

# X-Ray Inspection System

General Catalog

The X-ray inspection system checks the material density to detect foreign body or faulty shape and inspects the weight.

**XrayHawk**

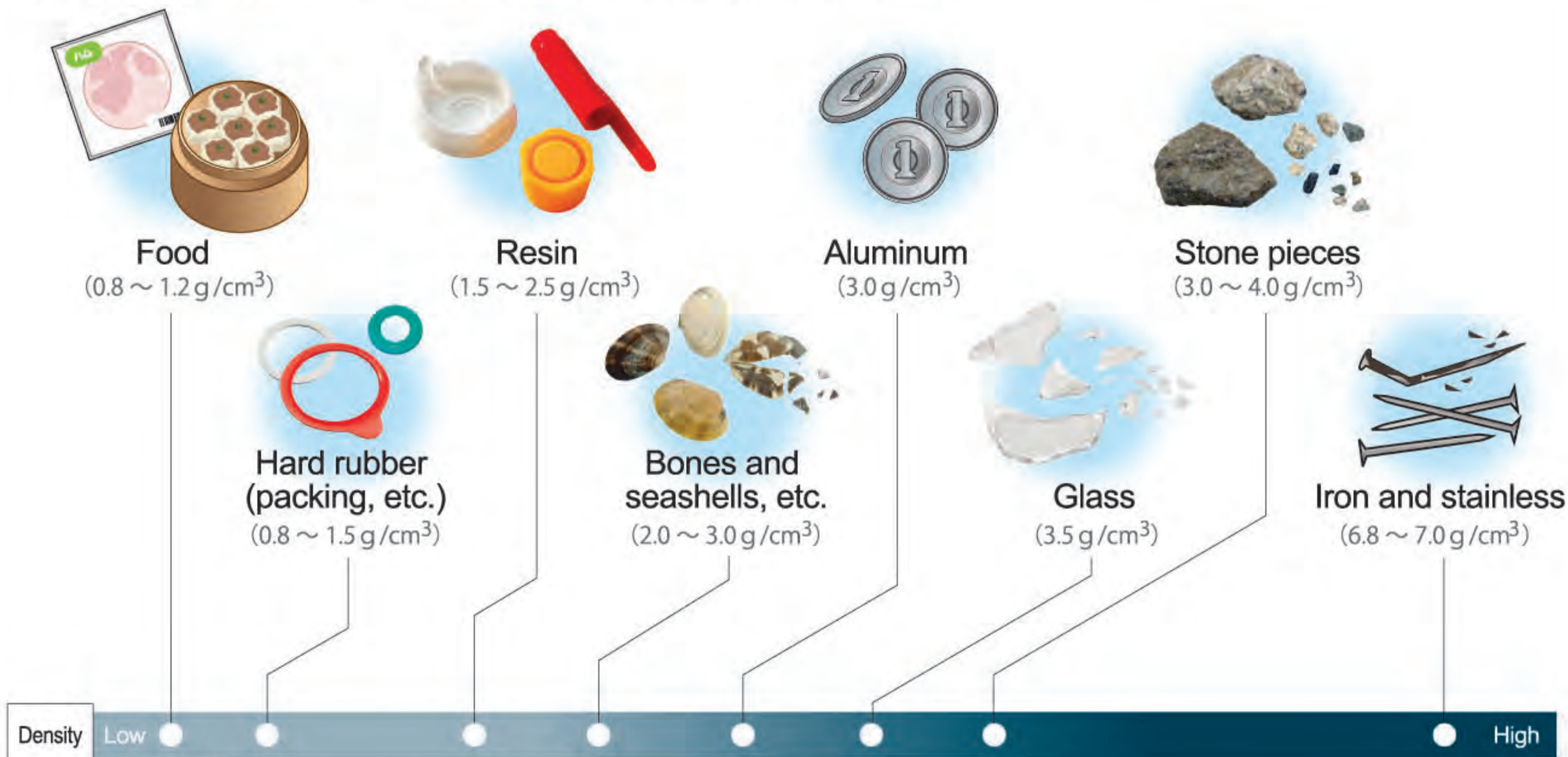
SX2 series

# X-RAY INSPECTION SYSTEM

# What you can do with the X-ray inspection system



## Foreign objects made from various materials can be detected. (Foreign object inspection can be combined with other inspections.)



In addition to metal foreign objects, other foreign objects, such as stone, glass, bone, and high-density plastic can be inspected. Comparing products to be inspected, materials with relatively higher density are detected easily. As a reference, materials which float in water have an extremely low density and are difficult to detect.



## Contents inside metallic packing materials can be inspected.

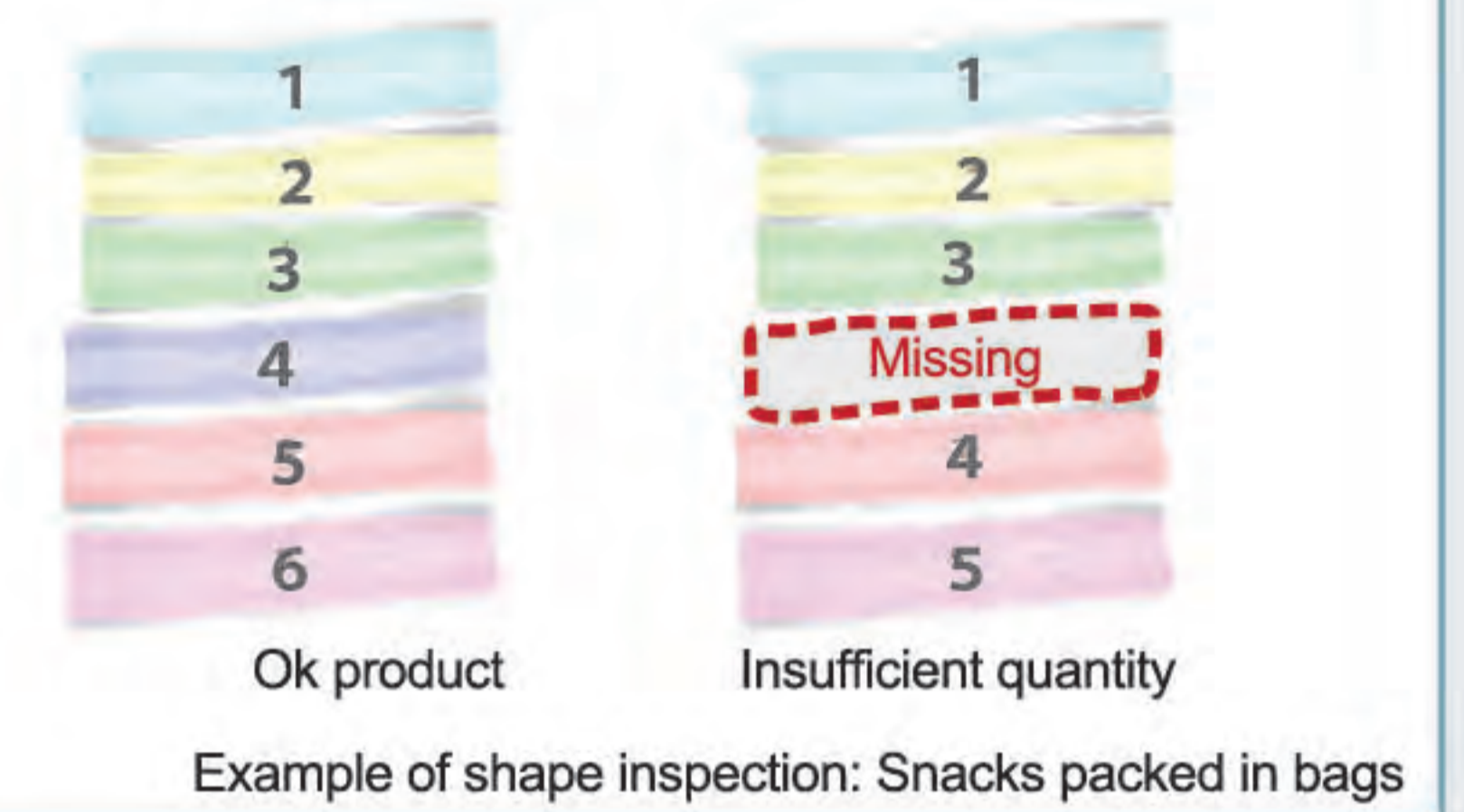


Foreign objects in cans and aluminum packing materials, through which the light is not transmitted and the contents of which cannot be seen, are also detected.

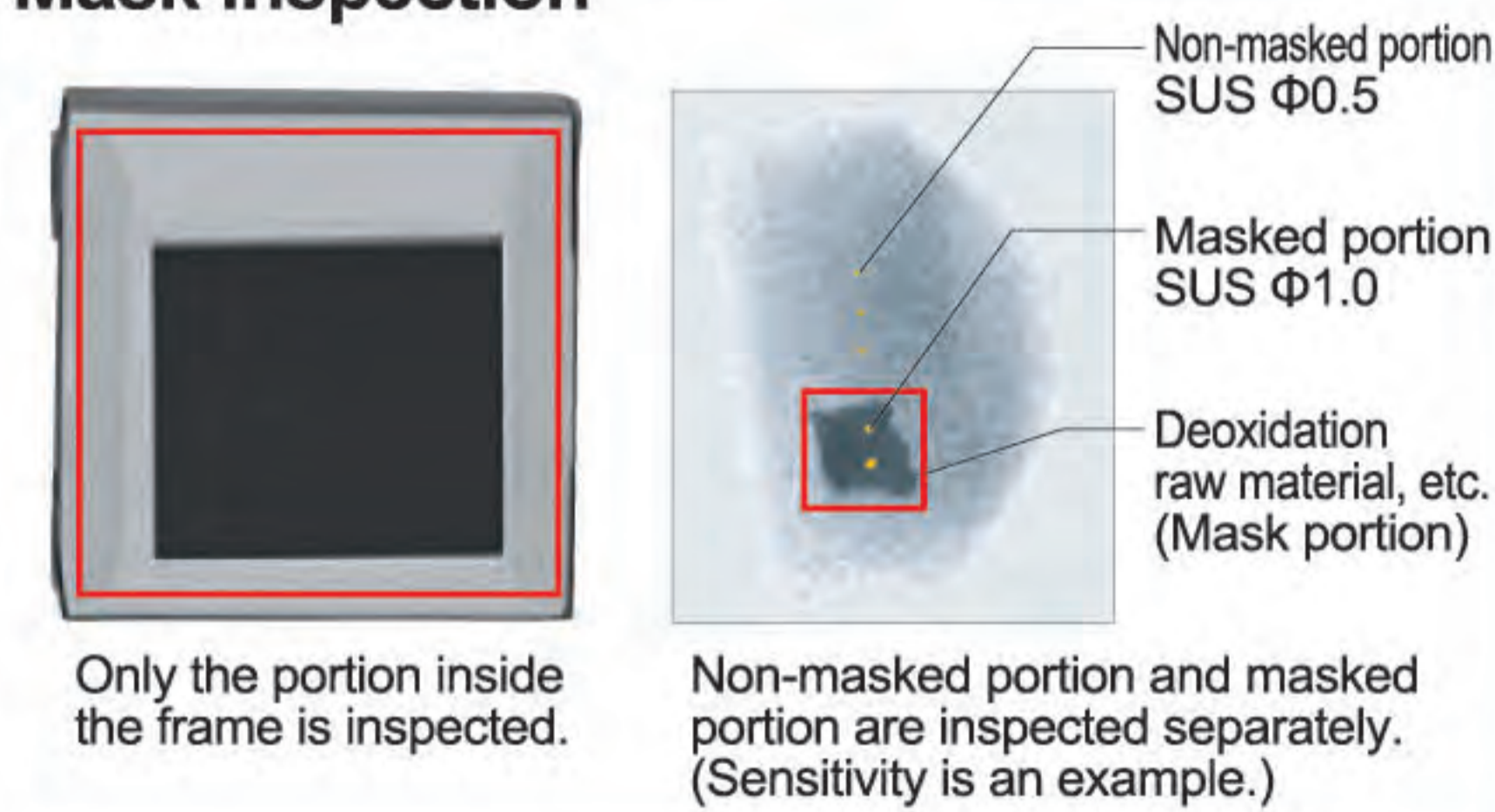
## Shape inspection



## Quantity inspection



## Mask inspection



## Jam inspection

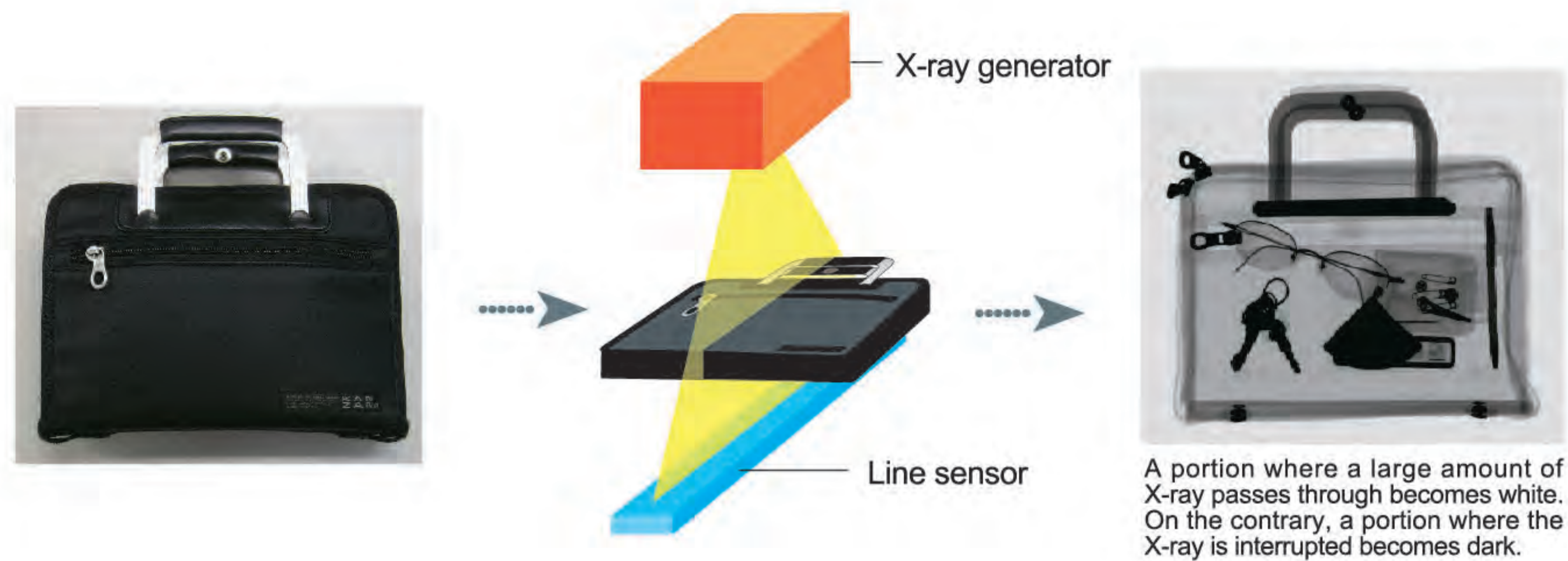


## Weight inspection



The weight is inspected using density. The weight of randomly placed products or continuously-packaged products that cannot be inspected with a weight measuring instrument can be inspected.

