

# FSCAN-series

## XAVIS X-RAY INSPECTION SYSTEM

BEST IN CLASS FOR THE FOOD SAFETY



Xavis X-ray inspection systems provide practical customer solutions with reliable technology



Conscientious Customer Safety Features



First-class Inspection Quality

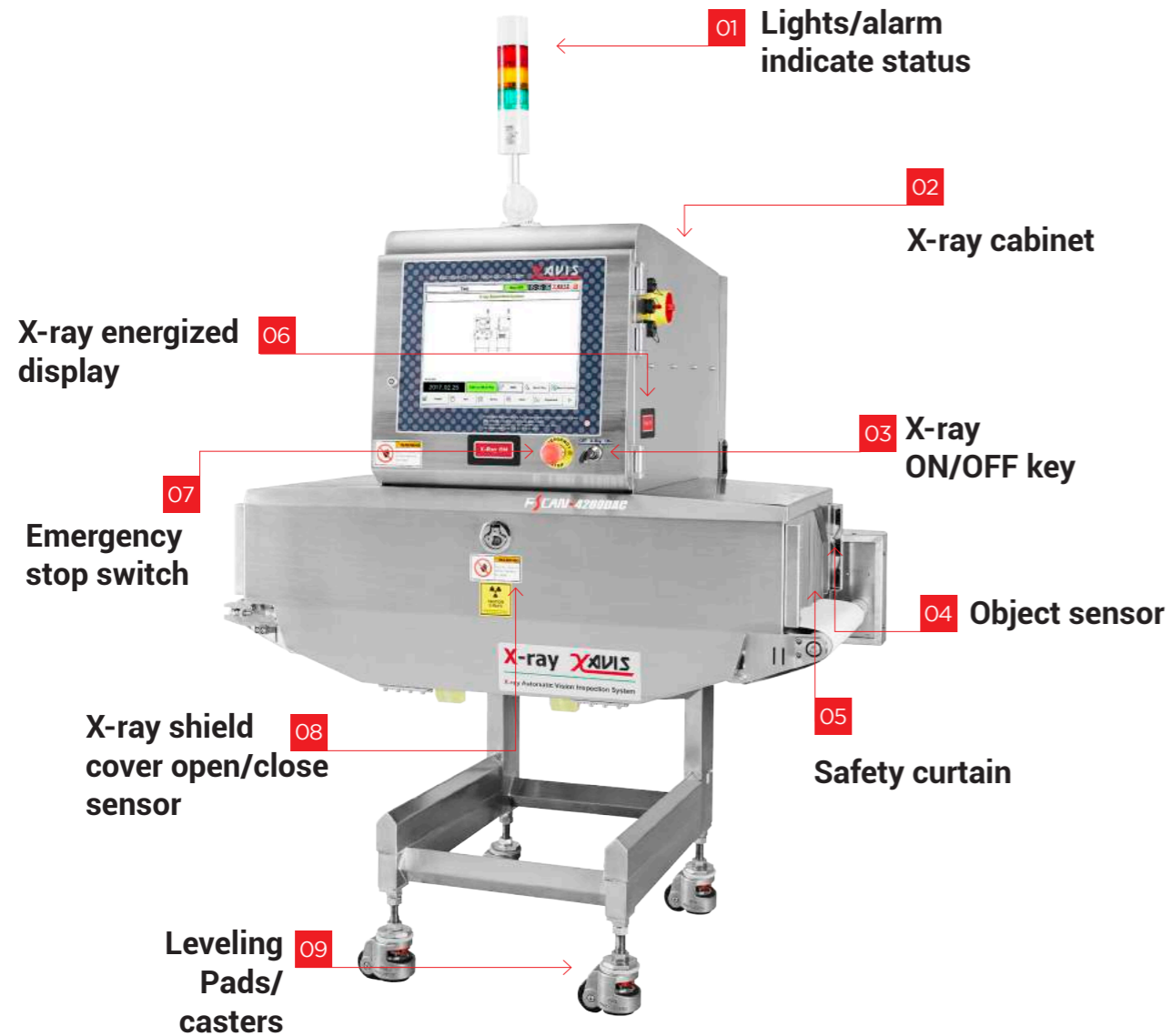


Superior Brand Reputation

**XAVIS**

[www.xavisxray.com](http://www.xavisxray.com)

