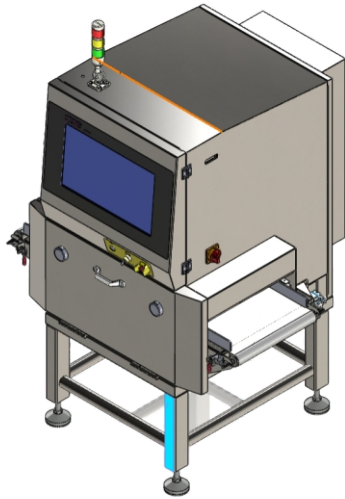


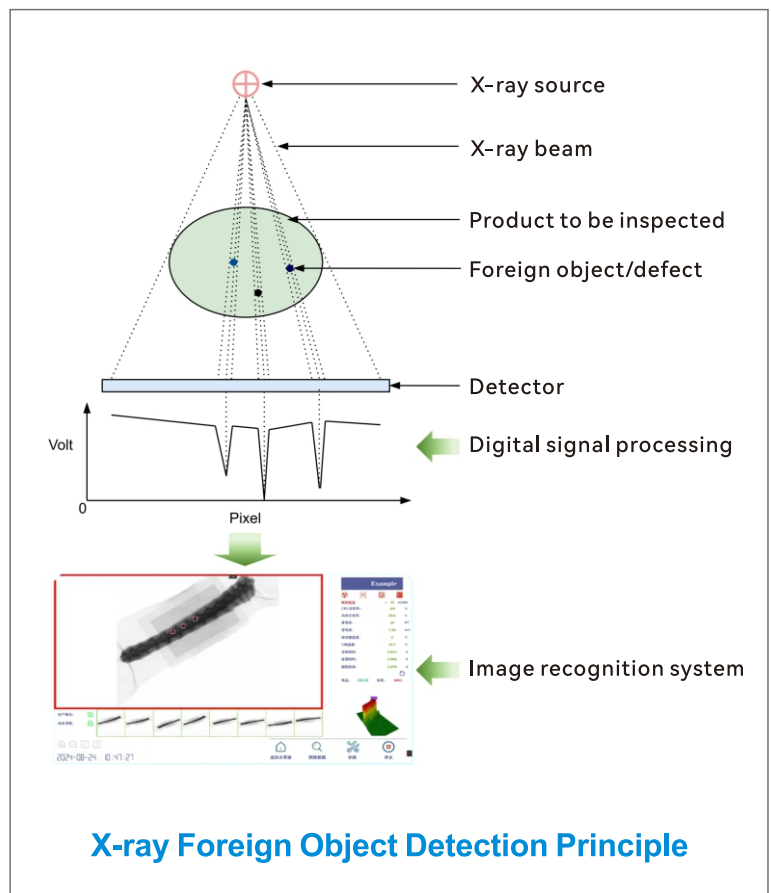
► X-RAY FOREIGN OBJECT DETECTION MACHINE



- ✓ Online detection of foreign objects, shapes, material composition, and packaging integrity in packaged, bulk, and bottled food or pharmaceuticals;
- ✓ It can detect a variety of foreign objects, including metals, glass, ceramics, hard plastics, bones, resins, shells, and pebbles;
- ✓ It is unaffected by temperature, humidity, salt content, or packaging materials such as aluminum foil, and features high precision and high reliability.

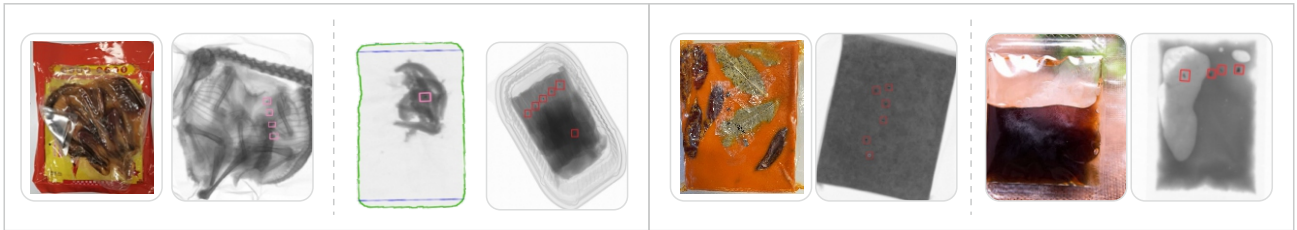
DETECTION RANGE

- Bulk foreign object detection + fruit pit detection;
- Dual-energy detection employs a dual-flow neural network to achieve deep AI fusion;
- Detects various forms of food or medicine, including packaged, bulk, and bottled products;
- Missing item detection;
- Foreign object detection in packaged food;
- Foreign object detection in desiccants;
- Aquatic product inspection;
- Detection of leakage from plastic packaging seals.

