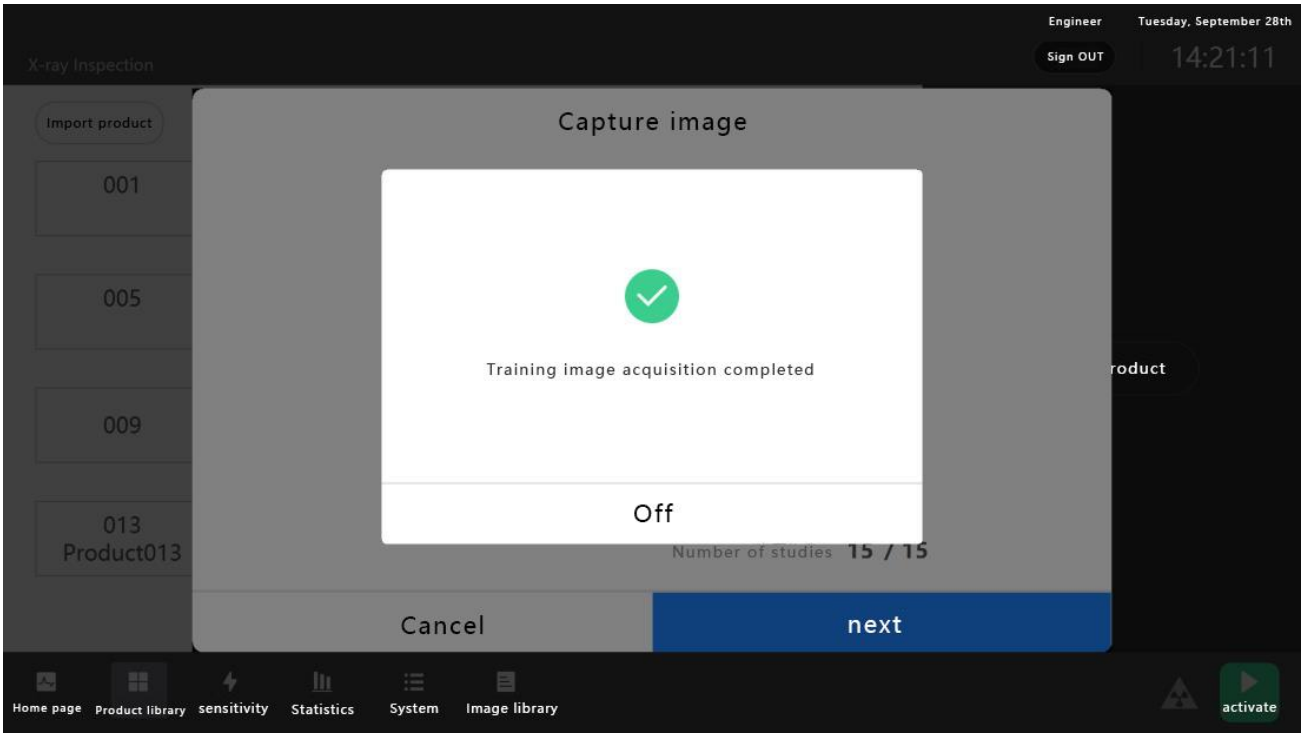
Intelligent Algorithm

The algorithm can collect samples in real time and improve detection capabilities through continuous learning.



Convenient Operation

Equipment parameters are basically free of debugging, the software operation is user-friendly and easy to understand.



Applicable Fields

Widely used in fruits, vegetables, prepared foods, snack foods, aquatic products, daily chemicals, pharmaceuticals, health care, plastics and many other fields.