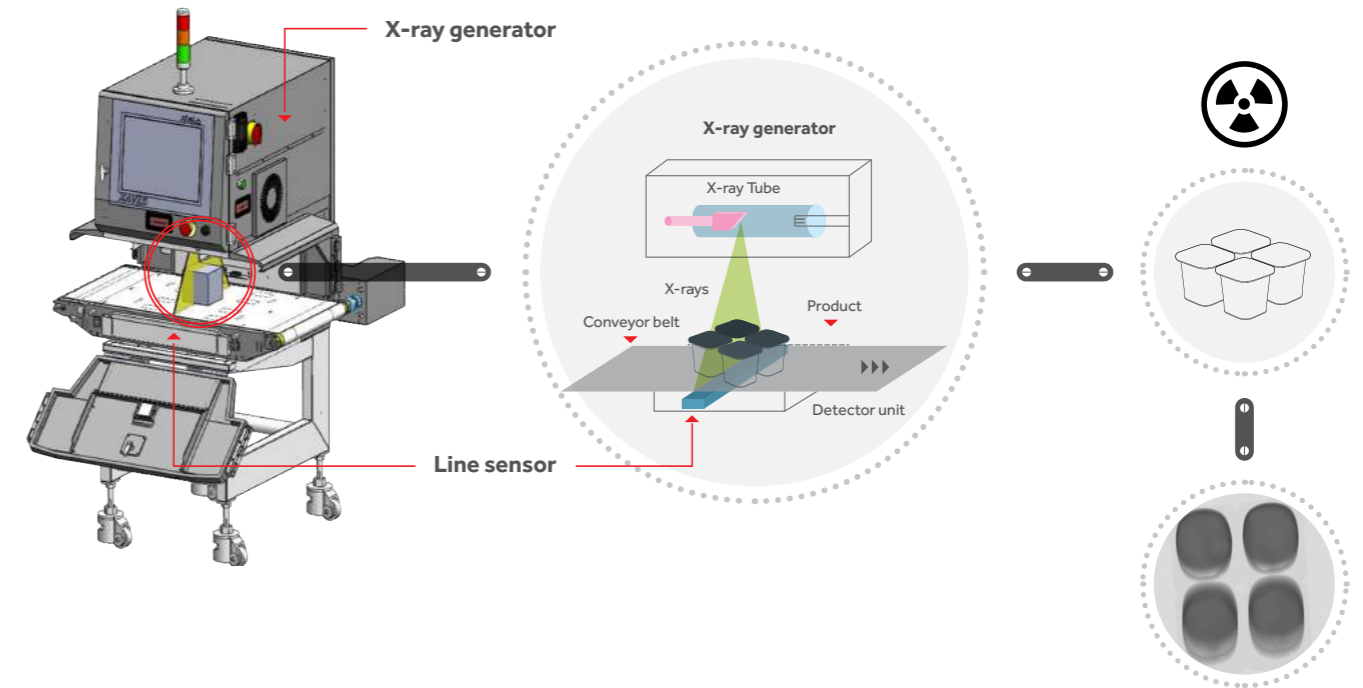
## XAVIS FSCAN MAIN FEATURE



1. Supports remote monitoring with audible alarm.
2. An X-ray generator is built in.
3. Turning the key to off stops X-ray radiation completely.
4. Interrupting the sensor for a certain period of time stops X-ray radiation.
5. Prevents X-ray leakage for unpacked or bulk products.  
The standard lead impregnated curtains are replaced with SS covers-preventing direct food contact with the curtains.
6. The lamp is lit when the X-ray is energized
7. Turns off the X-ray and drive circuits, stops the conveyor and X-ray generation.
8. Opening the cover turns off the X-ray generator.
9. It is easy to move and height can be adjusted.

“ X-ray Inspection systems are widely used in the food and pharmaceutical industries to ensure product safety and quality. Xavis X-ray can be used at any stage in your production line to identify with the greatest accuracy and reliability when foreign bodies are contaminating your product, thus protecting your brand and reassuring our customers. ”

## PRINCIPLE OF X-RAY INSPECTION



### HOW XAVIS X-RAY SYSTEM WORKS

Products on the X-ray conveyor pass through the X-ray beam inside the aperture, a line sensor then receives the transmitted X-rays and converts them to electric signals. An image processing system generates X-ray transparent images and then uses Xavis' Fscan system software to detect foreign materials within the product.

## SAFETY OF FOOD X-RAY INSPECTION

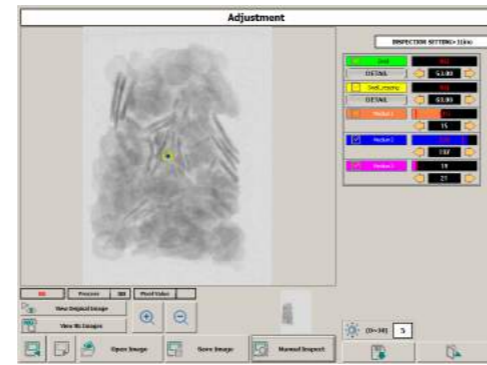
Everyone's exposed to background radiation; it's all around us and includes radiation from natural and man-made sources. In fact, natural sources of radiation account for approximately 80 percent of the total radiation most of us receive and there's little we can do to escape it. After all, it's impossible to stop eating, drinking or breathing. Each person of the world population is exposed to approximately 2,400  $\mu\text{Sv}$  of ionizing radiation from natural sources every year, which far exceeds the radiation exposure received from a properly-installed and maintained X-ray inspection system. Food X-ray systems are designed to ensure a perfectly safe working environment for operators. X-rays are electrically generated, which means they can be turned on and off, and X-ray generators are enclosed in cabinet systems to protect users from the effects of radiation.

# BENEFITS OF FSCAN-SERIES



## FOREIGN MATERIAL DETECTION

Detection accuracy and performance stability begins with core technology inherent with FSCAN-series imaging. Xavis X-ray systems create X-ray images with the highest resolution the market offers as standard. Higher resolution provides a better image and better digital data for analysis resulting in significantly improved performance.

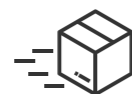


## TYPE OF FOREIGN MATERIALS X-RAY CAN DETECT

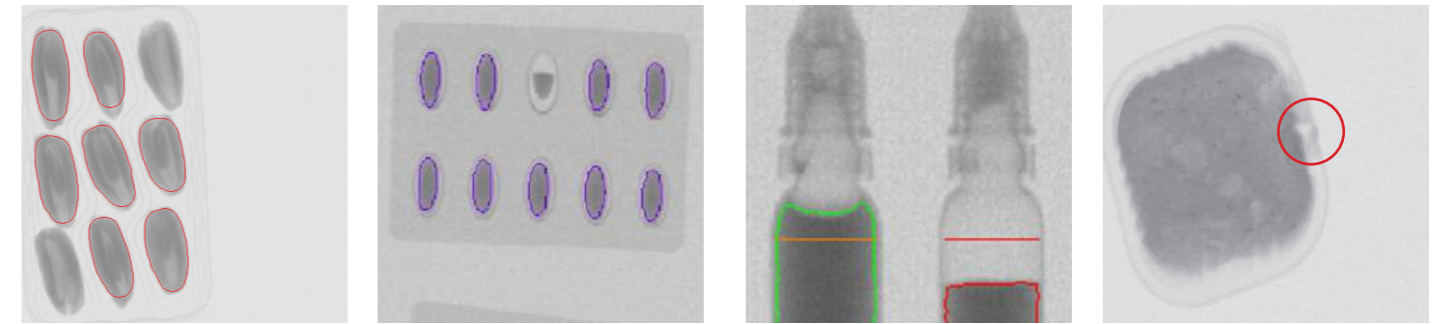
Metal / non-ferrous metals in foil, including stainless steel  
 glass / bone(calcified), PVC plastic, PTFE(Teflon) plastic  
 ceramic or concrete, rubber

## HIGH-SPEED INSPECTION

200 meters per minute. Approximately 400~600 pcs per minute can be inspected (inspected pcs can vary depending on dimensions of the inspected product).



*FSCAN X-ray inspection system can improve productivity while inspecting the product for various quality control inspections.*



## OBJECT COUNTER

Fscan software verifies the quantity of products in the box.



## MEASURING PRODUCT SIZE

Inspects complete product presence by checking the density of product in a specific area within a pack.



## SHAPE & MISSING PRODUCT DETECTION

Fscan software verifies missing or damaged product identification for complete product integrity.



## FILL LEVEL

Fscan software verifies fill level of glass bottles, cans or plastic bottles irrespective of their opacity.



## MASS MEASUREMENT

In some cases of uniform and homogenous products such as blocks of cheese, X-ray weighing can be reliably used for weighing products for internal uses.