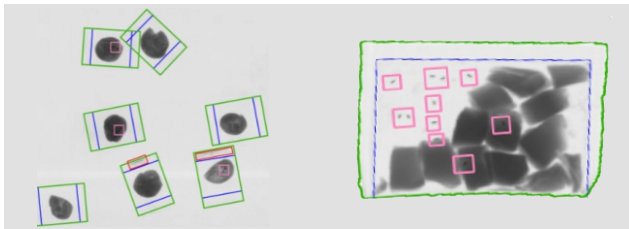


Application Examples

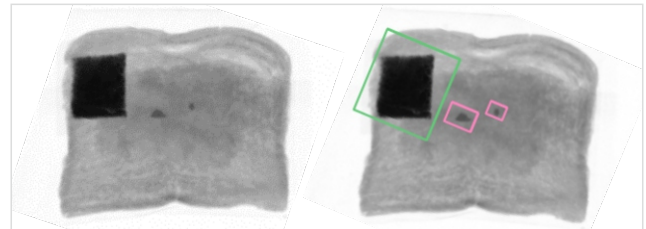
Foreign object detection in plastic packaging



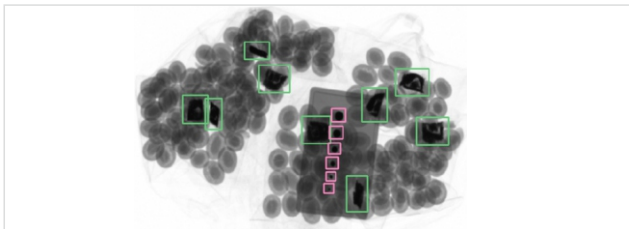
Fruit pit + foreign object detection



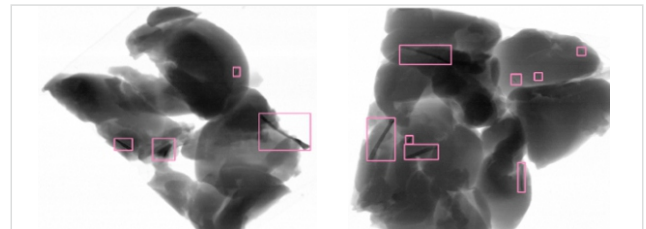
Inspect broken glass



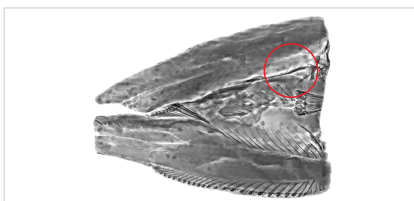
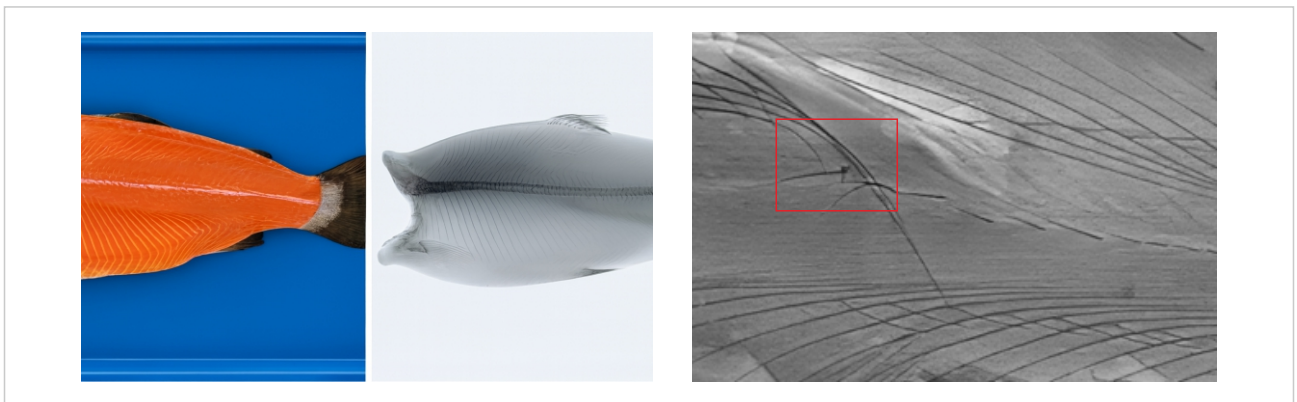
Testing ceramic balls



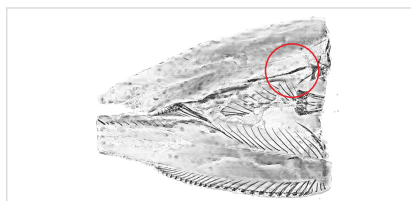
Detection of bone fragments



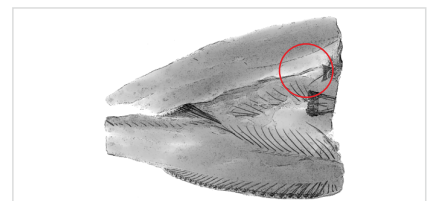
Aquatic product detection



Original art style (realistic)