# About X-ray inspection system

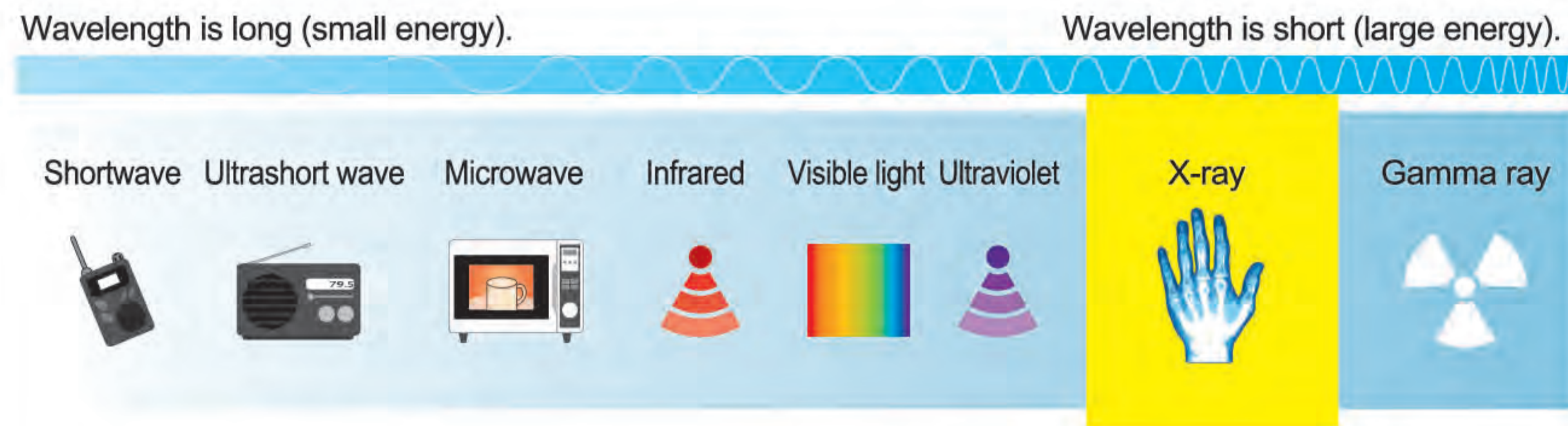


A portion where a large amount of X-ray passes through becomes white. On the contrary, a portion where the X-ray is interrupted becomes dark.

# For assuring safety

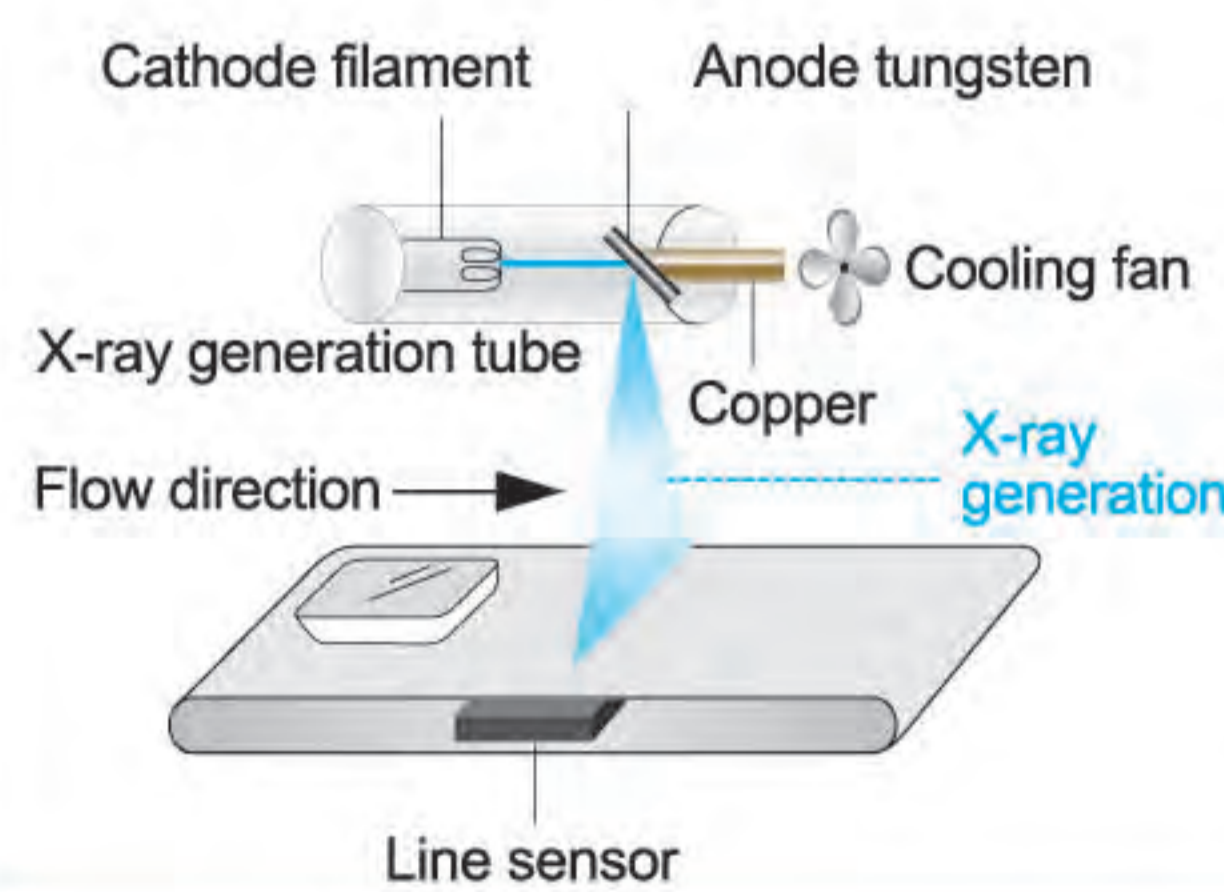


## X-ray belongs to electromagnetic waves



The X-ray inspection system is so designed that the inside of an article can be seen clearly by utilizing the principles that are basically the same as the X-ray radiography. Soft X-ray with small energy among X-rays is used for the X-ray inspection.

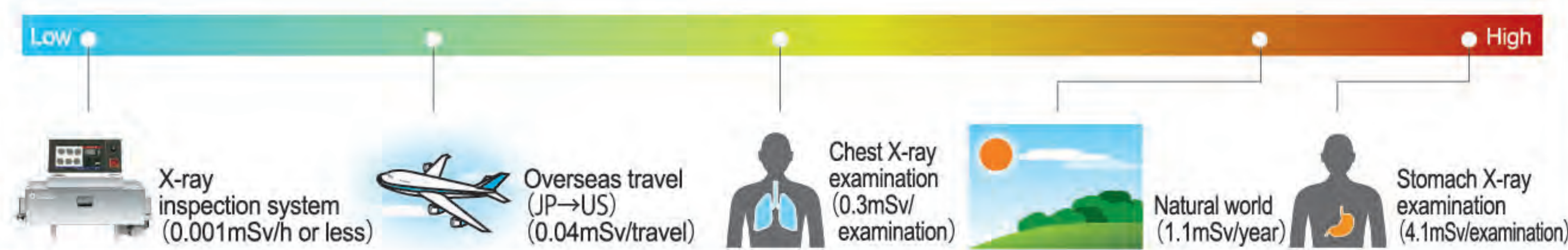
## Mechanism of X-ray generation



The X-ray irradiated from the X-ray generation tube reaches the line sensor through a product to be inspected. Images are captured based on the measured transmission amount. X-ray transmission images that have been captured are analyzed to automatically judge foreign objects and others. Shutting down the current will stop the X-ray immediately.

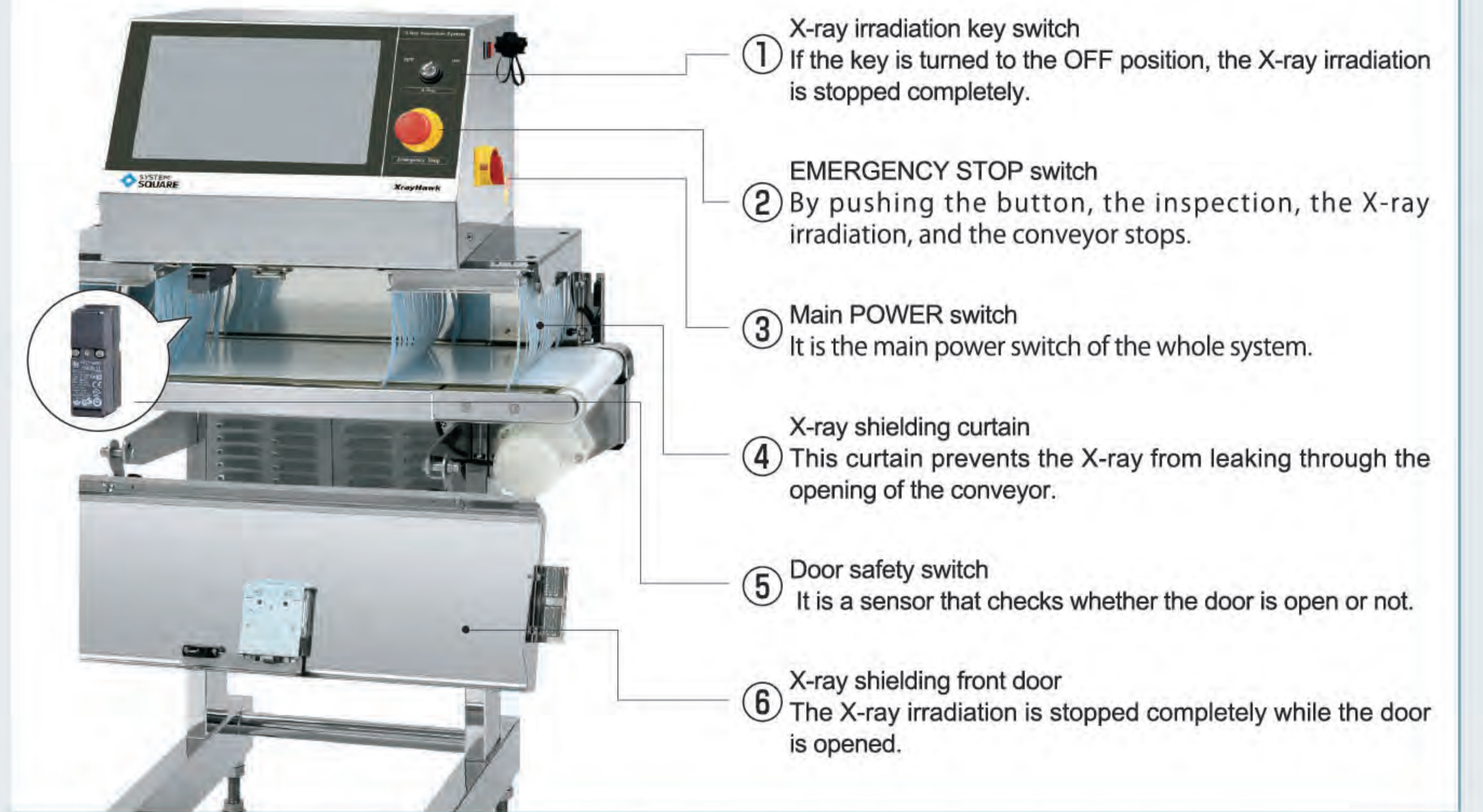
When the tube voltage is increased, the wavelength of the X-ray becomes short to increase the transmission capability. This is effective to detect thick products to be inspected and foreign objects with a high density. Detection of foreign objects with a low density may be improved by decreasing the tube voltage.

## Example of X-ray exposure level comparisons



## Hazardous work is prevented.

Various safety measures are taken by considering work personnel' s safety. The system can be operated safely even without special qualification about X-ray.



• Sufficient safety measures for work personnel are taken based on "Ministerial Ordinance for Prevention of Hazards from Ionizing Radiation". According to these rules, when the X-ray leak does not exceed 1.3mSv within 3 months, it is not necessary to assign the supervisor in charge of work. The X-ray leak of this system is 1 $\mu\text{Sv/h}$  or less. Therefore, if the same operator works, 1 $\mu\text{Sv/h}$  x 16 hrs./day x 6 days/week x 13 weeks (3 months) = 1.25mSv/3 months. This value is within the specified range. The X-ray irradiation amount of this system is 0.1Gy or less based on "Food Sanitation Act". This level has no problem from a view point of toxicity, nutrition, and microbiology.