## PRODUCT IN SEAL

A fragment of the product or foreign material inside the packages seal may be detectable.



**BULK INSPECTION**

HOPPER AND GUIDE ARE INSTALLED  
- NUTS, GRAINS, CEREALS, FROZEN FRUITS AND VEGETABLES

X-ray bulk systems are robust, reliable, hygienic and simple to use. The design is optimized for the inspection of products that are transported loose and unpacked prior to packaging and processing such as nuts, grains, cereals, frozen fruits and vegetables or for formed products such as potato cakes & hamburgers. To minimize product waste a high speed and accurate airjet reject mechanism rejects portions by selecting only the area of flow in which a foreign material has been detected.



**UNPACKAGED PRODUCT INSPECTION**

INCLINED AND DECLINED CONVEYOR SYSTEM  
- CHICKEN BREAST, DOUGH, SLAB MEAT

Suitable for inspection of unpacked food, such as meat and fish, with which X-ray protection curtains cannot be used.



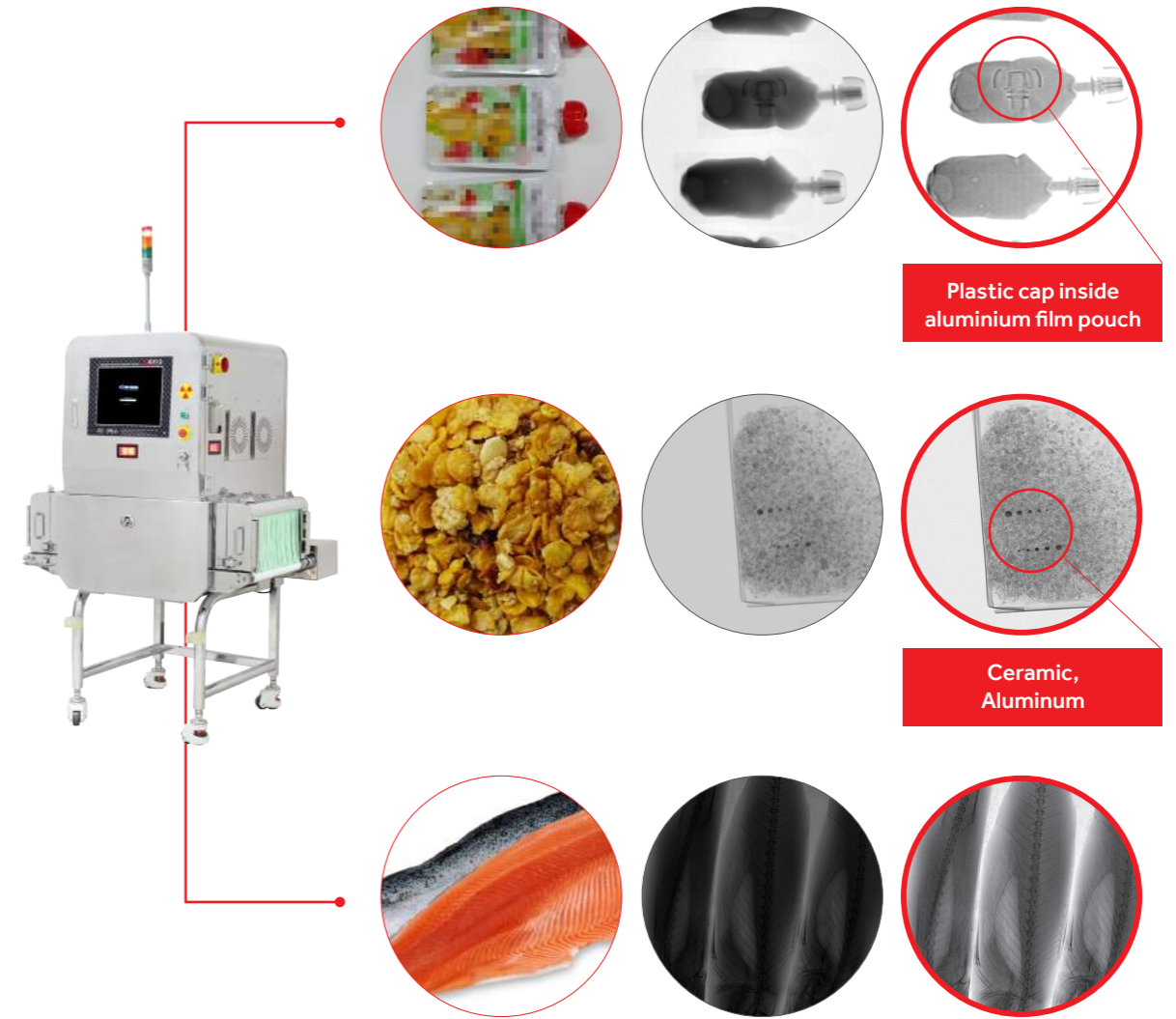
**PIPELINE INSPECTION**

FOR INSPECTION OF FLUID, SEMI-SOLID PRODUCTS  
- GRIND PORK, POULTRY TRIM, SOUPS, JELLY, JAMS

Pipeline X-ray inspection system that are designed to inspect pumped food products such as meat and poultry as well as slurries, semi-solids and fluids, at any stage in processing or before final packaging. Applications generally include sauces, jams, minced meat, molten chocolate, dairy spreads and icecream.



**NORMAL X-RAY SYSTEM**      **DUAL ENERGY SENSOR SYSTEM**



Plastic cap inside aluminium film pouch

Ceramic, Aluminum

**DUAL ENERGY SENSOR SYSTEM**

LOW-DENSITY FOREIGN MATERIALS DETECTION  
- PLASTIC, GLASS, BONE, ALUMINUM

X-ray inspection system is specially designed to detect objects of low-density in a package or product, which can not be achieved by normal X-ray food inspection system. With its highly accurate image processor we see a 45% increased in the image clarity, the maximum capacity of detecting stainless foreign material is now improved from 0.8mm to 0.6mm.

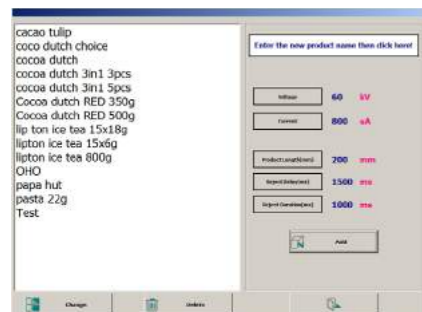
## USER-FRIENDLY OPERATION

### 15" Color touchscreen for easy operation

Simple and intuitive settings. With the "smart learning" function, basic sensitivity and X-ray power level can be set with sampling inspection of the product.