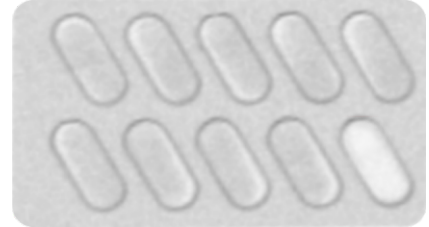
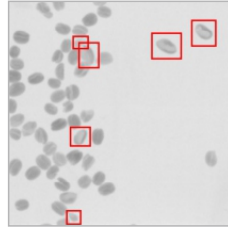
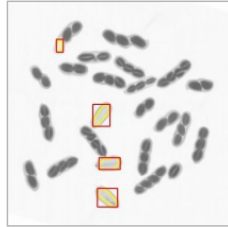
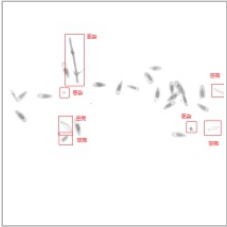
High-waisted style (sheer)



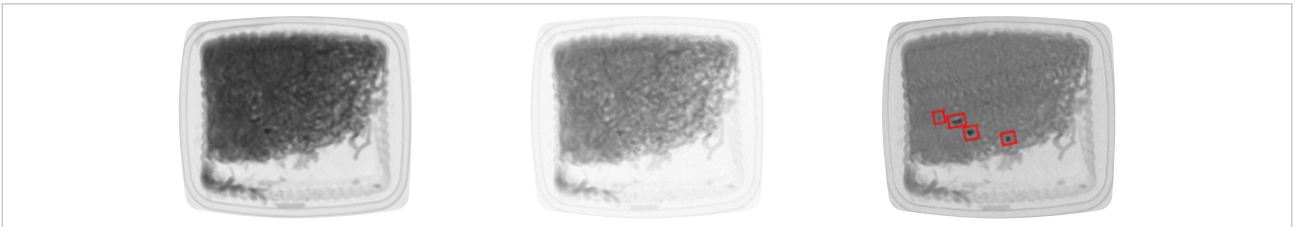
Relief style (soft)

Application Examples

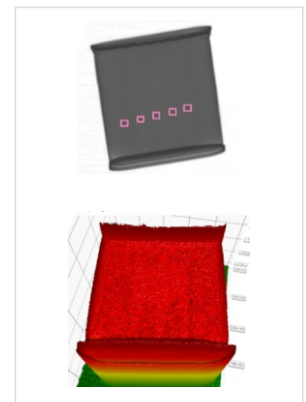
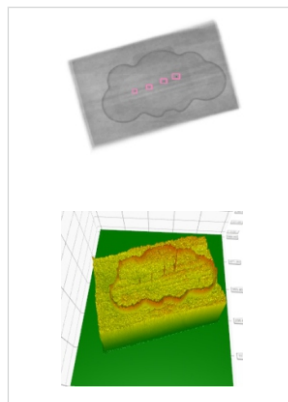
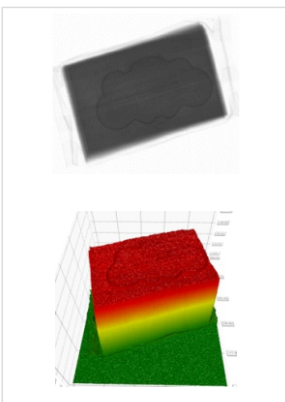
Empty shell + missing detection



Dual-energy detection—achieving deep AI fusion using a dual-stream neural network



Develop image enhancement algorithms for foreign objects with small density differences.



Technological Advantages

FOOD SAFETY AI EXPERT



Visual Inspection Technology

Equipped with internationally leading light source generators and high-precision linear array receivers, and utilizing independently developed optimization algorithms and superpixel technology, it highlights macroscopic and microscopic features of abnormal products. Through real-time computation on high-performance GPUs, it completes simple and complex quality inspections on the production line, reducing production defects and improving production output and efficiency.



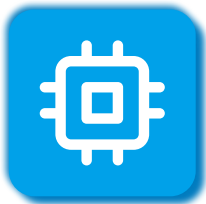
Artificial Intelligence

The R&D team has published over 120 papers related to the field of artificial intelligence, providing more professional insights into AI. The team has developed a series of specialized neural networks based on AI, including Zeroshot SVDetector for foreign object detection, Diffusion SvFisher focusing on image style transfer of fish bones, TwoStream SvFusion for dual energy fusion, and Small SvSubtle high-speed neural network designed for bulk materials, truly solving the long-term challenges brought by food safety.