• Company that will use the inspection system must submit the plan to the Chief of the Labor Standards Inspection Office in relevant region at least 30 days prior to the installation work of the X-ray inspection system.

• It is necessary to execute warming up X-ray once a month.

• Make sure to ground the earth terminal of the power plug for safety (according to the 3rd class grounding standard). Never connect several cables to one ground point. Or some expensive parts would be in risk at breaking down.

# Features of System Square's X-ray inspection system



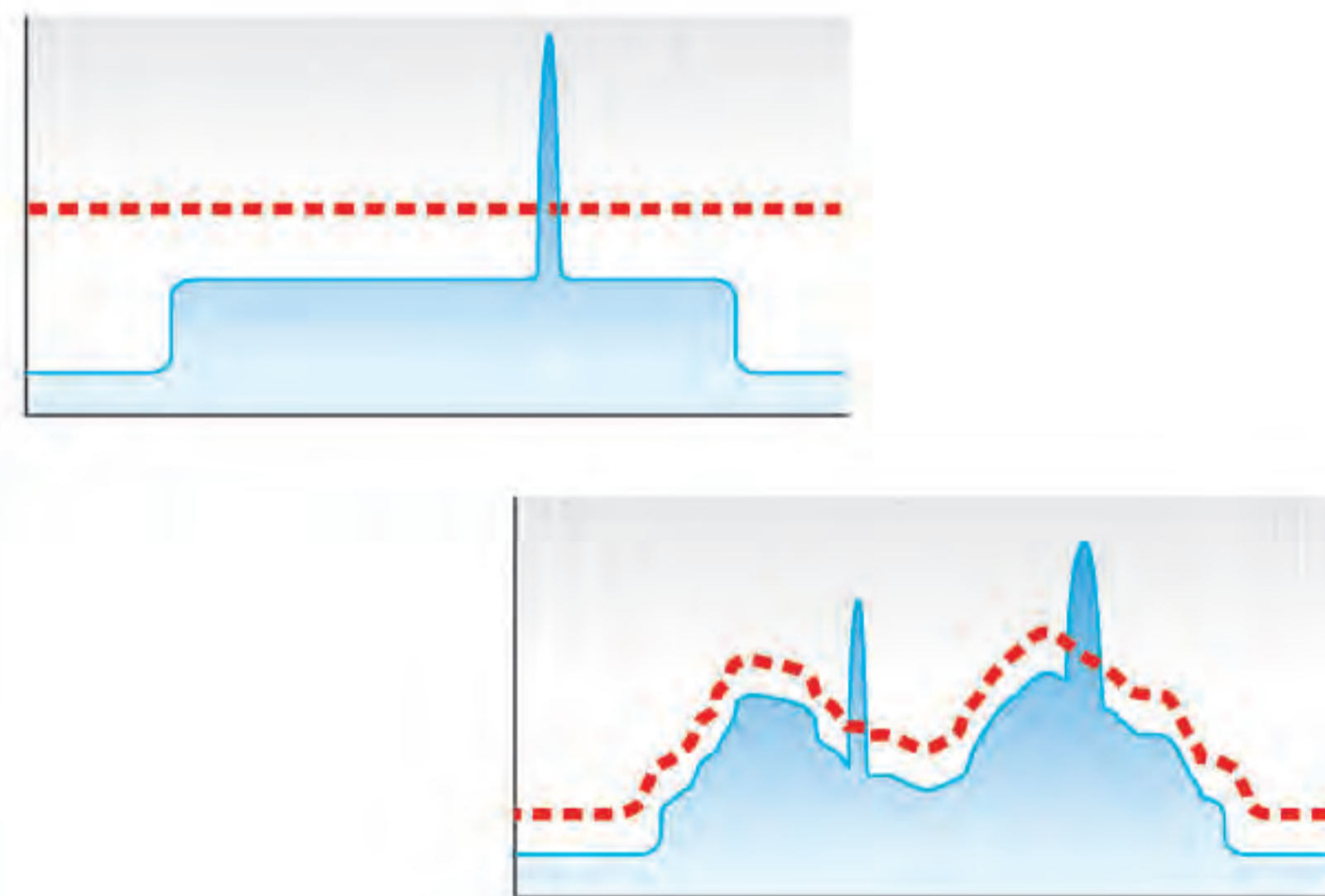
## Everyone can operate the system easily.



Important setting operations such as sensitivity setting are supported by easy-to-understand guidance.

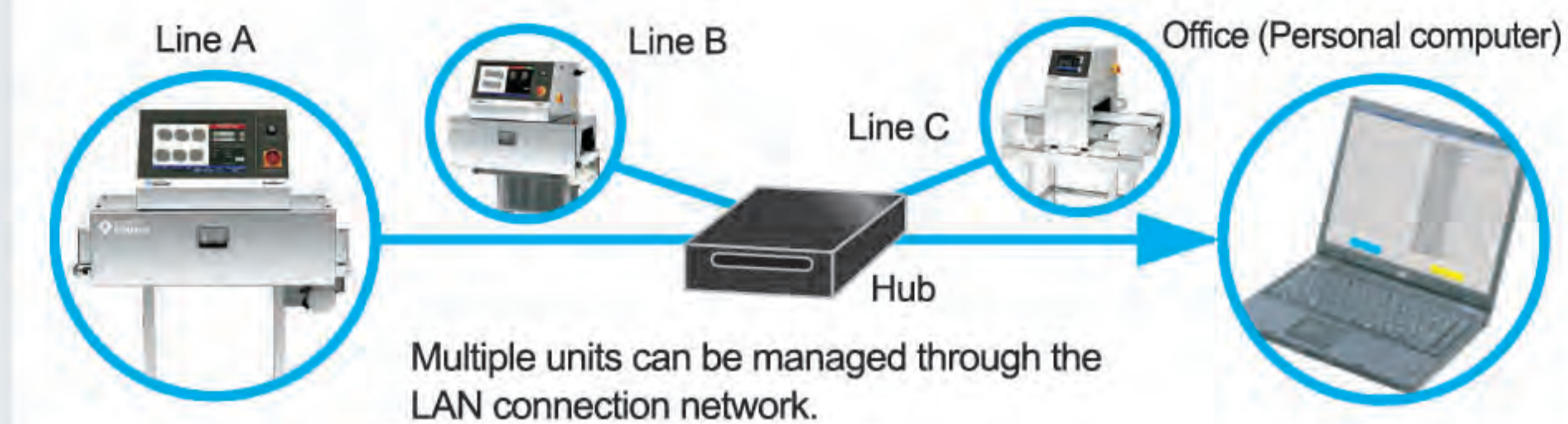
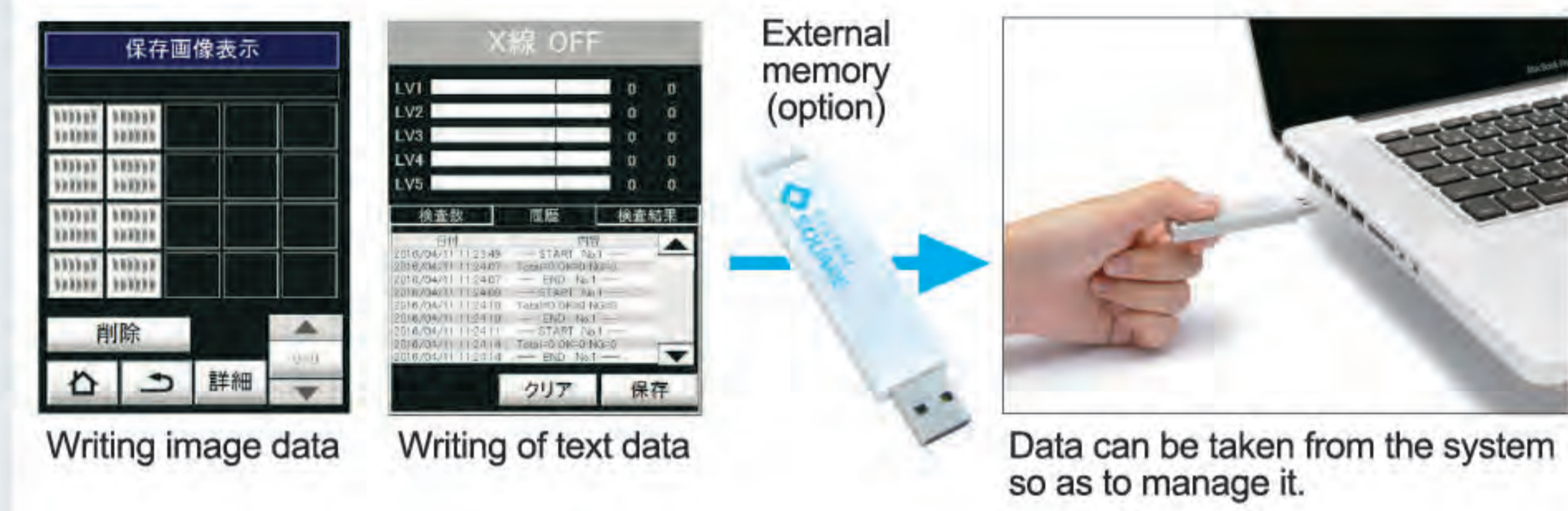


## Pursuing high-sensitivity detection



Originally developed image analysis program can detect not only solid foreign objects such as metal, but also bone or resin foreign objects with a high sensitivity. Customizing to fit product characteristics is also supported.

## Enhanced information management function



## Simple maintenance work



Consideration for maintenance work such as easily detachable transfer belt. Overall equipment structure is made simple to improve the cleaning ability.

## Raw material pre-process

### Recommended models

SX2-2554W, SX2-4074W

- Applicable to complete waterproof (IP66) and dust-proof. Tough environment-resistant performance is incorporated as standard.
- A variety of customizing results suitable for production lines.

**Major inspection item**  
Foreign object



## Cooking product

### Recommended models

SX2-2554W, SX2-4074W

- Applicable to complete waterproof (IP66) and dust-proof. Tough environment-resistant performance is incorporated as standard.
- A variety of customizing results suitable for production lines.
- Foreign object inspection and other inspection such as shape or weight inspection can be made at the same time.

**Major inspection item**  
Foreign object, shape, and weight



## Packaging and boxing

### Recommended models

- SXS2 series (jam inspection with high sensitivity)
  - Hybrid inspection is incorporated. Applicable to all packaged products. Separate belt conveyor type machine
  - Effects of transport belt are eliminated to ensure high-sensitivity inspection.
- SXP-2044W
- Low running cost, low price machine
- SX2-2554W, SX2-4074W
- Applicable to complete waterproof (IP66) and dust-proof.

**Major inspection item**  
Foreign object, jam, missing product

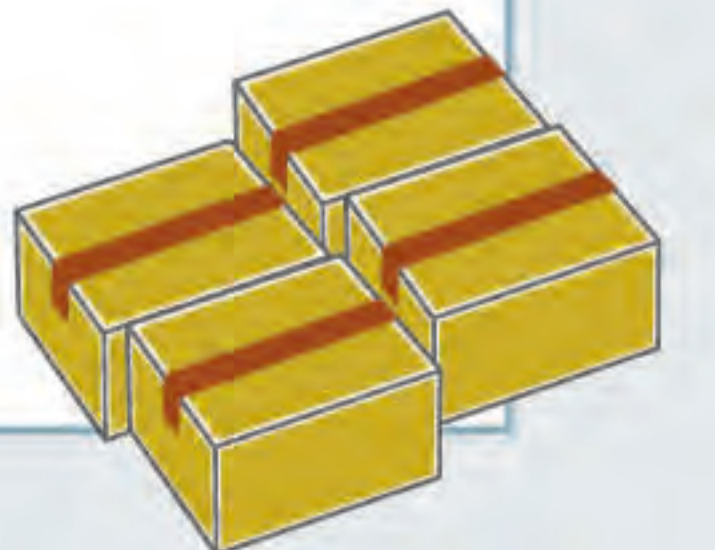


## Storage and shipment

### Recommended models

- SX2-5376W, SX2-53106W, SX2-6976D, SX2-69106D
- Applicable to inspection of large products.
- Mask function is applied to corrugated boards or trays to identify portions to be inspected. This ensures high-sensitivity inspection.