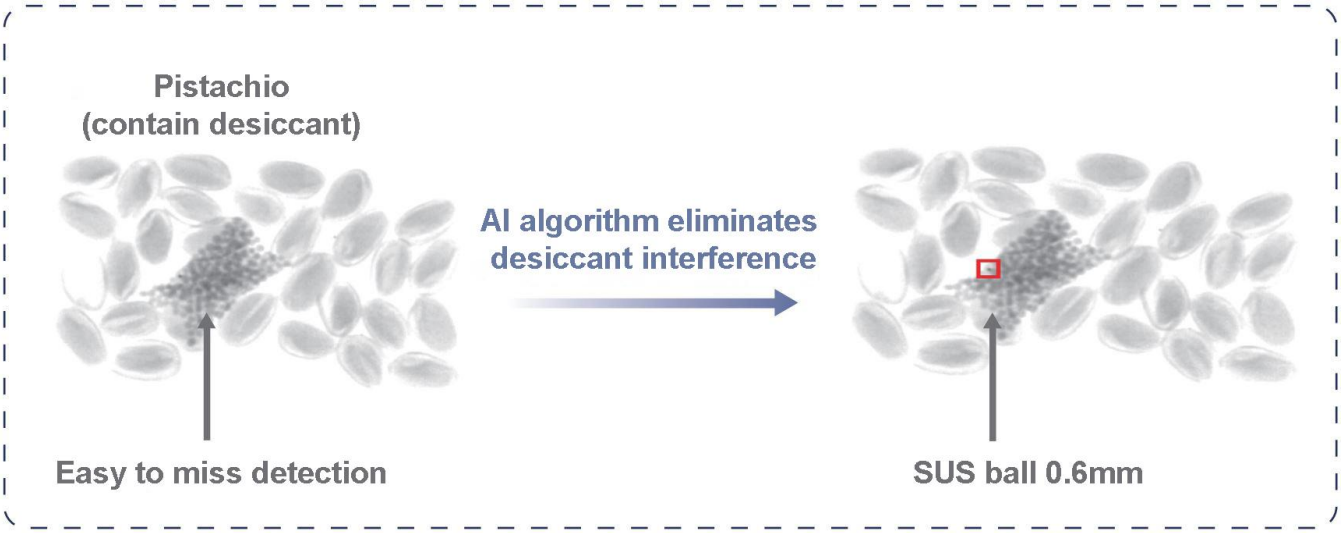
Products Series
XS Series X-ray Inspection System





- While detecting foreign object in the product (metal, stone, ceramic, glass, bone), it can also simultaneously detect defects, such as poor product form, including incompleteness, fracture, breaks, overlap, etc., effectively preventing the outflow of defective products.
- Product counting & integrity detection in opaque product packaging.
- Reduce the impact of desiccant & deoxidizer.