Software Technology

Sooview's software interface is user-friendly, requiring no complicated settings, easy to operate, and stable and reliable.



Industrialized Fuselage

Each device of Sooview is equipped with a high computing power intelligent core, and all products have undergone engineering design to ensure standardized production. The overall integration of the equipment is high, with strong anti-interference ability, reducing the number of control modules in traditional detection equipment.



Team Professionalism

The team leader has a rich background in radiographic and optoelectronic imaging, providing strong support for the entire development team. The development team has over 30 master's and doctoral students in the field of computer science. During the development process, we fully relied on our own advantages and built a large-scale food sample library and model library. Meanwhile, Sooview is able to quickly respond to various other detection scenarios and meet personalized customer needs.

► Standard X-ray Equipment

Inspection Of Packaging Bags



PRODUCT ADVANTAGES

- ✓ Based on Sooview's unique ZeroShot SvDetector deep learning algorithm, a customized foreign object detection solution suitable for various packaging products has been developed.
- ✓ It can detect foreign objects inside packaged products, as well as the integrity of the sealing of packaged products (clamping or damage), provide multiple removal methods, and meet the customization needs of various products.
- ✓ 4G wireless network, wired network with multiple connection methods, remote and fast technical support and operation.

Ai can identify foreign objects, material inclusions, and broken bags at a glance and automatically remove defective products. It has stable performance and is easy to maintain for large, medium, and small packaging.



DETECTION RANGE

Foreign objects: metal, glass, ceramics, stones, rubber and hard plastics, etc.



APPLICATION SCENARIOS

Snack foods, sauces and condiments, meat products, frozen products, dairy products.

PRODUCT TECHNICAL PARAMETERS

Model	XSS-2410	XSS-4016	XSS-6030	XSS-6040	XSS-7040
X-ray Source (Unit: W)	210	240	240/350	240/350	350
Detector Resolution	0.4mm (unloaded; actual accuracy may vary depending on the sample material and is subject to testing)				
Inspection Accuracy	SUS sphere: 0.4mm, glass: 1.0mm, ceramic: 1.0mm, SUS wire: 0.2*5mm				
Operating Software	Self-developed Sooview detection software				
Human Machine Interface	21.5-inch touchscreen				
Conveyor Belt Speed	10-60 m/min				
Inspection Weight	<10Kg				
Inspection Dimensions	240*50mm	400*120mm	600*200mm	600*300mm	700*300mm
Power Supply	AC 220V 2.0kw 50hz				
Temperature and Humidity	Ambient temperature 0~45°C, relative humidity 30~85% (non-condensing)				
Waterproof Rating	Conveyor is IP66, other parts are IP54				
Equipment Materials	304 stainless steel, brushed finish				

► High-precision X-ray Equipment Inspection Of Packaging Bags



PRODUCT ADVANTAGES

- ✓ Employing multiple rows of 0.2/0.4mm high-resolution detectors, it can meet the high-precision detection requirements of higher detection accuracy or production line speed.
- ✓ Based on Sooview's unique ZeroShot SvDetector deep learning algorithm, a customized foreign object detection solution suitable for various packaging products has been developed.
- ✓ 4G wireless network, wired network with multiple connection methods, remote and fast technical support and operation.

Employing multi-row pixel, high-resolution imaging technology, it can meet the high-precision detection requirements under higher detection accuracy or higher production line speeds.



DETECTION RANGE

Foreign objects: metal, glass, ceramics, stones, rubber and hard plastics, etc.