**Major inspection item**  
Foreign object


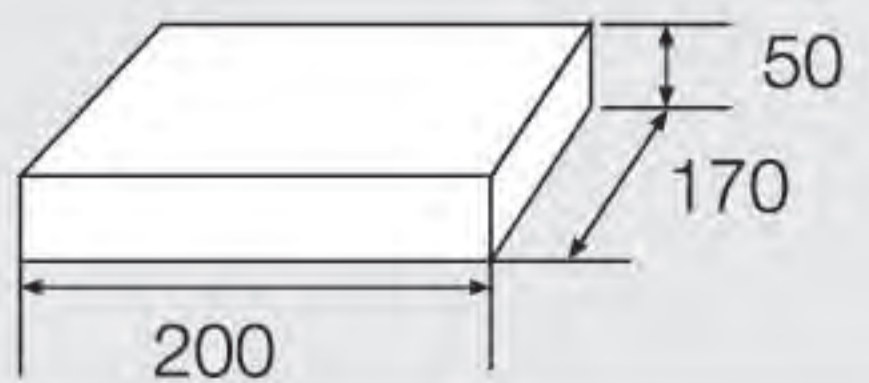
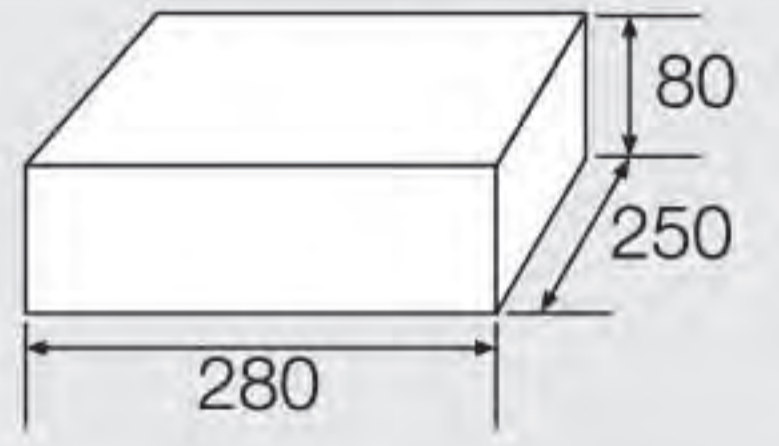
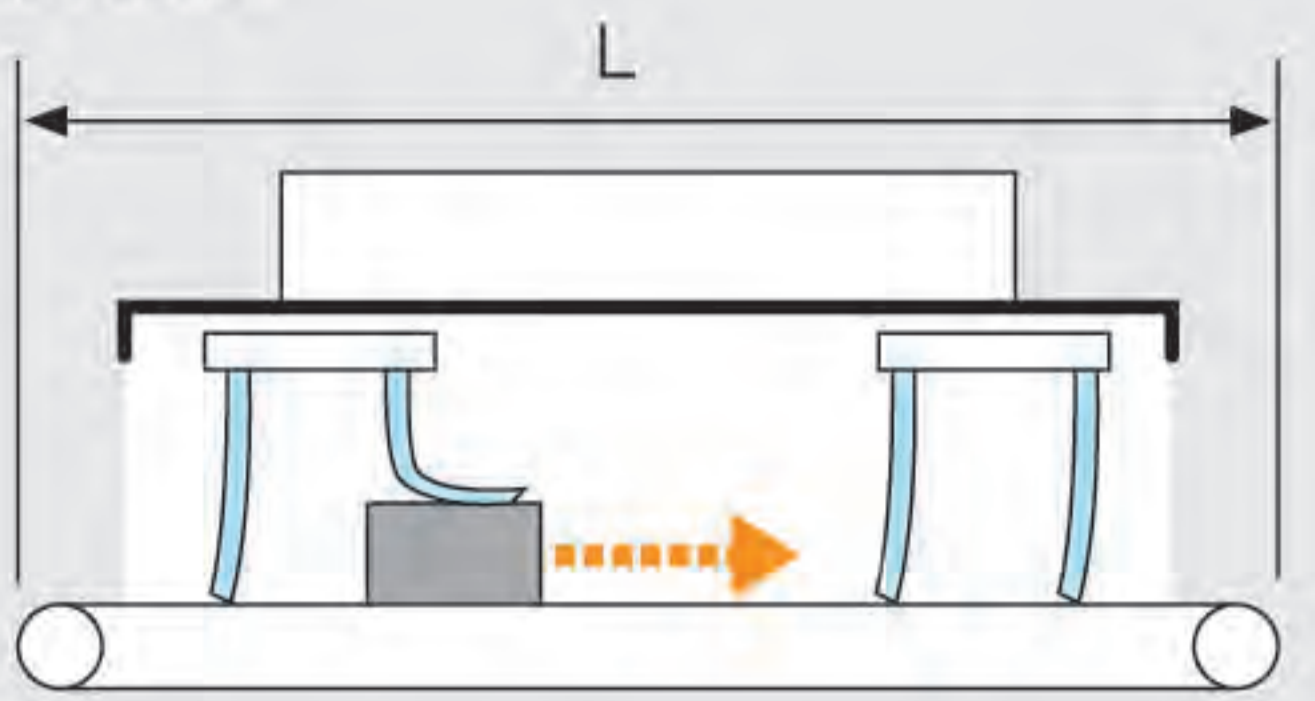

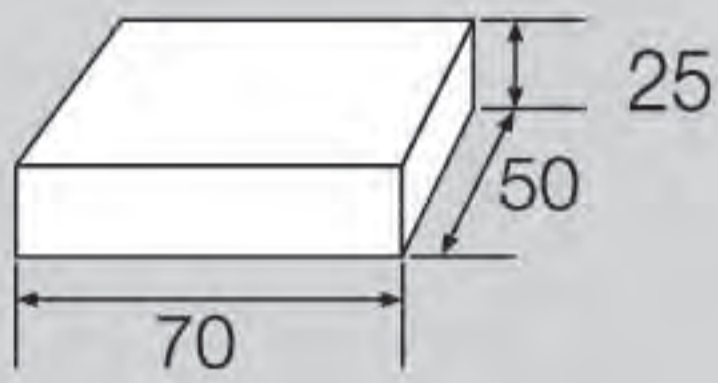


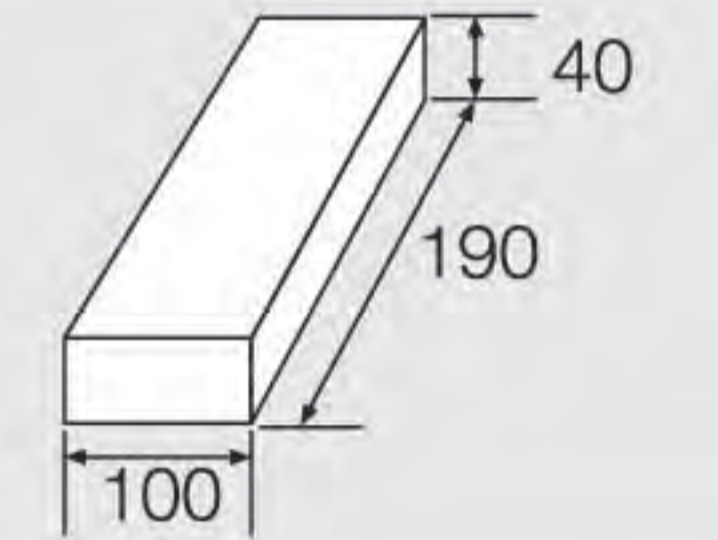
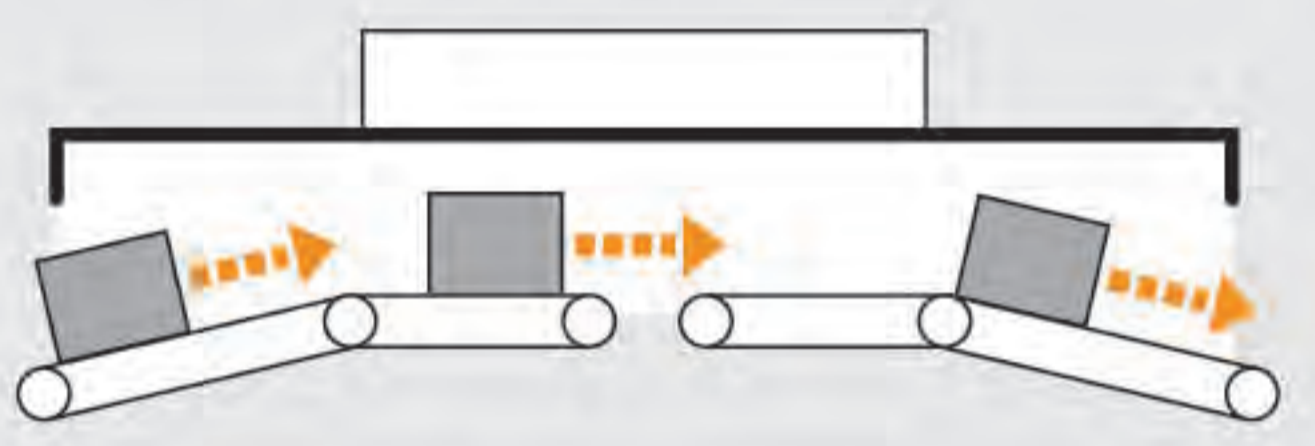

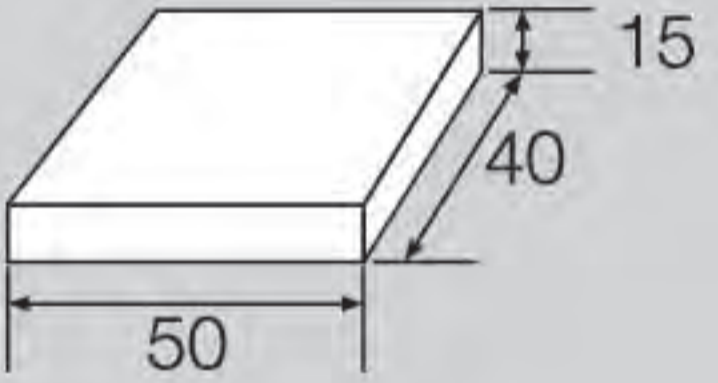

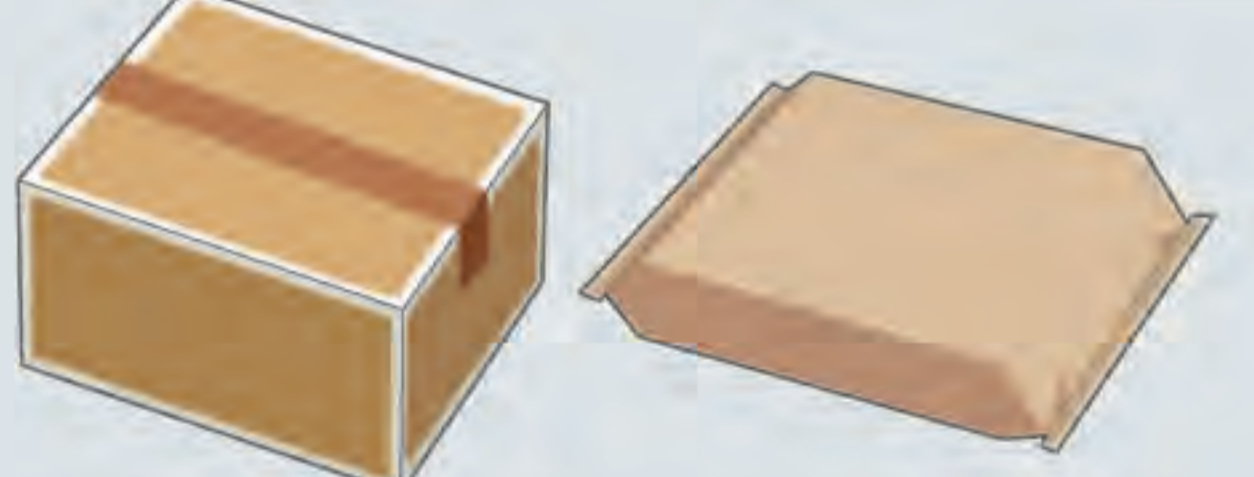
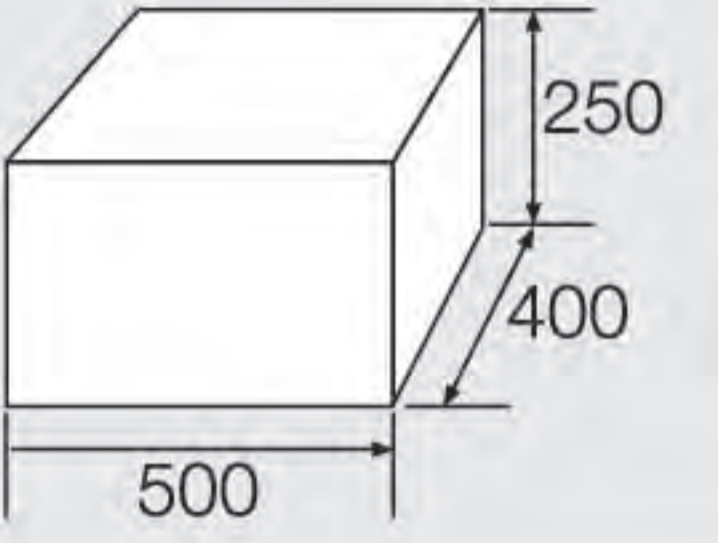
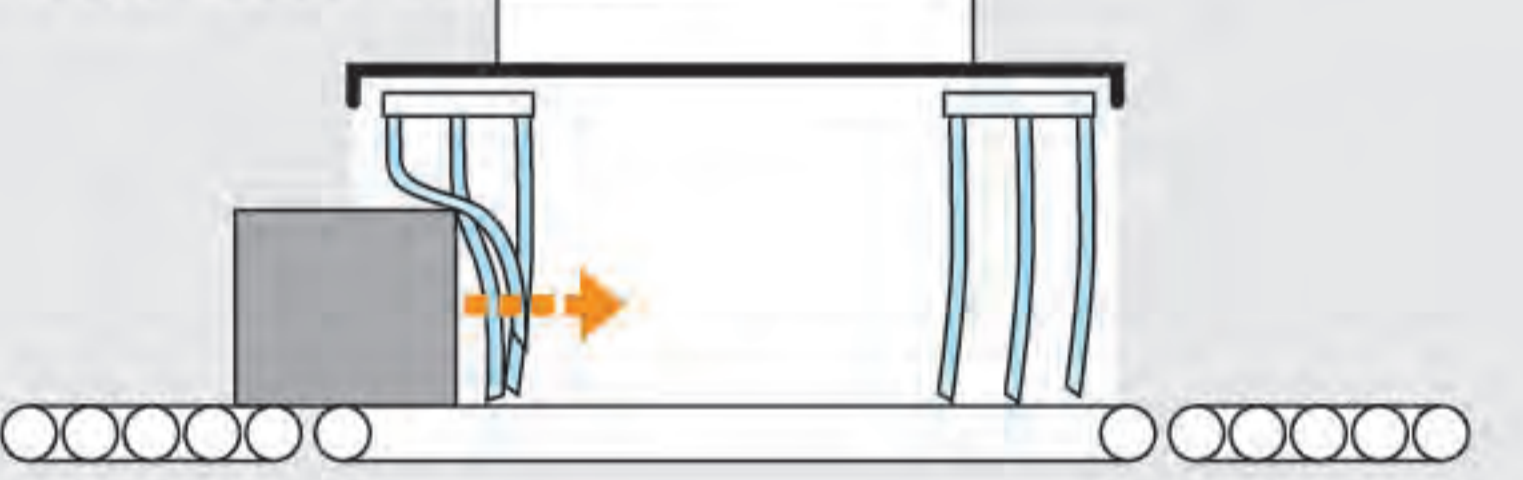