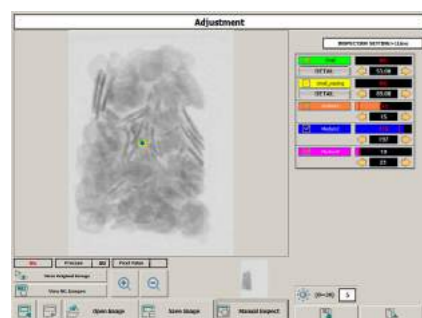
### 1000 unique products

Store products in more than 1000 Stored products have product settings value. A user does not require additional settings when inspecting other products.



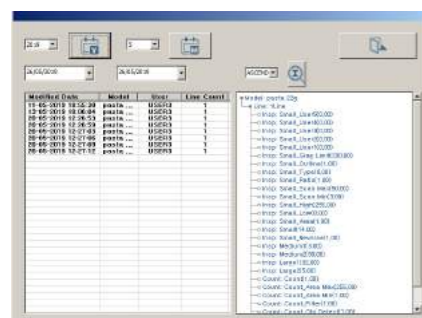
### Easy sensitivity setting

Six algorithms can easily be adjusted to detect a foreign material.



### Setting history

Save worker's setting modifying history and store all work history of the worker.

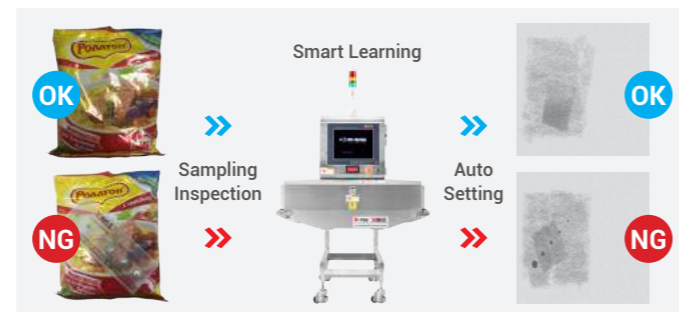


### Multi-language function

Fscan software supports multiple languages for display and input.

### Smart learning

Simple and intuitive settings. With the "smart learning" function, basic sensitivity and X-ray power level can be set with sampling inspection of product.



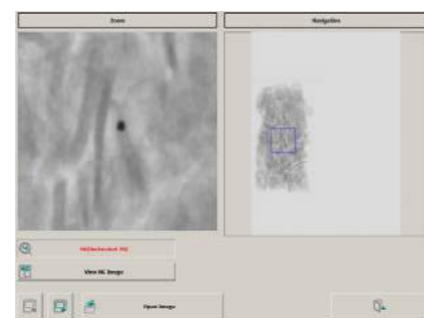
### User management

Program administrators can create and grant privileges to users.



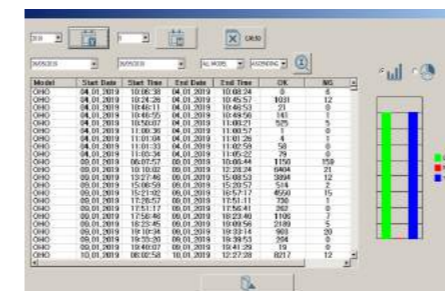
### Image analysis

Image zoom function.



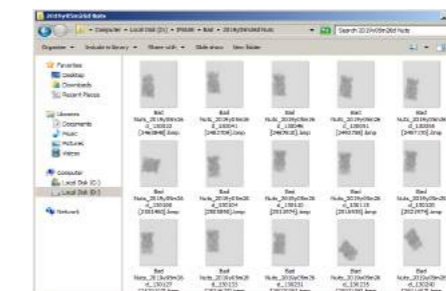
### Data management

Provides reports on defective and good products inspected by X-ray. Reports can be categorized into annual, monthly, weekly and daily reports and saved as an Excel file.



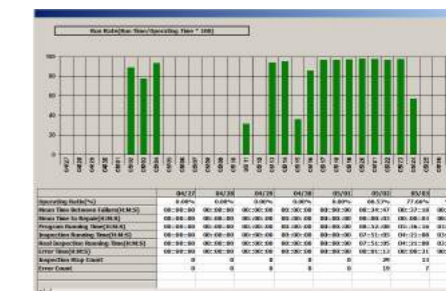
### Image management

Save all produced images for post-tracking management.



### Data analysis

Information on production and operation of the product can be seen on various type of chart.

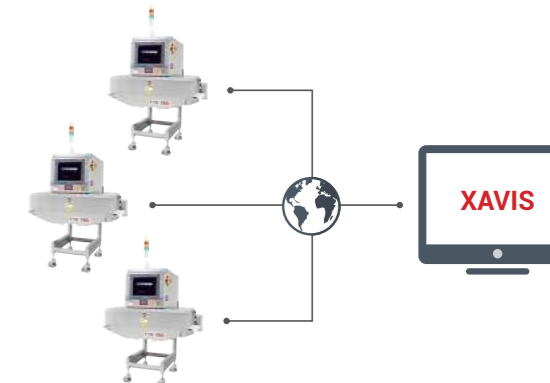


## REAL TIME REPORT & ONLINE SUPPORT

By checking the operation history of the equipment by date and time, information on the operation of the equipment can be grasped at a glance.

### Real time report

It is possible to report and confirm the quality in real time through the network and build a complete statistical system. All report and images can be downloaded via network.

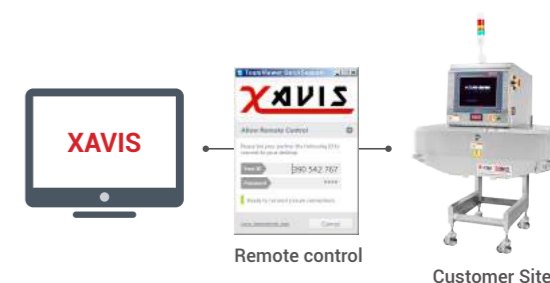


### Online support - Internet

Xavis can access your FSCAN system remotely via Internet and directly troubleshoot to assist with problem situations.

※To utilize this function the X-ray machine needs Internet connection.