APPLICATION SCENARIOS

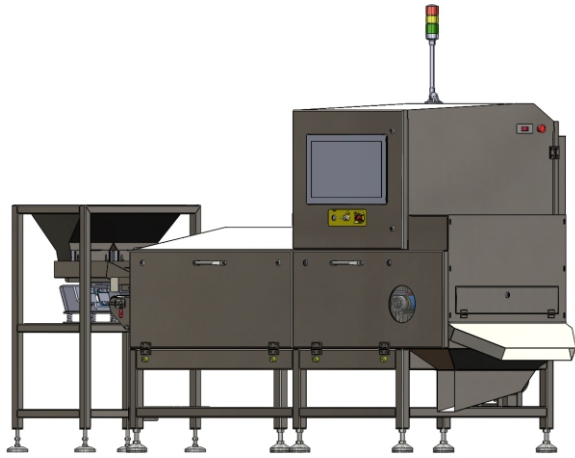


PRODUCT TECHNICAL PARAMETERS

Model	XSS-2410	XSS-4016	XSS-6030	XSS-6040	XSS-7040
X-ray Source (Unit: W)	Maximum power options: 150W/210W/240W/350W				
Detector Resolution	0.2/0.4mm high-definition TDI (actual accuracy may vary depending on the sample used; testing is required)				
Inspection Accuracy	SUS sphere: 0.4mm, glass: 1.0mm, ceramic: 1.0mm, SUS wire: 0.2*5mm				
Operating Software	Self-developed Sooview detection software				
Human Machine Interface	21.5-inch touchscreen				
Conveyor Belt Speed	10-60 m/min				
Inspection Weight	<10Kg				
Inspection Dimensions	240*50mm	400*120mm	600*200mm	600*300mm	700*300mm
Power Supply	AC 220V 2.0kw 50hz				
Temperature and Humidity	Ambient temperature 0~45°C, relative humidity 30~85% (non-condensing)				
Waterproof Rating	Conveyor is IP66, other parts are IP54				
Equipment Materials	304 stainless steel, brushed finish				

► X-ray Detection Equipment

Used for bulk material



PRODUCT ADVANTAGES

- ✓ A customized deep learning design solution for various bulk material products has been developed based on Sooview's proprietary Small-svs subtle deep learning algorithm.
- ✓ It can effectively screen impurities such as metals, glass, ceramics, rubber, resin, and stones from raw materials, and separate empty, damaged, moldy, and worm-eaten materials, demonstrating excellent performance in sorting organic impurities. A multi-channel air-blowing device is used to precisely locate and remove impurities from the raw materials.
- ✓ 4G wireless network, wired network with multiple connection methods, remote and fast technical support and operation.

Foreign matter and defect detection in bulk products: low carry-out ratio and high detection rate.



DETECTION RANGE

It is suitable for intelligent impurity removal of nuts, seeds, beans, dehydrated vegetables, tea, medicinal herbs, granular materials, roasted nuts and seeds and other bulk materials..



APPLICATION SCENARIOS

Empty shell and foreign object detection
Empty shell detection



PRODUCT TECHNICAL PARAMETERS

Model	XSS-S4010	XSS-S6010
X-ray Source (Unit: W)	350W beryllium window	
Detector Resolution	0.4/0.4mm high-definition (actual accuracy may vary depending on the sample used; testing is required)	
Operating Software	Self-developed Sooview detection software	
Human Machine Interface	21.5-inch touchscreen	
Conveyor Belt Speed	60-90 m/min	
Inspection Weight	<10Kg	
Inspection Dimensions	400*80mm	600*80mm
Power Supply	AC 220V 2.0kw 50hz	
Temperature and Humidity	Ambient temperature 0~45°C, relative humidity 30~85% (non-condensing)	
Waterproof Rating	Conveyor is IP66, other parts are IP54	
Equipment Materials	304 stainless steel, brushed finish	

► X-ray Detection Equipment

Used for bottle and jar products

PRODUCT ADVANTAGES



- ✓ Employing dual X-ray sources and multi-detector simultaneous imaging eliminates blind spots, resulting in a higher detection rate for foreign objects at the bottom of bottles.
- ✓ No experience is required. Based on Sooview's proprietary AI algorithm platform, new products can be quickly added by following the wizard's automatic learning, achieving excellent high-precision detection.
- ✓ Utilizing AI algorithms, it can detect low-density and extremely small foreign objects based on various characteristics.
- ✓ 4G wireless network, wired network with multiple connection methods, remote and fast technical support and operation.

Employing a dual-light source, dual-viewpoint solution, this system can efficiently detect and reject upright conveyor-packaged, boxed, and bottled products containing foreign objects.



DETECTION RANGE

Foreign objects: metal, glass, ceramics, hard rubber, resin, bone, shells, stones, etc. Defects in bottles and jars themselves can also be detected.



APPLICATION SCENARIOS



PRODUCT TECHNICAL PARAMETERS

Model	XSS-B1626-2	XSS-B1626-4
X-ray Source (Unit: W)	350W	350W/500W
Detector Resolution	0.4mm/0.4mm HD/0.2mm HD (Actual accuracy subject to testing, affected by sample material)	
Inspection Accuracy	Stainless steel ball $\Phi 0.5\text{mm}$, stainless steel wire $\Phi 0.3 \times 2\text{mm}$, glass ball $\Phi 1.5\text{mm}$, ceramic ball $\Phi 1.5\text{mm}$	
Human Machine Interface	21.5-inch touchscreen	
Conveyor Belt Speed	10-120 m/min	
Inspection Weight	<5kg	
Inspection Dimensions	160mm wide , 260mm high	
Power Supply	AC 220V 3.0kw 50hz	
Temperature and Humidity	Ambient temperature 0~45°C, relative humidity 30~85% (non-condensing)	
Waterproof Rating	Conveyor is IP66, other parts are IP54	
Equipment Materials	304 stainless steel, brushed finish	

▶ Three-view Equipment

Detection bottle and jar products



PRODUCT ADVANTAGES

- ✓ Based on Sooview's proprietary AI algorithm, it can detect low-density and extremely small foreign objects according to their characteristics.
- ✓ The main unit integrates a high-speed pneumatic push rod, enabling precise rejection of defective products even on high-speed production lines.
- ✓ It offers multiple connection methods, including 4G wireless and wired networks, ensuring data integrity even during power outages, and providing rapid remote technical support and operation.