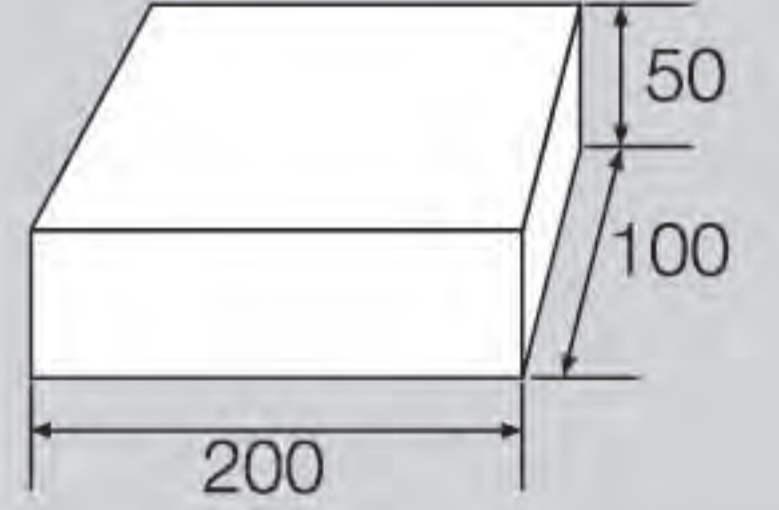
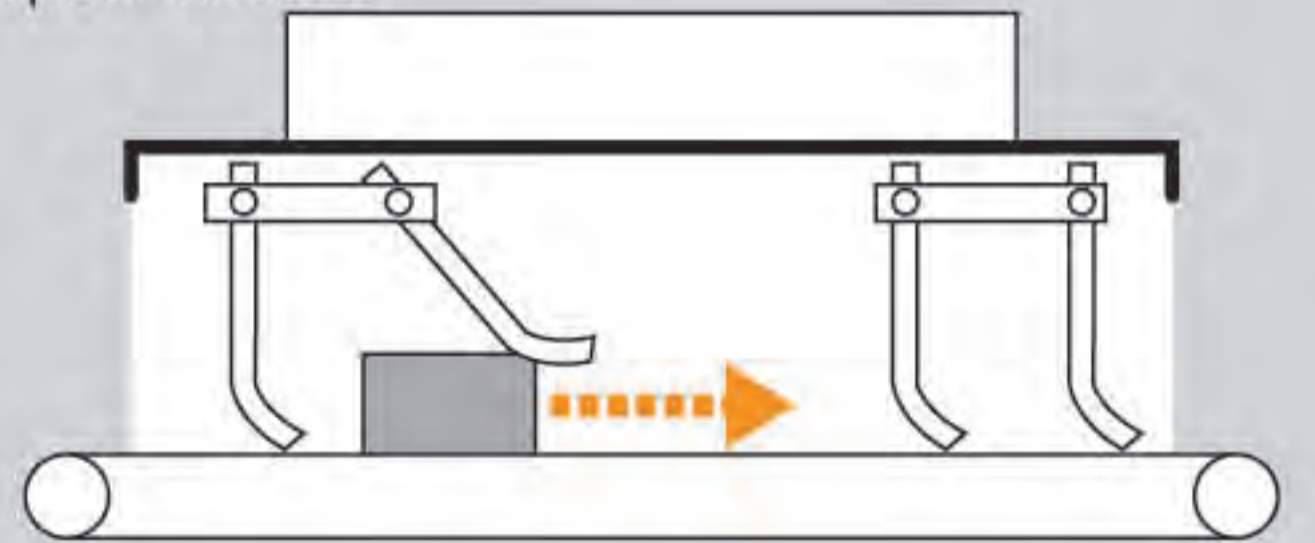


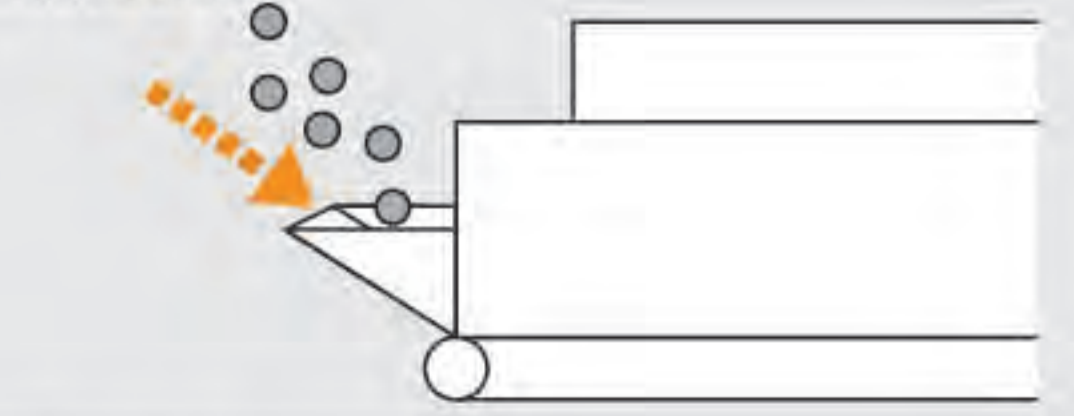

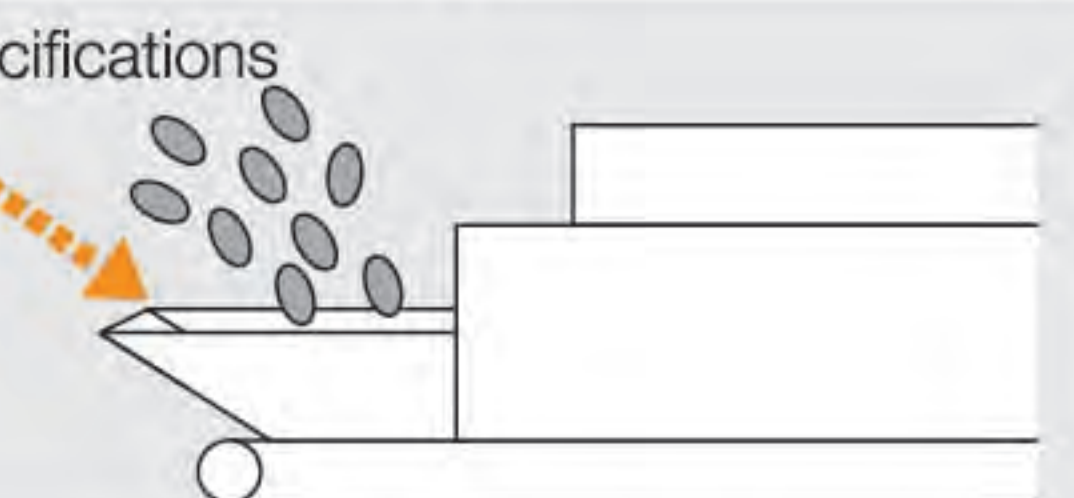


# Line Up

	Features	Passing size W x H (no curtain type) unit: mm	Tube voltage and output	Standard machine length Unit: mm	Waterproof and dust-proof	Inspectable item
<b>SXP-2044W</b>	Compact size model Compact design and low price Low running cost	190×100(40)	40kV 60W	800	Inside of inspection chamber conforms to IP66.	Foreign object inspection Jam* Weight, area, quantity, and shape
<b>SX2-2554W</b>	Middle size model Completely sealed waterproof, dust-proof, with no cooling unit Complete waterproof	240×120	50kV 150W	800	Overall system conforms to IP66 as standard.	Foreign object inspection Jam* Weight, area, quantity, and shape
<b>SX2-4074W</b>		390×150	75kV 300W			
<b>SX2-5376W</b>	Large size model For large products (Large box, large bag, food tray)	521×220	75kV 300W	1200	Inside of inspection chamber conforms to IP66.	Foreign object inspection Jam* Weight, area, quantity, and shape
<b>SX2-53106W</b>		519×220	100kV 300W			
<b>SX2-6976D</b>		673×300	75kV 300W		IP4*	
<b>SX2-69106D</b>		670×300	100kV 300W			
<b>SXP-1354W</b>	Continuously-packaged product inspection	130×30	50kV 100W	600		
<b>SX2-2154W</b>	Highly sensitive X-ray model (separate conveyor) For thin products Low leak type	210×50(20)	50kV 150W	1000	Inside of inspection chamber conforms to IP66.	Foreign object inspection Jam* Weight, area, quantity, and shape
<b>SX2-3474W</b>		340×50(20)	50kV 300W			
<b>SXS2-2154HC1D</b>	Hybrid inspection 	210×50	50kV 150W	1000	Overall system conforms to IP63	Jam inspection with high sensitivity Foreign object inspection Weight, area, quantity, and shape
<b>SXS2-3474HC1D</b>	 (High sensitivity Inspections can be made.)	340×120	50kV 300W	1200		

\* Options, contact our company. 9

# Selection of appropriate transport method (reference)

Product to be inspected		Inspection product size (guideline) Unit: mm	Transport specifications	Features
General packaged products	 <p>Confectionery Pasta Processed meat Frozen foods Flour, etc.</p>	 	<p>Curtain specifications</p> 	<p>L=800mm General purpose curtain specifications The product needs a certain weight (100g or more)</p> <p>L=1400mm Extend the conveyor to reliably block X-rays even for large products</p>
	 <p>Individually packaged product (aligned) Confectionery Ice cream, etc.</p>		<p>Trapezoidal no curtain specifications</p> 	<p>For light products that do not slip (approx. 50g or less) Since the curtain does not hit the product, it is difficult to change the posture Curtains do not wear out in environments with a large number of processes Corresponds to product heights 30-40mm or less</p>
	 <p>Light box products (short) Large and light bag products</p>		<p>Split trapezoidal conveyor specifications</p> 	<p>High-grip transport belt enables stable transport of light products Corresponds to product heights 100mm or less</p>
	 <p>Thin products Continuous packaging products</p>		<p>Split straight conveyor specifications</p> 	<p>The number of processes is large and the posture does not change easily. Corresponds to seal inspection Corresponds to product heights 20mm or less</p>
	 <p>Cardboard Craft bag</p>		<p>Large conveyor specifications</p> 	<p>For large products with a product height 150 mm or more</p>
	Unpackaged products	 <p>Meat (block)</p>		<p>SUS curtain specifications</p> 
Bulk products		 <p>Individually packaged confectionery / Candy Cut meat Mushroom Cut vegetables Grains / Beans / Nuts Frozen foods, etc.</p>	 <p>Passing height 30mm, Product length 50mm or less</p>	<p>Entrance chute specifications</p> 
		 <p>Passing height 30mm, Product length 250mm or less</p>	<p>Entrance hopper specifications</p> 	<p>Inspection / sorting integrated type Corresponds to passing heights 30mm or less, product length 250mm or less</p>

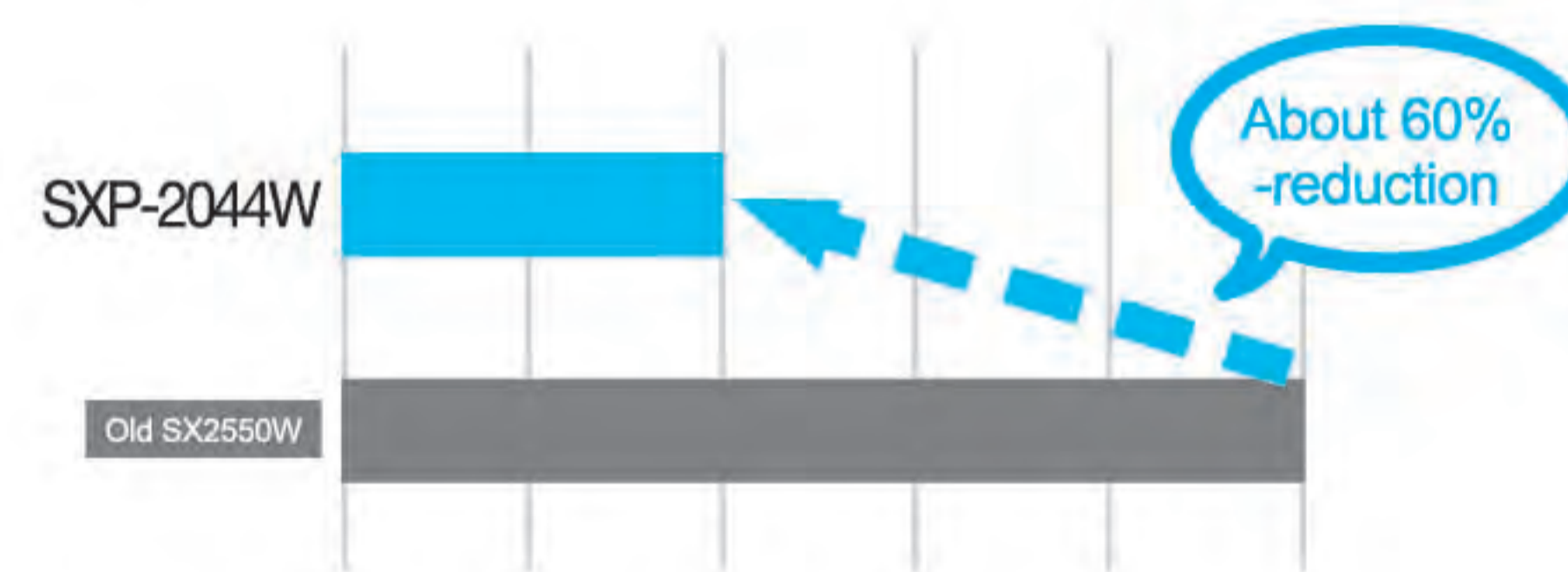
# Compact design and low price

Compact size model SXP-2044W



## Low running cost

The service life of the X-ray generator, a consumable part, is improved significantly.\* Furthermore, the power consumption is reduced approx. 50% when compared to the old SX2550W. Total cost necessary for the maintenance work after system installation is reduced 60%.