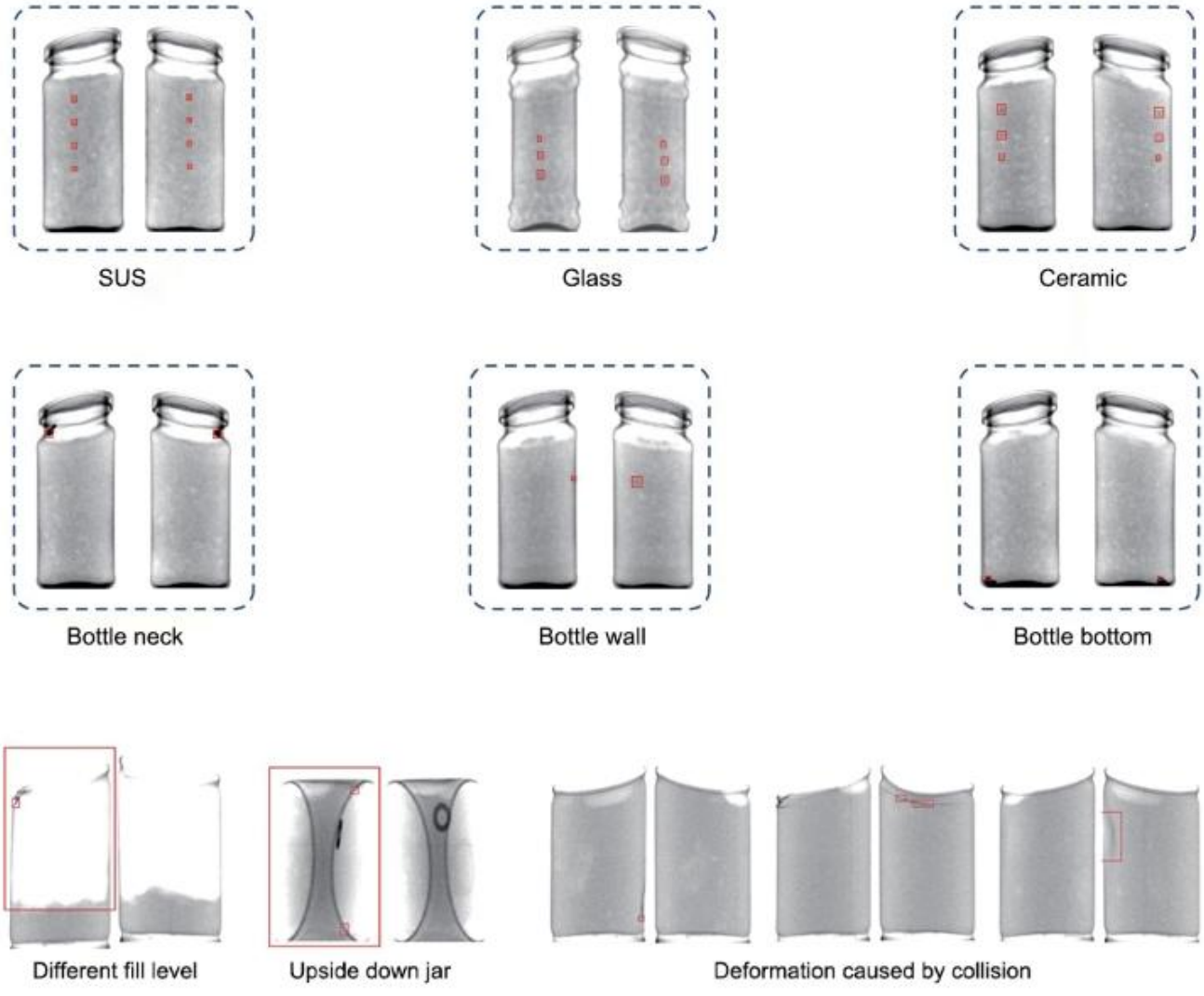
Specification

Model		XS-4016	XS-5025	XS-6030	XS-8050
Structure	Tunnel width	400mm	500mm	600mm	800mm
	Tunnel height	160mm	250mm	300mm	500mm
	Dimension	2009(H)*1094(L)* 902(W)mm	2090(H)*1500(L)* 1180(W)mm	2140(H)*1500(L)* 1280(W)mm	2301(H)*2021(L)* 1635(W)mm
	Weight	380kg	500kg	600kg	800kg
	Frame material	SUS304	SUS304	SUS304	SUS304
Conveying	Conveyor material	Food grade PU	Food grade PU	Food grade PU	Food grade PU
	Conveyor width	400mm	500mm	600mm	800mm
	Height from conveyor to ground	800±50mm	800±50mm	800±50mm	800±50mm
	Conveyor speed	10~60m/min	10~60m/min	10~60m/min	10~60m/min
	Max load	10kg	15kg	20kg	30kg
X-ray	X-ray tube voltage	40~80kv	40~80kv	30~80kv	60~120kv
	X-ray tube current	200~5000μA	200~5000μA	4000~7500μA	200~7500μA
	X-ray power	210W	210W	350W	480W
Sensitivity	Stainless steel ball（Φ）	0.3mm	0.3mm	0.5mm	0.5mm
	Stainless steel wire	0.2*2mm	0.2*2mm	0.3*2mm	0.3*2mm
	Glass ball（Φ）	1.0mm	1.0mm	1.5mm	1.5mm
	Ceramic ball（Φ）	1.0mm	1.0mm	1.5mm	1.5mm
Configurtation	Protection level	Conveying part： IP66			
		Other sections： IP54			
	Rejection	NG belt stops；automatic rejection（optional）			
	Alarm mode	Sound and light alarm			
	Display	21.5 inch touch screen, resolution 1920*1080			
	Cooling	Industrial air conditioner			
	Protection	4 layers of protective curtains at entrance and exit			
	X-ray leakage	≤1 μ Sv/h			
	Working temperature	-10~40℃			
	Working humidity	30~90%RH，no frost			

XS Series X-ray Inspection System (Special for bottle/Jar/Can product)



- While detecting foreign object in the product (metal, stone, ceramic, glass, bone), it can also simultaneously detect defects, such as poor product form, including insufficient or overfilled cans, bumps and deformations of the cans, upside down jar, etc.



Specification

Model		XS1625-S	XS1625-D
Structure	Tunnel width	160mm	160mm
	Tunnel height	250mm	250mm
	Dimension	2150(H)*4200(L)* 1500(W)mm	2150(H)*4200(L)* 1500(W)mm
	Weight	900kg	1000kg
	Frame material	SUS304	SUS304
Conveying	Conveyor material	Food grade PP chain plate	Food grade PP chain plate
	Conveyor width	150mm	150mm
	Height from conveyor to ground	800±50mm	800±50mm
	Conveyor speed	30~60m/min	30~60m/min
	Max load	15kg	15kg
X-ray	X-ray	Single	Double
	X-ray tube voltage	60~120kv	60~120kv
	X-ray tube current	200~7500μA	200~7500μA
	X-ray power	480W	480W
Sensitivity	Stainless steel ball（Φ）	0.5mm	0.5mm
	Stainless steel wire	0.3*2mm	0.3*2mm
	Glass ball（Φ）	1.5mm	1.5mm
	Ceramic ball（Φ）	1.5mm	1.5mm
Configuration	Protection level	Conveying part： IP65	
		Other sections： IP54	
	Rejection	NG stops；automatic rejection	
	Alarm mode	Sound and light alarm	
	Display	21.5 inch touch screen, resolution 1920*1080	
	Cooling	Industrial air conditioner	
	Protection	Shield	
	X-ray leakage	≤1 μ Sv/h	
	Working temperature	-10~40℃	
	Working humidity	30~90%RH，no frost	