Employing a single-light source, three-view solution, this system can efficiently detect and reject upright conveyor-packaged, boxed, and bottled products containing foreign objects.

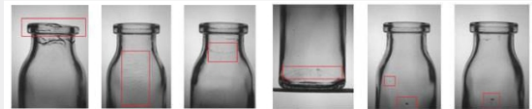


DETECTION RANGE

Foreign objects: metal, glass, ceramics, hard rubber, resin, bone, shells, stones, etc. Defects in bottles and jars themselves can also be detected.



APPLICATION SCENARIOS



PRODUCT TECHNICAL PARAMETERS

Model	XSS-B1626-3
X-ray Source (Unit: W)	350W/500W
Inspection Accuracy	Stainless steel ball $\Phi 0.5\text{mm}$, stainless steel wire $\Phi 0.3 \times 2\text{mm}$, glass ball $\Phi 1.5\text{mm}$, ceramic ball $\Phi 1.5\text{mm}$ (Actual accuracy subject to testing, affected by sample material)
Operating Software	Self-developed Sooview detection software
Human Machine Interface	21.5-inch touchscreen
Conveyor Belt Speed	10-120 m/min
Inspection Weight	<5kg
Inspection Dimensions	160mm wide , 260mm high
Power Supply	AC 220V 3.0kw 50hz
Temperature and Humidity	Ambient temperature 0~45°C, relative humidity 30~85% (non-condensing)
Waterproof Rating	Conveyor is IP66, other parts are IP54
Equipment Materials	304 stainless steel, brushed finish

► Fishbone X-ray Inspection Machine



PRODUCT ADVANTAGES

- ✓ Built on the Sooview AI algorithm platform and combined with the Diffusion.SvFisher algorithm, this system perfectly solves the problem of detecting foreign objects, fish bones, and spines in various fish products. It can detect uncalcified fish bones as small as 0.05mm, boasting world-class sensitivity and accuracy.
- ✓ It employs a segmented protective conveyor channel, ensuring comprehensive product safety and hygiene without blind spots. It can quickly drain moisture to prevent microbial growth.
- ✓ A 4K high-definition display clearly shows the location of fine bones in the inspected product, facilitating manual inspection.

Even the smallest fish bones are no longer hidden. The system images residual fish bones in fish products and enhances the display on a dual-station high-definition screen, assisting operators in efficiently removing fish bones and achieving "zero" fish bone residue.

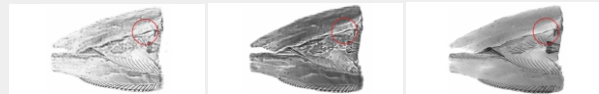


DETECTION RANGE

Foreign object / fish bone



APPLICATION SCENARIOS



PRODUCT TECHNICAL PARAMETERS

Model	XSS-F4610
X-ray Source (Unit: W)	350W beryllium window
Inspection Accuracy	Stainless steel wire 0.05*6mm (unloaded, subject to change depending on the sample, actual test results shall prevail)
Operating Software	Self-developed Sooview detection software
Human Machine Interface	21.5-inch/43-inch high-definition monitor
Conveyor Belt Speed	10-25m/min
Inspection Weight	<10Kg
Inspection Dimensions	450mm*100mm
Power Supply	AC220V, 2.1kVA, 50Hz
Temperature and Humidity	Ambient temperature -10~45°C, relative humidity 30~85% (non-condensing)
Waterproof Rating	Conveyor is IP66, other parts are IP65
Equipment Materials	316L stainless steel, brushed finish

► X-ray Dual-energy Machine

Detecting bone fragments in meat



PRODUCT ADVANTAGES

- ✓ The system employs a dual-energy detection algorithm, processing two images with different energies to effectively detect bone fragments of various sizes in meat products, improving the detection capability of low-density foreign objects in bulk material inspection.
- ✓ Based on the Sooview AI algorithm platform, coupled with proprietary AI algorithms, it accurately detects bone fragments.
- ✓ It utilizes a dedicated meat product conveyor; the conveyor system and main unit are detachable and can be directly washed, eliminating secondary contamination.

Advanced dual-energy detection technology enables high-precision detection of low-density foreign objects in meat products, such as residual bones, bone fragments, and cartilage.

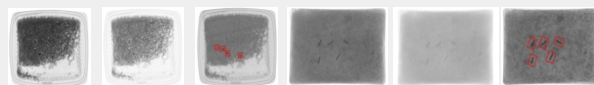


DETECTION RANGE

Foreign objects: residual bones, bone fragments, cartilage, etc. in meat products.