\*The service life of the X-ray lamp bulb is 2.5 to 3 times longer than that of the old SX2550W. The bulb cost is reduced 25%.

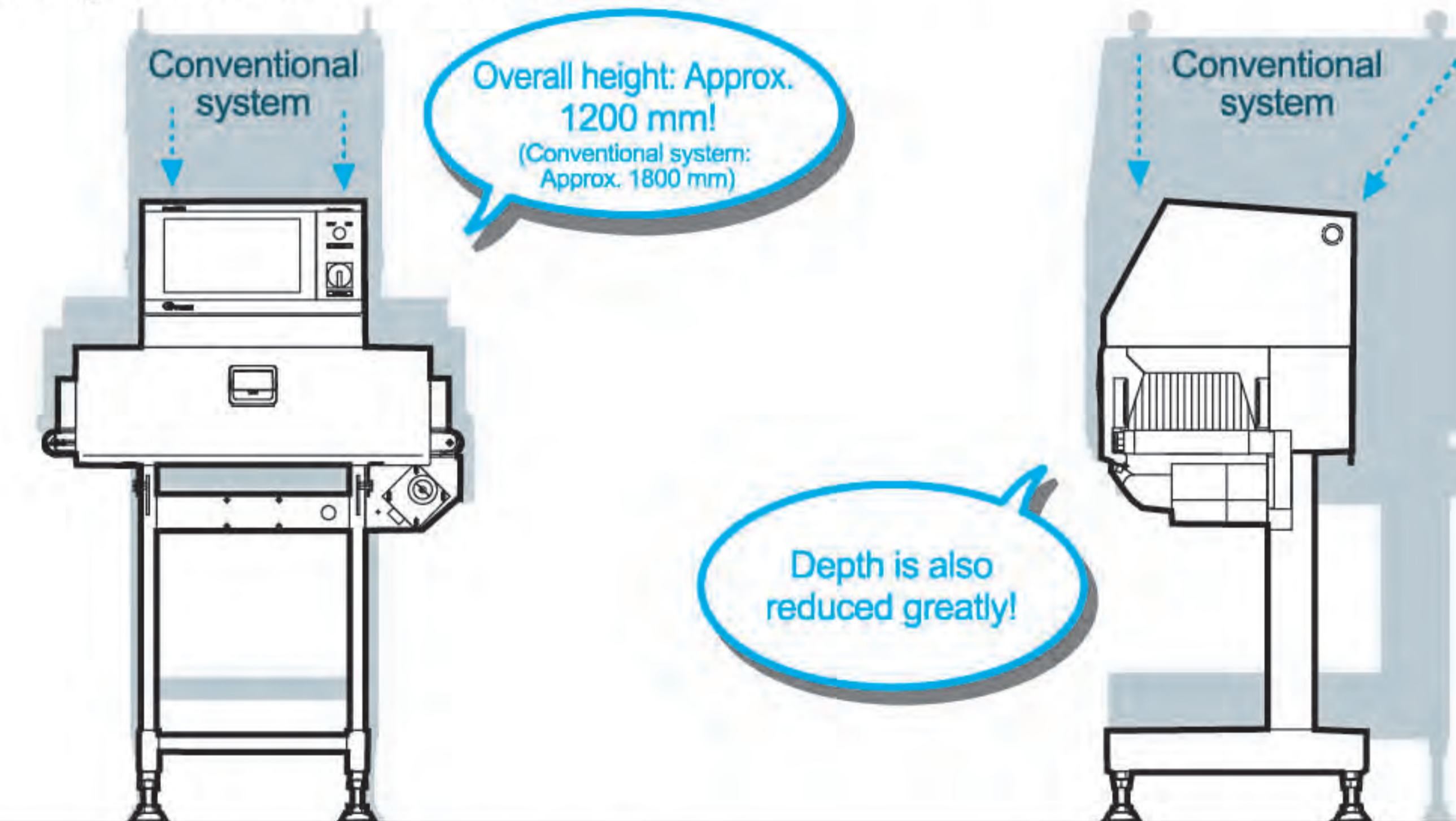
## Suitable for individually packaged products

Suitable for inspection of individually packaged products such as aluminum packing retorts or snacks.



## Super-compact design

The space sharing ratio becomes about half when compared to the conventional system! This system is lightweight and easy to move for the maintenance work.



## No curtain type for unpackaged products



## User friendly operation system

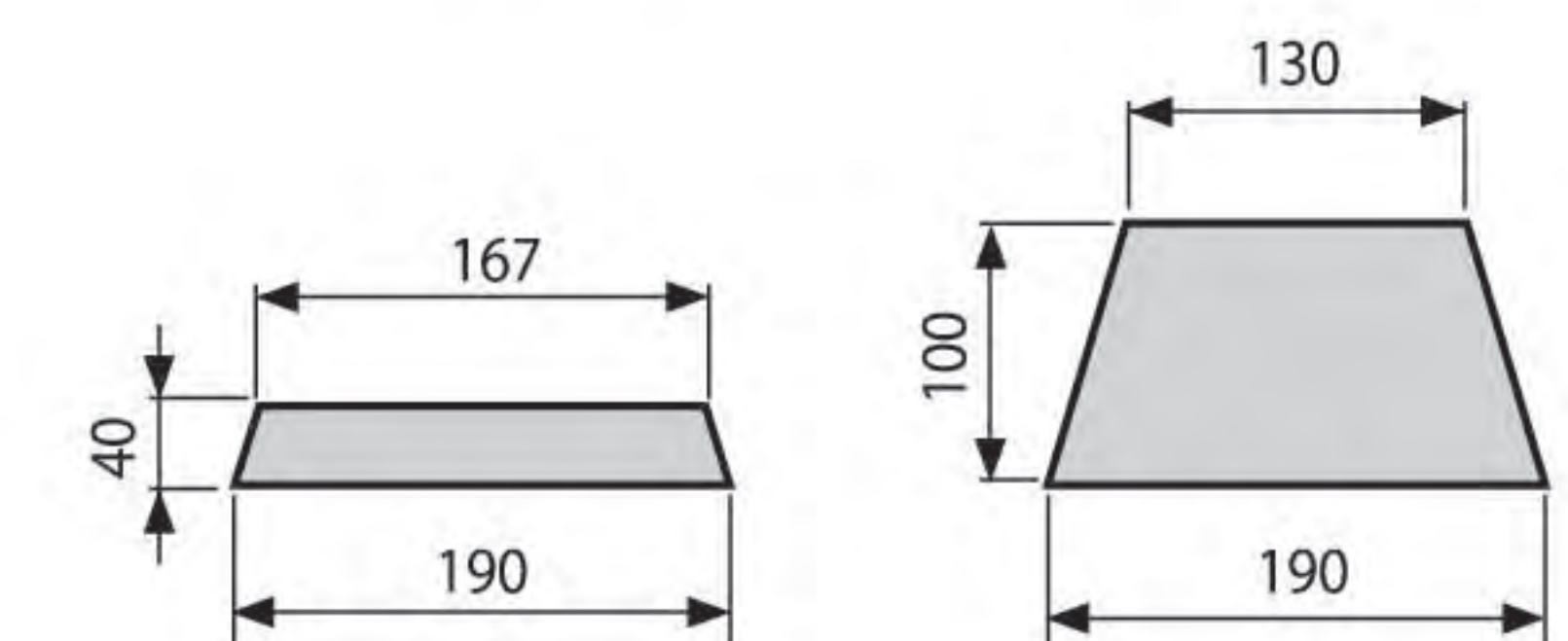
Easy operation through color touch panel.



## Inspectable range

SXP-2044W  
No curtain Type

SXP-2044W



# Completely sealed with no cooling unit

Middle size model SX2-2554W / SX2-4074W



Full-body IP66- compliant



SX2-2554W

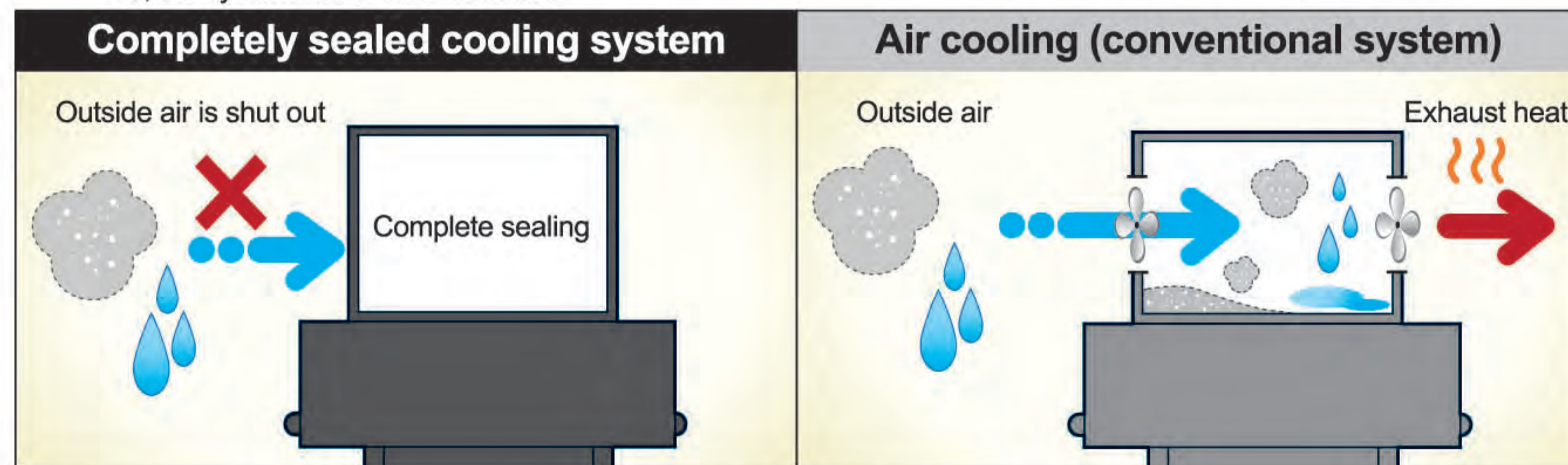
SX2-4074W

SX2-2554W No curtain type



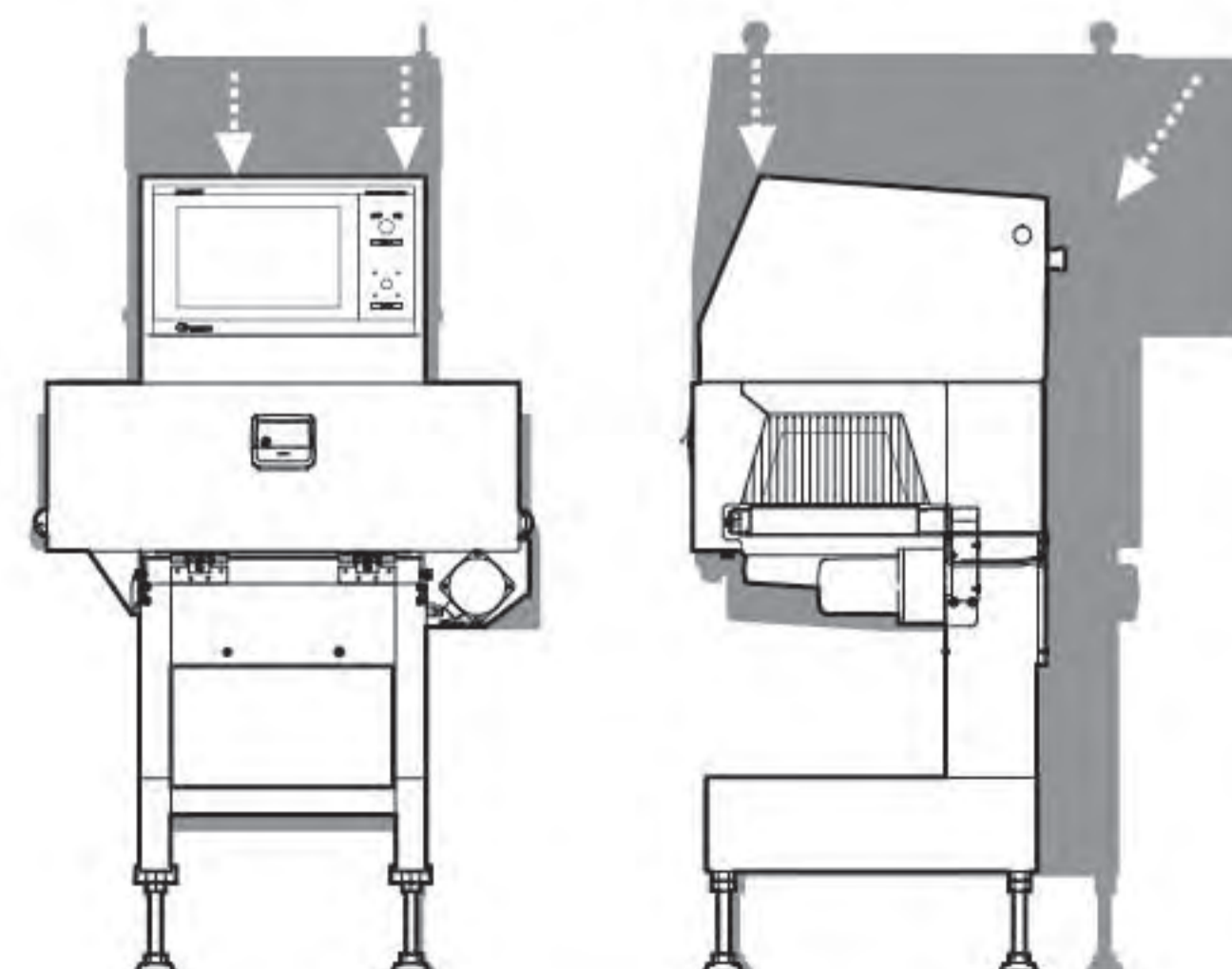
## Completely sealed cooling system is used.