- Check hardware status
- Verify X-ray images
- Adjust sensitivities, settings
- Upgrade X-ray program



# SIMPLE MAINTENANCE

## STANDARD TYPE



Safety curtain & curtain guide removal

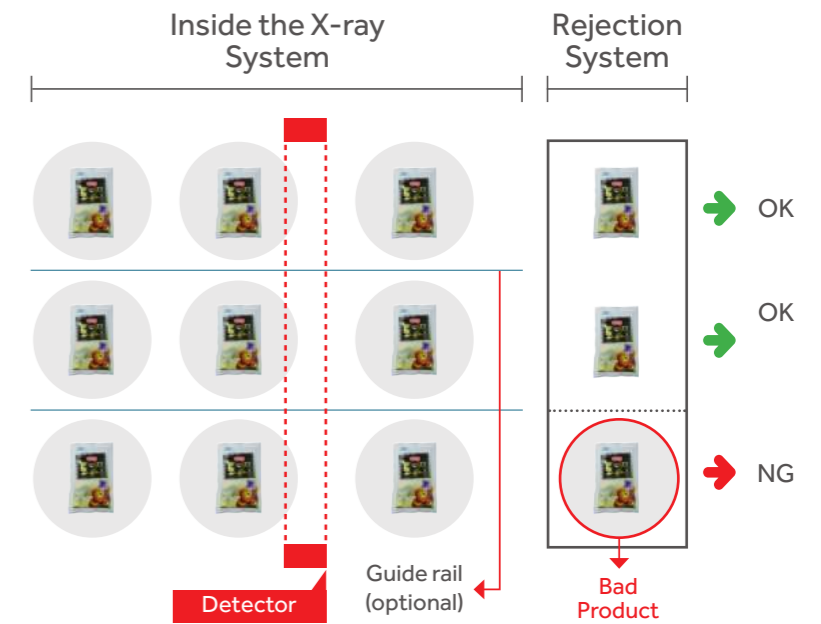
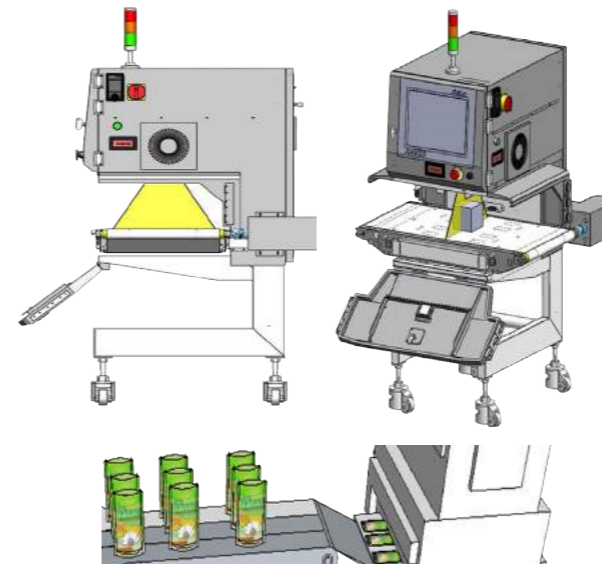


Cleanable conveyor frame

The conveyor belt and lead curtain can be easily removed/ attached without tools, allowing easy cleaning and sanitation. (This function is provided as standard)

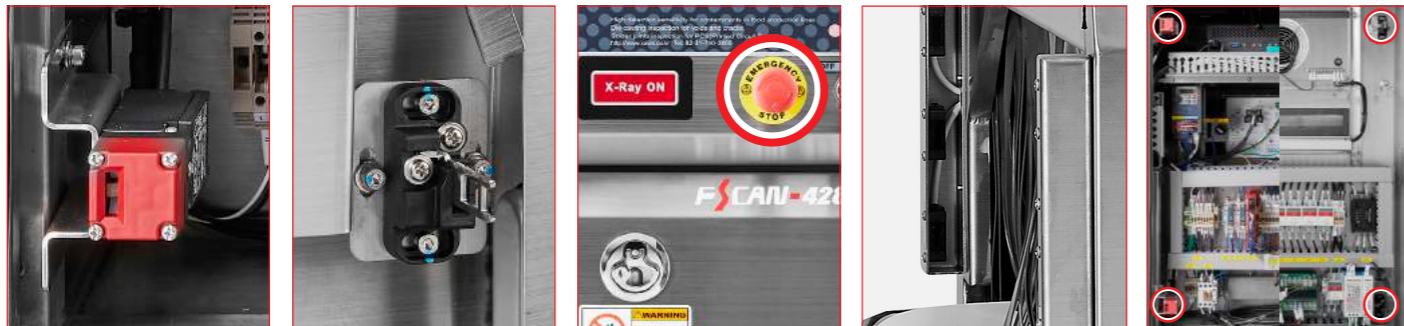
# MULTI-LANE

## INSPECTION EFFICIENCY



Single packaged products are controlled simultaneously in 2~4 rows. Rated products in each row and sorted out.

# SAFETY DESIGN



### X-ray ON/OFF key

Turning the key to OFF stops X-ray radiation completely

### Emergency stop switch

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

### X-ray energized display

The lamps are lit during X-ray radiation.

### Hand insertion sensor

Interrupting the sensor for a certain period of time stops X-ray radiation.

### Leakage prevention curtain

Prevents X-ray leakage. For unpacked or bulk products, the standard lead impregnated curtains are replaced with SS plates and covers – preventing direct food contact with the curtains.

### Door sensor

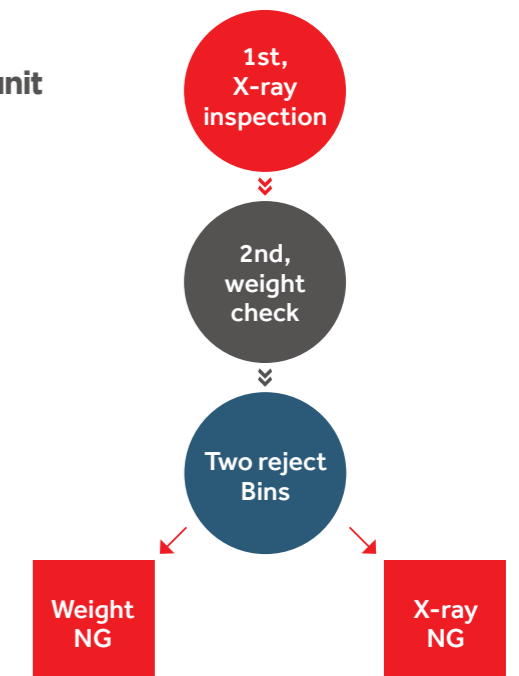
When the door is opened, the X-rays will automatically stop due to the failsafe feature being activated. This function is a standard on all our X-ray machines as being exposed to radiation can be harmful.