APPLICATION SCENARIOS



PRODUCT TECHNICAL PARAMETERS

Model	XSS-D4010
X-ray Source (Unit: W)	500W beryllium window
Detector Resolution	0.8mm HD
Inspection Accuracy	Stainless steel ball $\Phi 0.8\text{mm}$, stainless steel wire $\Phi 0.3 \times 2\text{mm}$, glass ball $\Phi 1.5\text{mm}$, ceramic ball $\Phi 1.5\text{mm}$ (actual accuracy is subject to testing and may vary depending on the sample).
Human Machine Interface	21.5-inch
Conveyor Belt Speed	10-40m/min
Inspection Weight	<10Kg
Inspection Dimensions	400mm*100mm
Power Supply	AC220V, 2.1kVA, 50Hz
Temperature and Humidity	Ambient temperature -10~45°C, relative humidity 30~85% (non-condensing)
Waterproof Rating	Conveyor is IP66, other parts are IP65
Equipment Materials	304 stainless steel, brushed finish

► Digital Intelligent Metal Detector (Touchscreen Version)



PRODUCT ADVANTAGES

- ✓ Available with either an LCD screen or a touchscreen, and multiple languages including Chinese and English.
- ✓ Features a one-button self-learning function. Following the pre-set program, the system automatically and accurately sets and memorizes product parameters after the product is passed through the inspection channel once, eliminating the need for complex manual adjustments and simplifying operation.
- ✓ It can store inspection parameters for over 200 products. Once set and stored, parameters can be recalled for subsequent use, enabling rapid switching of product parameters on the production line and minimizing setup time.
- ✓ It has user access logs and inspection data storage, display, and statistical functions. The equipment alarm log can store up to 700 entries.
- ✓ It features automatic fault detection and alerts upon startup, effectively preventing invalid inspections.
- ✓ It can be customized according to the size, weight, and characteristics of the product being inspected to achieve optimal inspection results.
- ✓ Various supporting automated conveying, rejection, and control systems can be customized to suit the characteristics of the production line, achieving seamless integration and improving production efficiency.



DETECTION RANGE

It is applicable to the food industry, including meat products, aquatic products, baked goods, dairy products, snacks, fruits, vegetables, grains and oils and their products, condiments, beverages, pet food and other fields.

The conveyor-type digital intelligent metal detector is a new generation of intelligent metal detection equipment developed using digital intelligent technology. It is used to detect various metal impurities such as metal shavings, broken needles, iron wire, lead, copper, aluminum, tin, and stainless steel that are mixed in or lost in raw materials or products. It achieves full digitization and intelligentization of metal detection technology, boasts superior performance, and is easy to operate, helping to improve enterprise production efficiency and ensure product quality.

PRODUCT TECHNICAL PARAMETERS

Model (XSJ)		3010	4015	5015	5020	5025	5030	6030	6035	6040	6050
Passable Width (mm)		300	400	500	500	500	500	600	600	600	600
Passable Height (mm)		100	150	150	200	250	300	300	350	400	500
Sensitivity	Fe Φ	0.8mm	1.0mm	1.0mm	1.2mm	1.5mm	2.0mm	2.5mm	3.0mm	3.5mm	4.0mm
	Non-Fe Φ	1.0mm	1.2mm	1.2mm	2.0mm	2.0mm	2.5mm	3.0mm	3.5mm	4.0mm	5.0mm
	SUS Φ	1.2mm	1.5mm	1.8mm	2.2mm	2.5mm	3.0mm	3.5mm	4.0mm	4.5mm	5.5mm
Speed (m/s)		0.25~0.6									

Note: The detection sensitivity is obtained by placing the test card in the middle of the conveyor belt and passing it through the detection channel. The actual detection sensitivity may vary depending on the characteristics of the product being tested or the working environment. The actual detection sensitivity should be taken as the standard.

► Metal Detector For Aluminum Foil Packaging



PRODUCT ADVANTAGES

- ✓ The user-friendly control panel design makes operation simple and convenient.
- ✓ It features an audible and visual alarm to stop the machine, automatic rewind, and automatic rejection when metallic impurities are detected.
- ✓ It can be customized to suit the size, weight, and characteristics of the products being inspected, achieving optimal inspection results.
- ✓ The entire machine is constructed of 304# stainless steel, ensuring a robust, corrosion-resistant, and easy-to-clean machine.
- ✓ It complies with relevant certifications such as HACCP, GMP, FDA, QS, and ISO9001.



DETECTION RANGE

Applicable to the detection of magnetic metal foreign objects in aluminum foil packaging products, such as chocolate, candy, instant noodles, infant rice cereal, and milk powder packaging.