As the complete sealing is achieved, this greatly reduces damages to the system units due to humidity or dust. So, the system has a safer structure.



## Cooling unit is not needed to achieve less-expensive price.

As installation of cooling unit is not needed, the compact design and less expensive price are achieved.



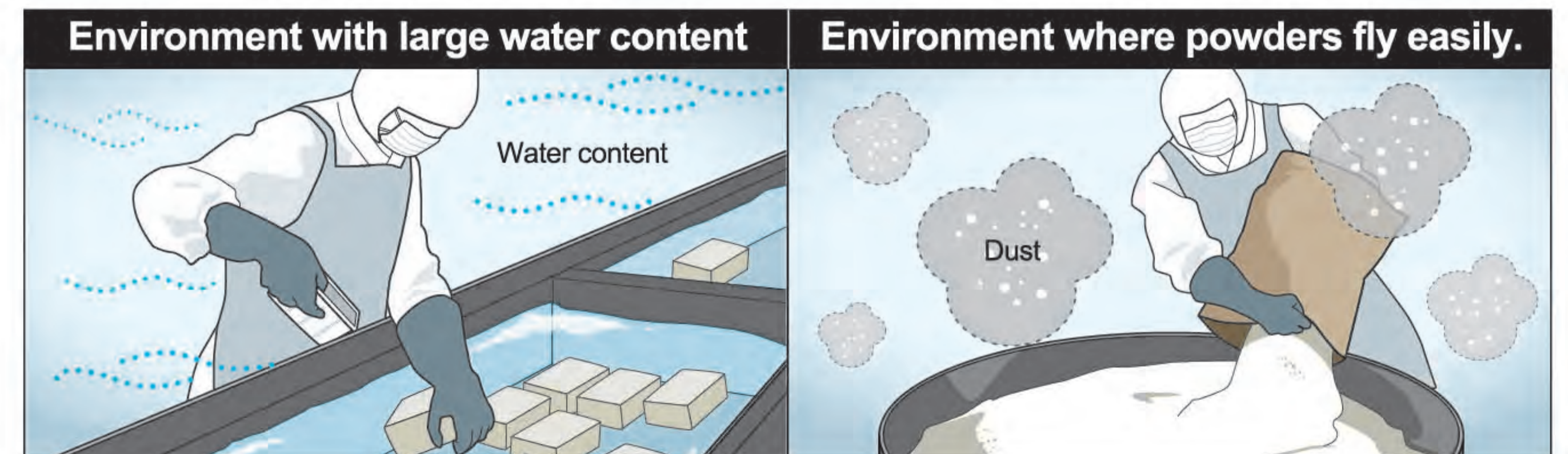
## Completely sealed structure

Completely sealed structure does not need any filter for the air supply/exhaust port.



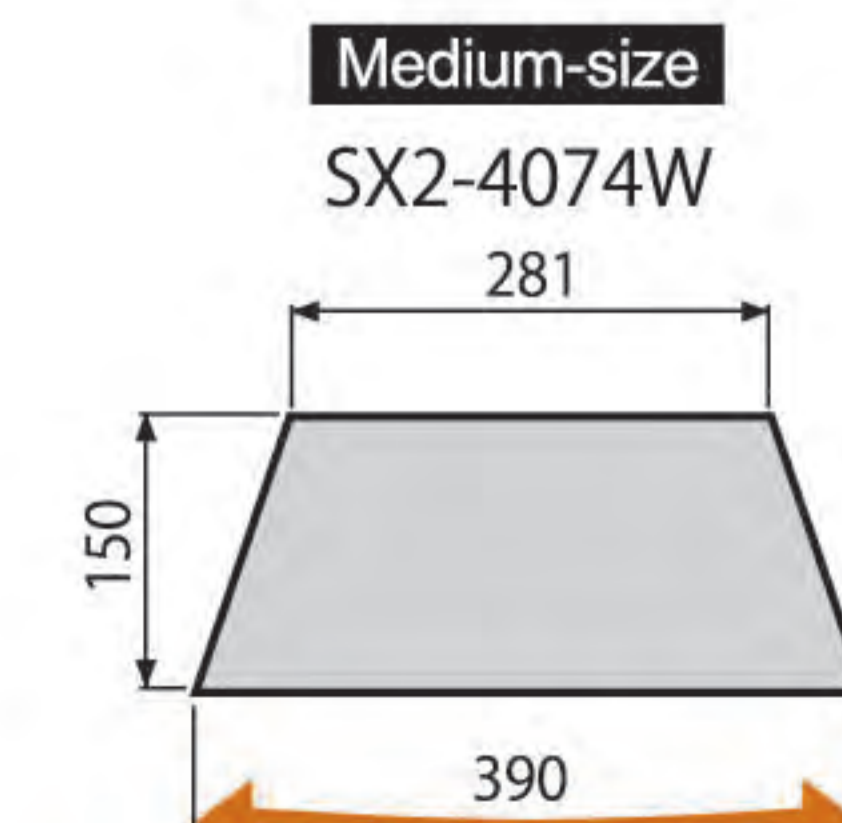
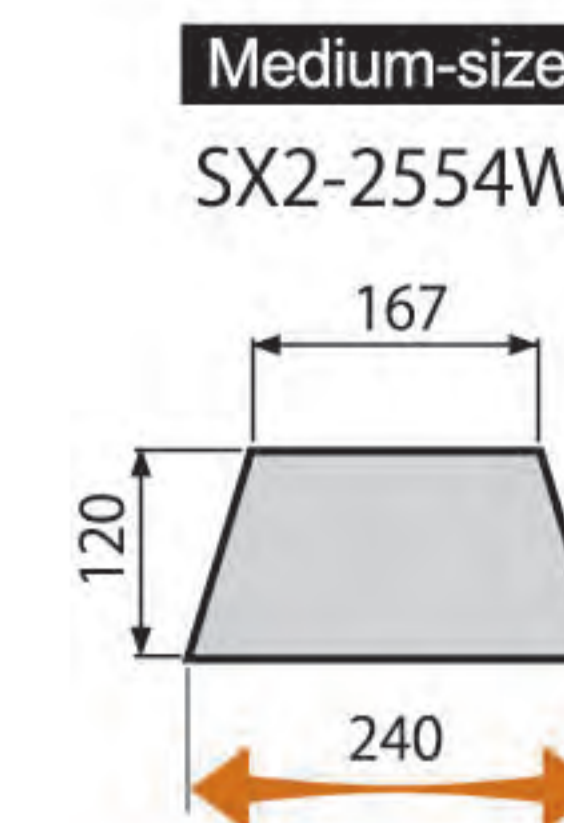
## The overall system conforms to IP66.

The overall system conforms to IP66. The system needs no cooling unit and can be operated in a wide variety of environments.



## Even compact size inspection system provides a wide inspection range.

Even the space saving model similar to the small-size inspection system provides an inspection range of the medium-size inspection system.



Unit:mm



# For large products

Large size model SX2-5376W / SX2-53106W / SX2-6976D / SX2-69106D



SX2-53106W

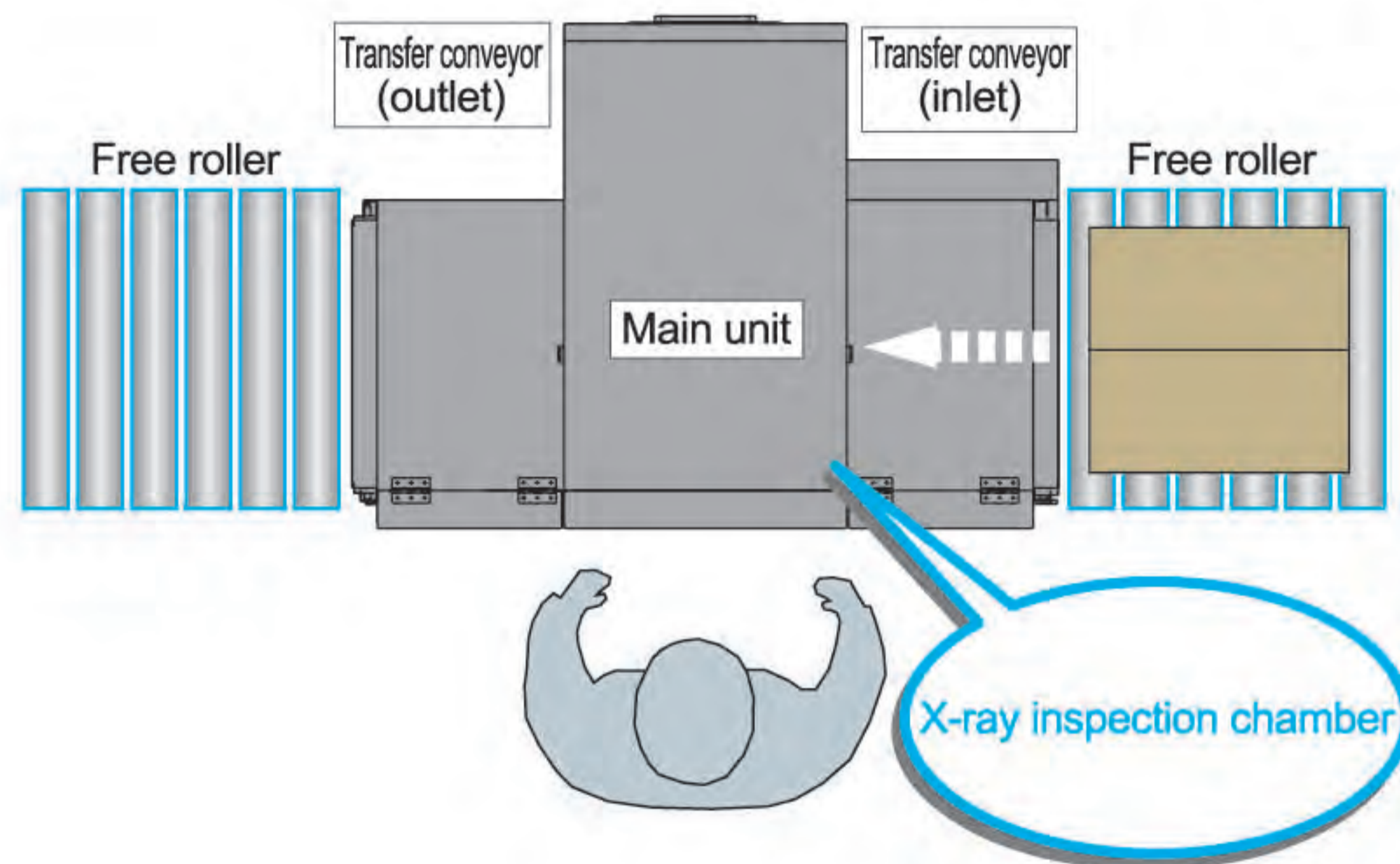


SX2-69106D



## Inspection example

Inspection area is wide. Large case can be directly passed through the system.



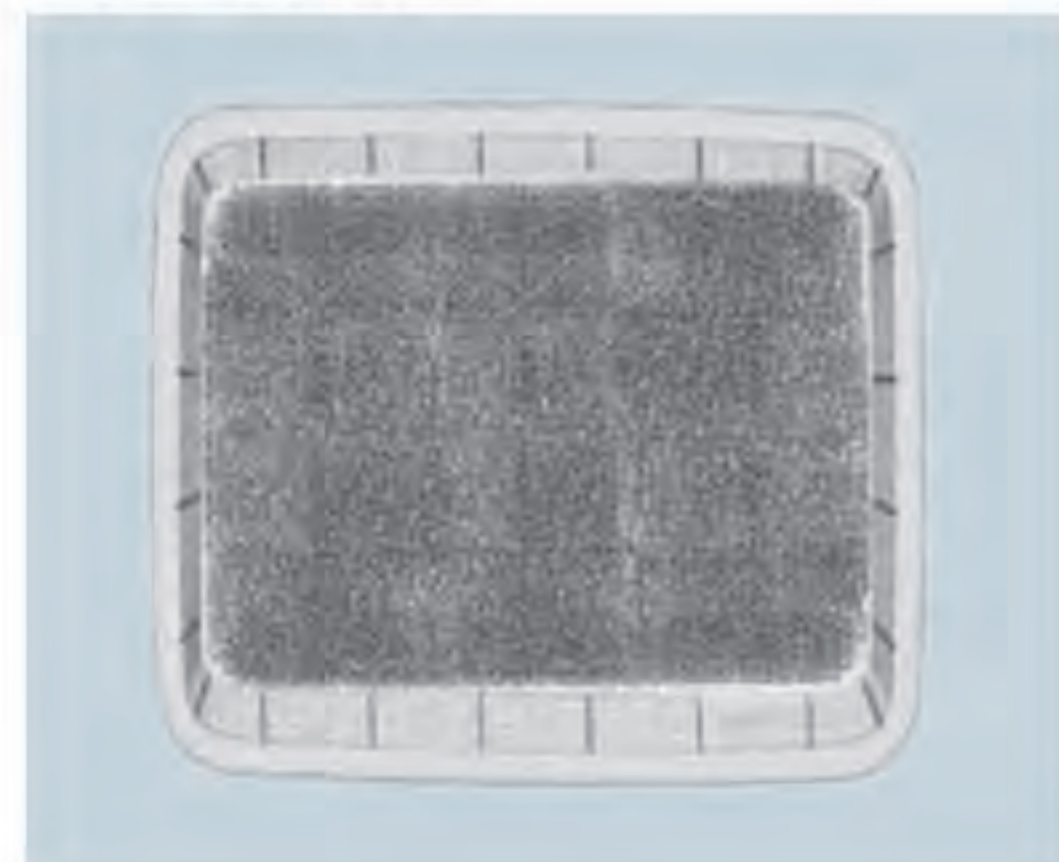
## Inspection images

Even large products can be inspected with clear images.