# COMBI SYSTEM

## Combi(X-ray + Checkweigher) System

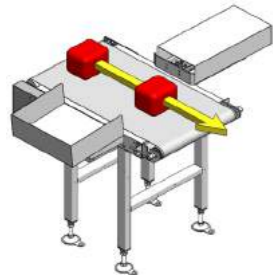
X-ray food inspection system and checkweigher in one unit

- Two types of inspection at once
- Saves space, cost and time
- Unique reject confirmation function

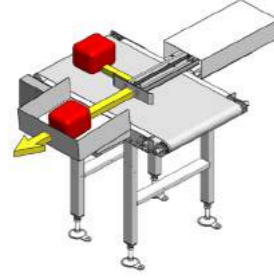


# REJECTOR LINEUP

## PUSHER

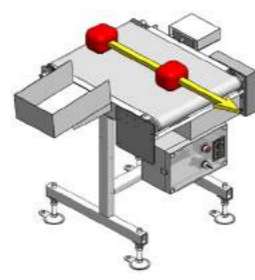


GOOD PRODUCT

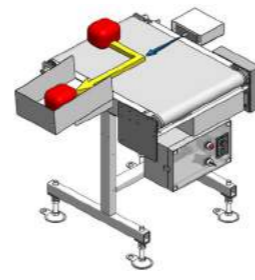


NG PRODUCT

## AIR BLAST

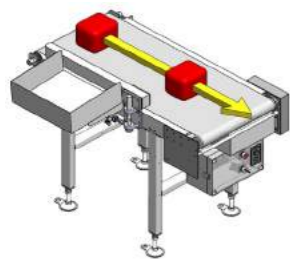


GOOD PRODUCT

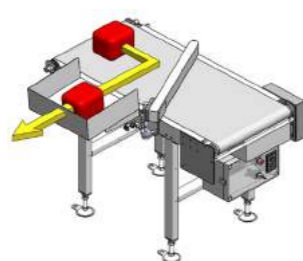


NG PRODUCT

## FLIPPER

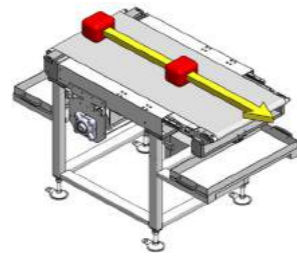


GOOD PRODUCT

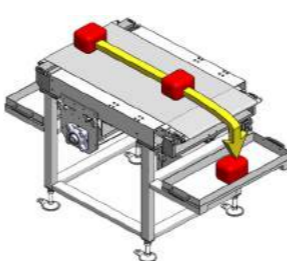


NG PRODUCT

## SHUTTLE

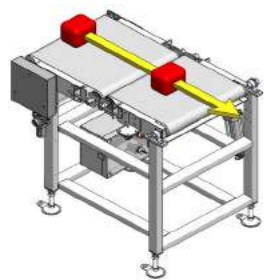


GOOD PRODUCT

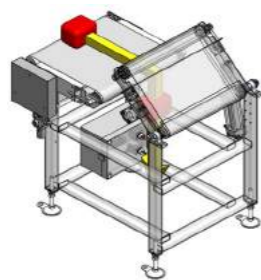


NG PRODUCT

## LIFT-UP

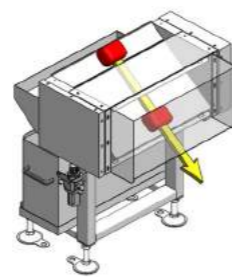


GOOD PRODUCT

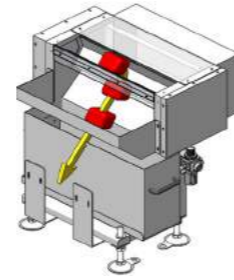


NG PRODUCT

## CHUTE

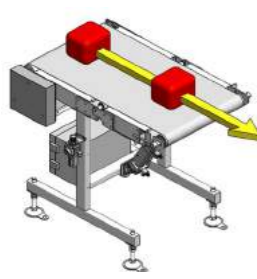


GOOD PRODUCT

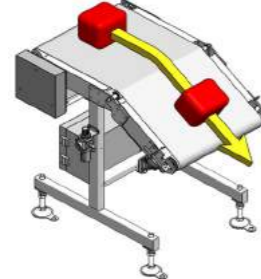


NG PRODUCT

## DROP-DOWN

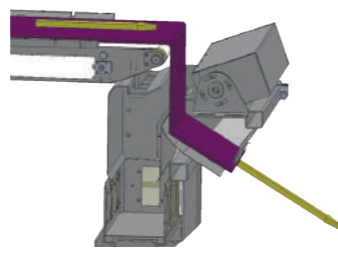


GOOD PRODUCT

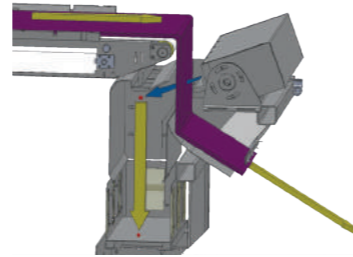


NG PRODUCT

## MULTI AIR-GUN



GOOD PRODUCT



NG PRODUCT

**Pusher** It sorts products on a conveyor using an air-driven device. It is suitable for rejecting heavy items such as cardboard and kraft paper products

**Flipper** It is a general purpose system, appropriate for thick products.

**Lift-up/Drop-down** It sorts products with a vertically movable belt. It is suitable for rejecting thin products.

**Air blast** NG products are blown sideways off the line by a powerful air jet. It is suitable for the products with high speed, small and lightweight.

**Shuttle** The belt on the rejector is expanded during the rejection to let NG products fall. It is suitable for unpackaged pet food and sticky Bulk products.

**Chute** It has a vertically movable flap that allows product to drop below it. It is suitable for separating small bulk items.

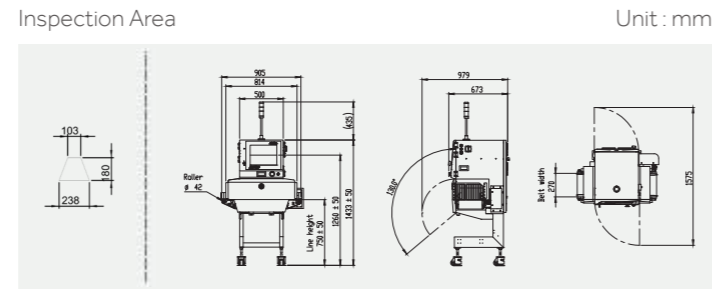
**Multi air-gun** It blows only where defective products are detected. It dramatically decreases the amount of product being rejected.