XS Series X-ray Inspection System (for Bulk material)



- Specially designed for inspection of bulk products before packaging, it can achieve high-precision and highly adaptable foreign object and defect detection results. Together with the high-speed spray rejection system, it provides effective technical support for improving the quality and efficiency of customers' production.
- Suitable for bulk material like nut, pills etc.
- The size of tunnel can be customized according to customer's requirements.
- The entire machine integrates 32/64 array jet valves to accurately eliminate defective products and reduce the occurrence of defective products

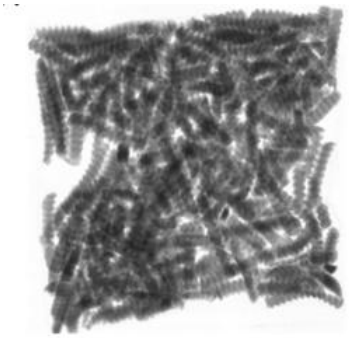
Specification

Model		XS-6010
Structure	Tunnel width	600mm
	Tunnel height	100mm
	Dimension	2070(H)*2180(L)*1280(W)mm
	Weight	500kg
	Frame material	SUS304
Conveying	Conveyor material	Food grade PU
	Conveyor width	600mm
	Height from conveyor to ground	800±50mm
	Conveyor speed	10~90m/min
	Max load	15kg
X ray	X-ray tube voltage	40~80kv
	X-ray tube current	200~5000μA

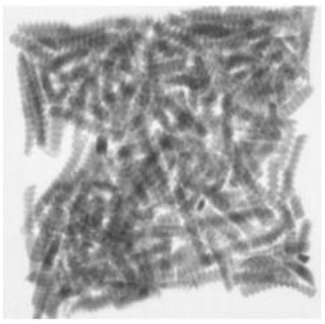
	X-ray power	210W
Sensitivity	Stainless steel ball（Φ）	0.3mm
	Stainless steel wire	0.2*2mm
	Glass ball（Φ）	1.0mm
	Ceramic ball（Φ）	1.0mm
Configuration	Protection level	Conveying part： IP66
		Other sections： IP54
	Rejection	36/64 lane air blast
	Alarm mode	Sound and light alarm
	Display	17 inch touch screen
	Cooling	Industrial air conditioner
	Protection	Protective curtain
	X-ray leakage	≤1 μ Sv/h
	Working temperature	-10~40℃
	Working humidity	30~90%RH，no frost

Dual Energy X-ray Inspection System





Single Energy Rendering



Dual Energy Rendering

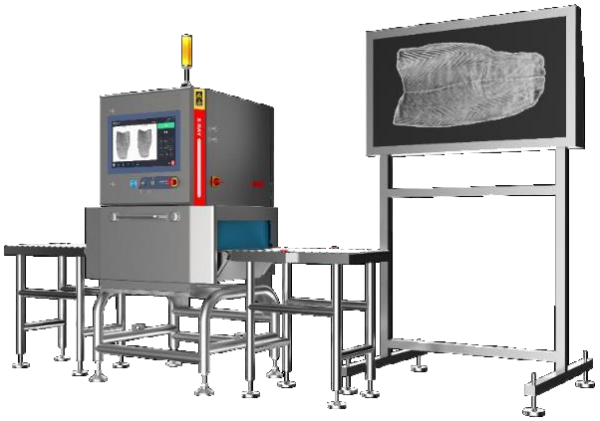
- The new Raytina dual energy detection algorithm effectively detects small foreign objects in various sizes of bones, fish bones, or French fries in meat
- AI based intelligent defect recognition algorithm; Equipped with software self-learning function and excellent detection accuracy
- Open calibration tools, expand detection applications, and easily have your own algorithms
- The conveying structure is stable, and the belt can be quickly disassembled, which can be well applied in production lines with high oil and water content in meat processing, easily and quickly removing dirt
- The entire machine has an IP66 waterproof rating
- Multi channel, stainless steel curtain optional
- Optional 0.1mm detector for precise detection of bones and fish bones