Designed and manufactured specifically for the inspection of aluminum foil and aluminum film packaged foods, it uses the principle of electromagnetic induction to detect ferromagnetic metallic foreign objects in aluminum film packaged foods. It is adaptable to humid and low-temperature environments, ensuring efficient and stable operation of the production line.

PRODUCT TECHNICAL PARAMETERS

Model (XSJ)		5005	5010	5012	5015	5020	5025	5030
Passable Width (mm)		50	100	120	150	200	250	300
Passable Height (mm)		400	400	400	400	400	400	400
Sensitivity	Fe Φ	0.6mm	0.8mm	1.0mm	1.2mm	1.5mm	2.0mm	2.0mm
Speed (m/s)		0.25~0.6						

Note: The detection sensitivity is obtained by placing the test card in the middle of the conveyor belt and passing it through the detection channel. The actual detection sensitivity may vary depending on the characteristics of the product being tested or the working environment. The actual detection sensitivity should be taken as the standard.

▶ Visual Inspection

Surface Inspection



PRODUCT ADVANTAGES

- ✓ Based on the Sooview AI algorithm platform, combined with a customized algorithm for an open-world detection model, it can accurately detect foreign objects such as hair in baked goods.
- ✓ Employing a multi-camera, multi-rejection solution, it effectively handles production lines with widths ranging from 20-80cm. The collaborative multi-rejection mechanism effectively removes multiple foreign objects appearing simultaneously.
- ✓ Large model quantization performs channel-level precision quantization on large models, reducing redundant computation by over 80% while maintaining accuracy.

It effectively filters out minute impurities from the surface of baked goods, offering high detection accuracy and a wide detection range, encompassing foreign objects visible to the human eye.



DETECTION RANGE

Tiny impurities on the surface of baked goods, such as hair, flies, and mold.



APPLICATION SCENARIOS



PRODUCT TECHNICAL PARAMETERS

Model	XSS-H8010
Inspection Accuracy	0.1mm hair (color inconsistent with cookie)
Operating Software	Self-developed Sooview detection software
Human Machine Interface	21.5" Touchscreen
Conveyor Belt Speed	10-30m/min
Inspection Weight	<10Kg
Inspection Dimensions	40mm*30mm
Power Supply	AC220V, 1.0kVA, 50Hz
Temperature and Humidity	Temperature: 0~45℃ , Relative Humidity: 20~80% (non-condensing)
Waterproof Rating	Transmission components IP66, other components IP65
Equipment Materials	304 stainless steel brushed finish
Camera	2K resolution

▶ Sorting And Rejection System

PRODUCT ADVANTAGES

- ✓ Driven by pneumatic or electric cylinders, multiple sorting methods are available to suit a variety of products.
- ✓ High precision and fast rejection speed improve product pass rate.
- ✓ Reinforced stainless steel frame with high waterproof rating.
- ✓ All contact parts are made of food-grade materials to ensure product contamination.
- ✓ Suitable for various automated production lines and logistics conveying systems.
- ✓ Can directly replace manual sorting, improving production efficiency and reliability.

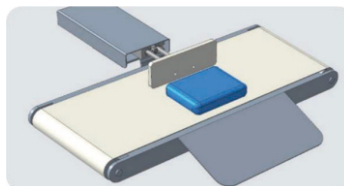
When used in conjunction with an inspection/checkweighing system, the inspection system provides alarm signals to control the sorting machine to remove defective products from the conveyor line, preventing them from flowing into the next production stage.

Air Blow Rejection



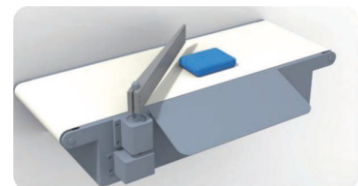
Suitable for products that are small in size, light in weight, and have a high production line speed.

Push Rod Rejection



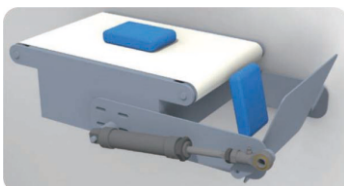
Applicable to most products, but not to sheet and liquid products.

Push Rejection



Applicable to most products, but not to sheet and liquid products.

Flip-type rejection



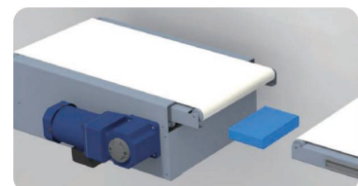
Defective products can be removed using a flip-over mechanism, suitable for thin sheets and small-sized products.

Drop rejection



Defective products can also be removed using a conveyor belt system, suitable for thin sheets and small-packaged liquids.

Telescopic rejection



Defective products can be removed using a telescopic and extending conveyor belt, suitable for fragile foods and products whose appearance needs to be protected during the removal process.