# FSCAN SERIES LINEUP

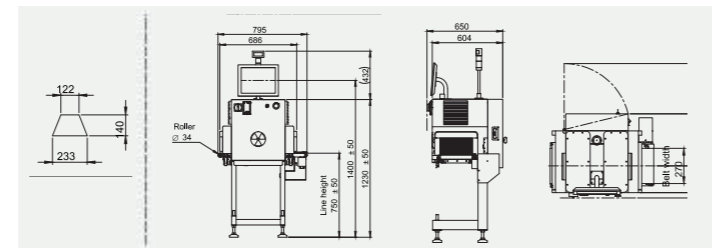
		Standard	Compact(L/E)	
Packaged	Small package			3280D/3280L
	Midium package			4280D/4500D 4280L
	Large package			6280D/6500D  9500D
Unpackaged /Bulk	Canned or bottled products			2080PH/2080PHE  2500PH/2500PHE
	Scan width 400mm			4280DB
	Scan width 600mm			6500DB
Liquid /Semi solid	Pipeline			4500DP

# SMALL PACKAGED / UNPACKAGED

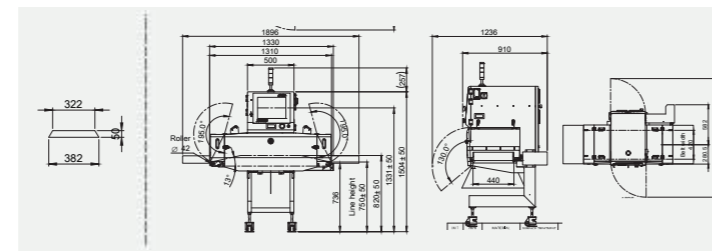
**FSCAN-3280D**



**FSCAN-3280L**



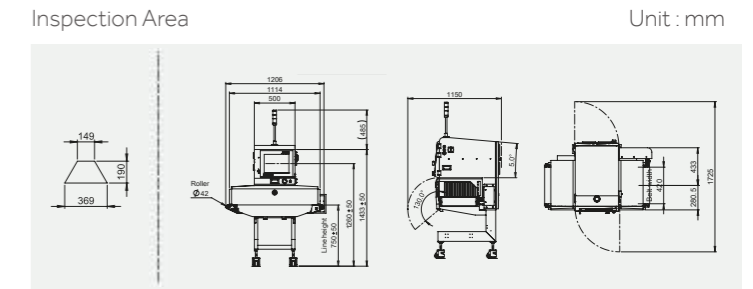
**FSCAN-4280DI**



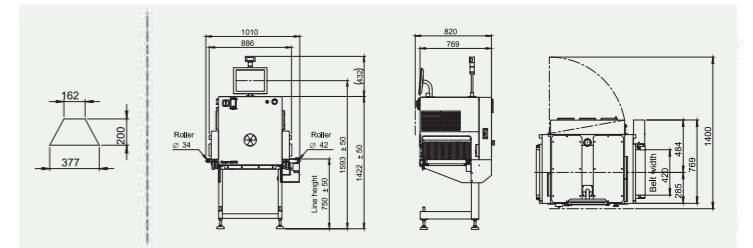
		3280D	3280L	4280DI
X-ray Output		80kV, 1.25mA, 100W	80kV, 1.25mA, 100W	80kV, 1.25mA, 100W
Inspectable Products Size	Max. Width	238 mm	233 mm	380 mm
	Max. Height	180 mm	140 mm	50 mm
Conveyor	Speed	10~68 M/M	10~50 M/M	10~68 M/M
	Width	270 mm	270 mm	420 mm
	Height of Belt Level	750 ± 50 mm	750 ± 50 mm	750 ± 50 mm
Monitor		15" Touch screen	15" Touch screen	15" Touch screen
Power Requirements		AC220V, 50/60Hz, 1.2kVA	AC220V, 50/60Hz, 1.0kVA	AC220V, 50/60Hz, 1.2kVA
Weight		230 kg	160kg	270kg

# LOW DENSITY MEDIUM PACKAGED / BULK

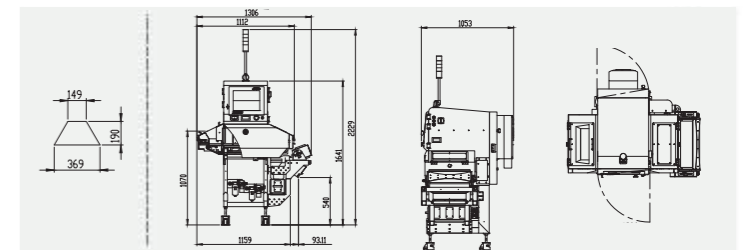
**FSCAN-4280D**



**FSCAN-4280L**



**FSCAN-4280DB**



		4280D	4280L	4280DB
X-ray Output		80kV, 1.25mA, 100W	80kV, 1.25mA, 100W	80kV, 1.25mA, 100W
Inspectable Products Size	Max. Width	380 mm	377 mm	380 mm
	Max. Height	180 mm	200 mm	180 mm
Conveyor	Speed	10~68 M/M	10~50 M/M	10~68 M/M
	Width	420 mm	420 mm	420 mm
	Height of Belt Level	750 ± 50 mm	750 ± 50 mm	750 ± 50 mm
Monitor		15" Touch screen	15" Touch screen	15" Touch screen
Power Requirements		AC220V, 50/60Hz, 1.2kVA	AC220V, 50/60Hz, 1.0kVA	AC220V, 50/60Hz, 1.2kVA
Weight		230 kg	220 kg	230 kg

\* All specifications are subject to change without prior notice. \* Sensitivity is dependent on the material as well as the size and array of examined objects.