Specification

Model		XS-4016
Structure	Tunnel width	400mm
	Tunnel height	160mm
	Dimension	2070(H)*2180(L)*1280(W)mm
	Weight	380kg
	Frame material	SUS304

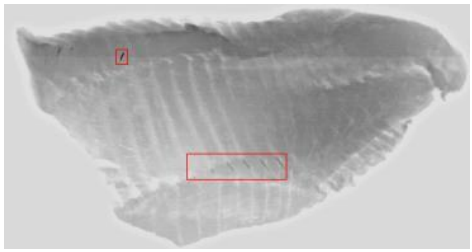
Conveying	Conveyor material	Food grade PU
	Conveyor width	440mm
	Height from conveyor to ground	800±50mm
	Conveyor speed	10~60m/min
	Max load	15kg
X ray	X-ray tube voltage	30~80kv
	X-ray tube current	4000~8000μA
	X-ray power	350W
	Detector	0.1mm Multiple Exposure Detection
Sensitivity	Stainless steel ball（Φ）	0.3mm
	Stainless steel wire	0.2*2mm
	Glass ball（Φ）	1.0mm
	Ceramic ball（Φ）	1.0mm
Configuration	Protection level	Conveying part： IP66
		Other sections： IP66
	Rejection	NG belt stops；automatic rejection（optional）
	Alarm mode	Sound and light alarm
	Display	21.5 inch touch screen .Resolution 1920*1080
	Cooling	Industrial air conditioner
	Protection	Protective curtain
	X-ray leakage	≤1 μ Sv/h
	Working temperature	-10~40℃
	Working humidity	30~90%RH，no frost

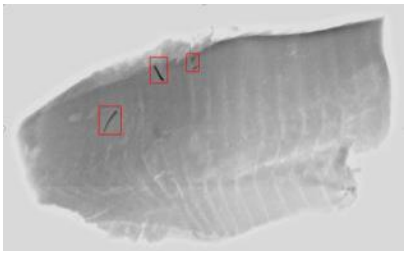
X-ray Inspection System For Fish Bone

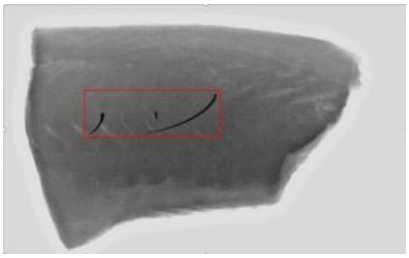




Product Feature







- High precision foreign object detection: 0.1mm detector, capable of detecting small foreign objects such as metal, glass, stones, bones, etc., with strong applicability and high detection accuracy
- Synchronous detection of foreign object defects: In addition to foreign object detection, it supports multiple defect detection methods such as cracking, missing/missing corners, overlapping, etc., with high accuracy
- Rapid expansion of detection types: open calibration tools, expand detection applications, and easily have your own algorithms
- Flexible connection of production lines: stable conveying structure, flexible design, and easy integration with existing production lines
- IP66 waterproof technology: The entire machine is designed with IP66 waterproof technology (except for air conditioning), which can meet the frequent flushing needs of food processing plants
- High anti-corrosion level: For the detection of aquatic materials, the entire machine uses high-grade corosion-resistant 316L stainless steel

Specification

Model		XS-4010
Structure	Tunnel width	400mm
	Tunnel height	100mm
	Dimension	1964(H)*1109(L)*1066(W)
	Weight	380kg
	Frame material	SUS316L
Conveying	Conveyor material	Food grade PU
	Conveyor width	440mm
	Height from conveyor to ground	800±50mm
	Conveyor speed	＜60m/min
	Max load	10kg

X ray	X-ray tube voltage	30~80kv
	X-ray tube current	4000~8000μA
	X-ray power	350W，beryllium window
	Detector	0.1mm TDI
Sensitivity	Stainless steel ball（Φ）	0.2mm
	Stainless steel wire	0.18*0.18mm
	Glass ball（Φ）	0.8mm
	Ceramic ball（Φ）	0.8mm
Configuration	Protection level	Conveying part： IP66
		Other sections： IP66
	Rejection	NG belt stops；automatic rejection（optional）
	Alarm mode	Sound and light alarm
	Display	21.5 inch touch screen .Resolution 1920*1080 ≥ 43 inch display screen, resolution 4K
	Cooling	Industrial air conditioning, independent dehumidifiers
	Protection	4 layer Protective curtain at the entrance and exit
	X-ray leakage	≤1 μ Sv/h
	Working temperature	-10~40℃
	Working humidity	30~90%RH，no frost