# HIGH DENSITY MEDIUM PACKAGED / PIPELINE

**FSCAN-4500D**

Inspection Area

Unit : mm

**FSCAN-4500L**

Inspection Area

Unit : mm

**FSCAN-4500DP**

Inspection Area

Unit : mm

		4500D	4500L	4500DP
X-ray Output		120kV, 4mA, 480W	120kV, 4mA, 480W	120kV, 4mA, 480W
Inspectable Products Size	Max. Width	389 mm	380 mm	N/A
	Max. Height	200 mm	200 mm	N/A
Conveyor	Speed	10~34 M/M	10~50 M/M	N/A
	Width	420 mm	420 mm	N/A
	Height of Belt Level	750 ± 50 mm	750 ± 50 mm	800 ± 50 mm
Monitor		15" Touch screen	15" Touch screen	15" Touch screen
Power Requirements		AC220V, 50/60Hz, 1.5kVA	AC220V, 50/60Hz, 1.5kVA	AC220V, 50/60Hz, 1.5kVA
Transfer Pipe Dimension		N/A	N/A	3-inch diameter
Processing Capacity (Flow)		N/A	N/A	12.0 kl/h
Weight		350 kg	240 kg	430kg

\* All specifications are subject to change without prior notice. \* Sensitivity is dependent on the material as well as the size and array of examined objects.

# LARGE PACKAGED

**FSCAN-6280D**

Inspection Area

Unit : mm

**FSCAN-6500D**

Inspection Area

Unit : mm

**FSCAN-9500D**

Inspection Area

Unit : mm

		6280D	6500D	9500D
X-ray Output		80kV, 1.25mA, 100W	120kV, 4mA, 480W	120kV, 4mA, 480W
Inspectable Products Size	Max. Width	573 mm	583 mm	954 mm
	Max. Height	300 mm	300 mm	250 mm
Conveyor	Speed	10~70 M/M	10~70 M/M	7.5~15 M/M
	Width	620 mm	620 mm	1,000 mm
	Height of Belt Level	750 ± 50 mm	750 ± 50 mm	800 ± 50 mm
Monitor		17" Touch screen	17" Touch screen	15" Touch screen
Power Requirements		AC220V, 50/60Hz, 1.3kVA	AC220V, 50/60Hz, 1.5kVA	AC220V, 50/60Hz, 2.6kVA
Weight		540 kg	560 kg	790kg

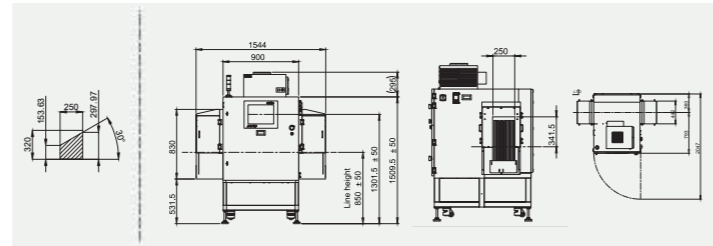
# SMALL CANNED, BOTTLED

**FSCAN-2080PH**

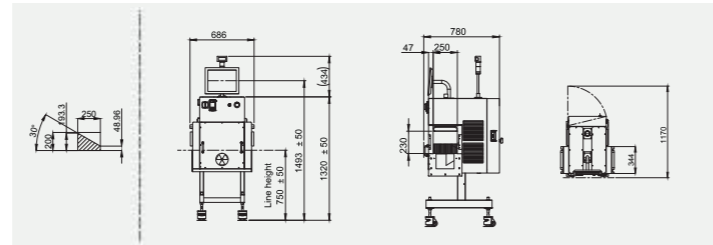


Inspection Area

Unit : mm



**FSCAN-2080PHE**



		2080PH	2080PHE
X-ray Output		80kV, 1.25mA, 100W	80kV, 1.25mA, 100W
Inspectable Products Size	Max. Width	250 mm	250 mm
	Max. Height	297 mm	193 mm
Conveyor	Speed	10~50 M/M	10~50 M/M
	Width	250 mm	250 mm
	Height of Belt Level	850 ± 50 mm	750 ± 50 mm
Monitor		15" Touch screen	15" Touch screen
Power Requirements		AC220V, 50/60Hz, 1.2kVA	AC220V, 50/60Hz, 1.2kVA
Weight		450 kg	230 kg

\* All specifications are subject to change without prior notice. \* Sensitivity is dependent on the material as well as the size and array of examined objects.

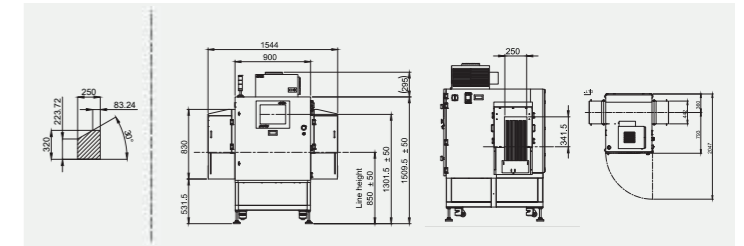
# LARGE CANNED, BOTTLED

**FSCAN-2500PH**

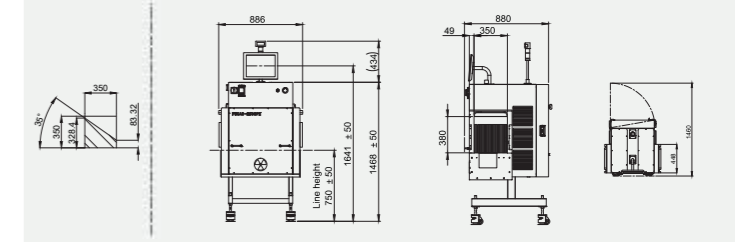


Inspection Area

Unit : mm



**FSCAN-2500PHE**



		2500PH	2500PHE
X-ray Output		120kV, 4mA, 480W	120kV, 4mA, 480W
Inspectable Products Size	Max. Width	250 mm	350 mm
	Max. Height	320 mm	328 mm
Conveyor	Speed	10~50 M/M	10~50 M/M
	Width	250 mm	350 mm
	Height of Belt Level	850 ± 50 mm	750 ± 50 mm
Monitor		15" Touch screen	15" Touch screen
Power Requirements		AC220V, 50/60Hz, 1.5kVA	AC220V, 50/60Hz, 1.5kVA
Weight		550 kg	250 kg

OPTIONS	
Higher level of protection : Body (Upper part) IP65	Air conditioner
Surface treatment : Matt / Hairline finish	Adjusting belt height (Maximum 900mm)
Air conditioner: For hot(over 30 degrees) and humid(over 70% RH) or dusty site	Increasing belt speed
CE parts and certificate	Increasing tunnel height
Combination rejector (with reject confirmation function)	Lockable rejector bin



www.xavisxray.com



Safe Food



Head Office : Room#619 Gungang Hitech Valley 1, 177 Sagimakgol-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea 13202  
 3D X-ray R&D Center : Room #601 TEL : +82-31-740-3800 FAX : +82-31-740-3802 <http://www.xavisxray.com> E-mail : [info@xavisxray.com](mailto:info@xavisxray.com)