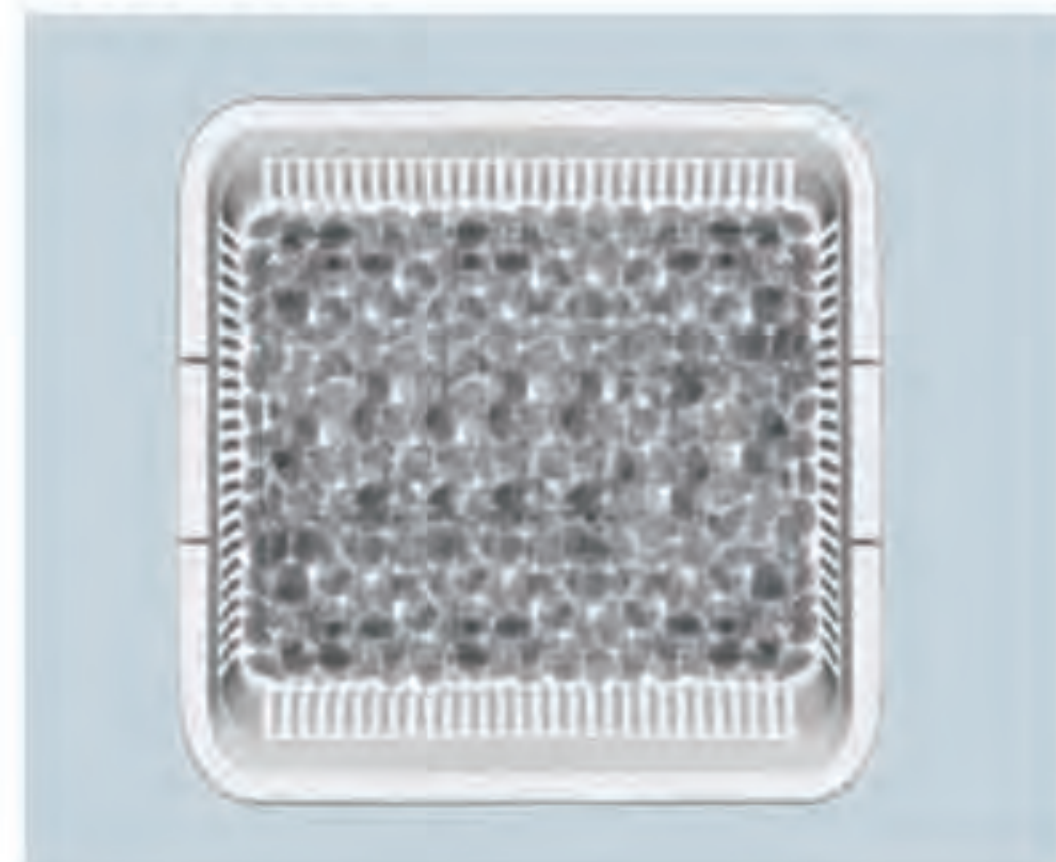
Rice in container



Bean in basket



Nut in basket



## Applicable to inspection of large products

The system is suitable for inspection of products packed in large box, products packed in bag, and cloth rags as shown below.

Products in large box



Products packed in large bag

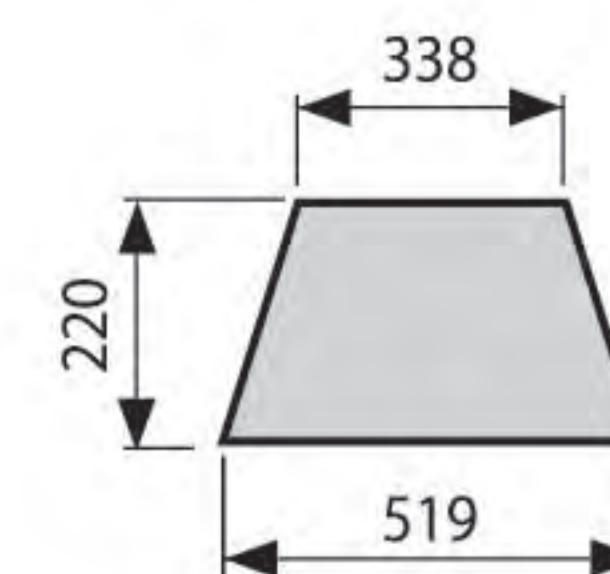


Products in food tray

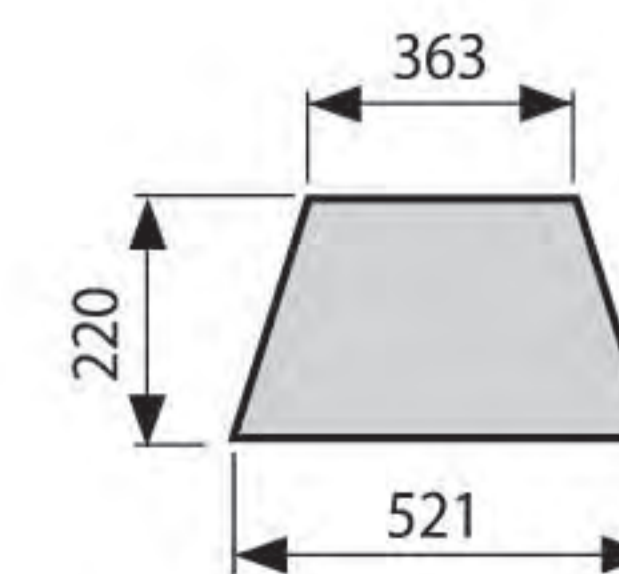


## Inspectable range

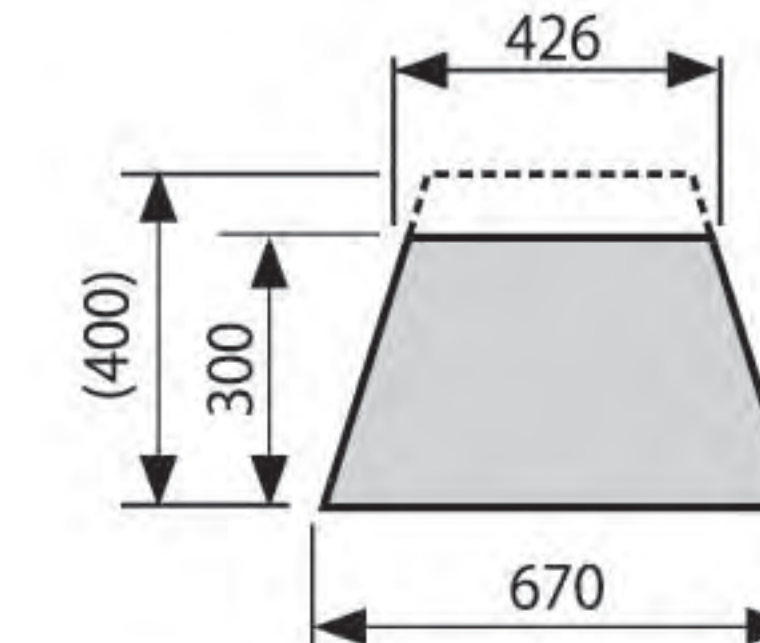
SX2-53106W



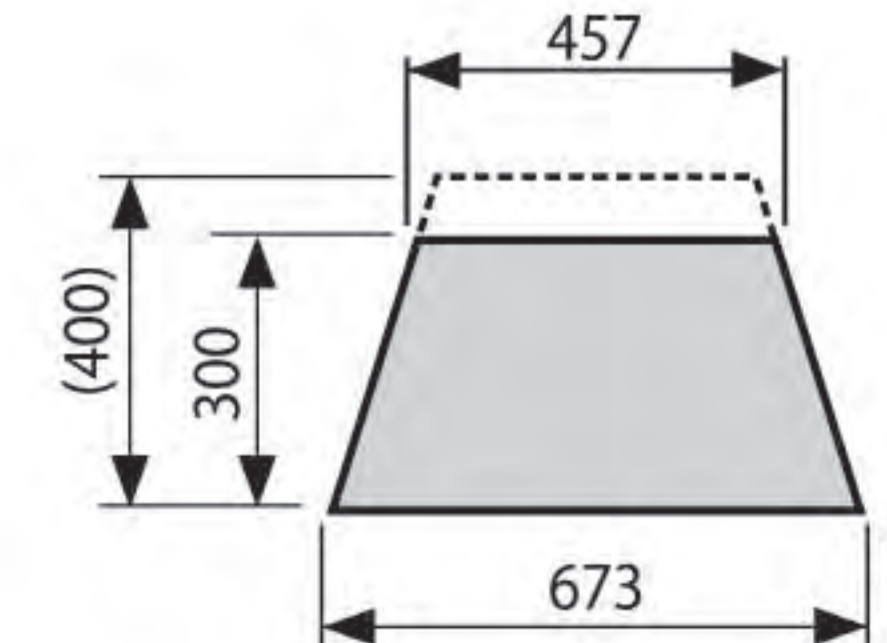
SX2-5376W



SX2-69106D



SX2-6976D



Unit:mm

\* Parenthesized values are for option unit.

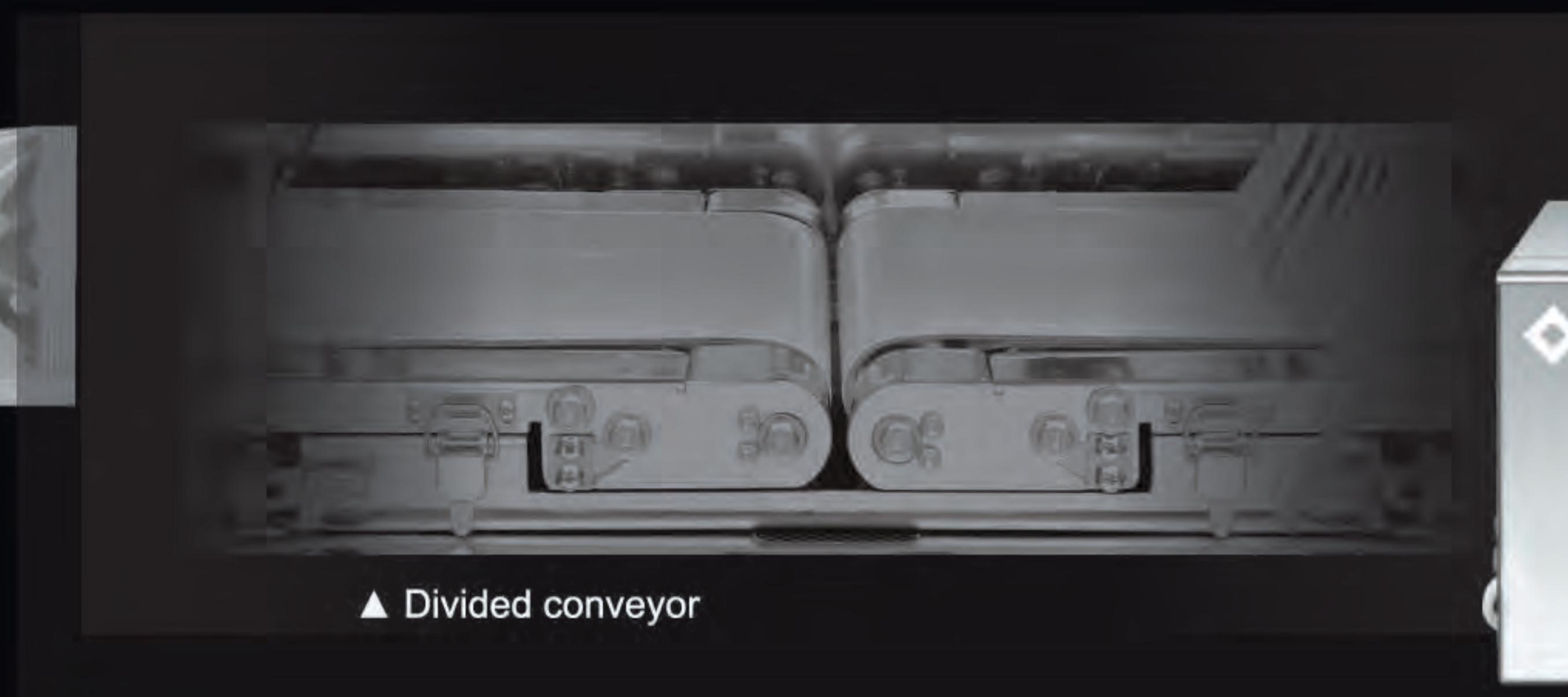
# Continuously-packaged product inspection

Model for continuously-packaged product SXP-1354W



# High sensitivity X-ray inspection system

High sensitivity model SX2-2154W / SX2-3474W

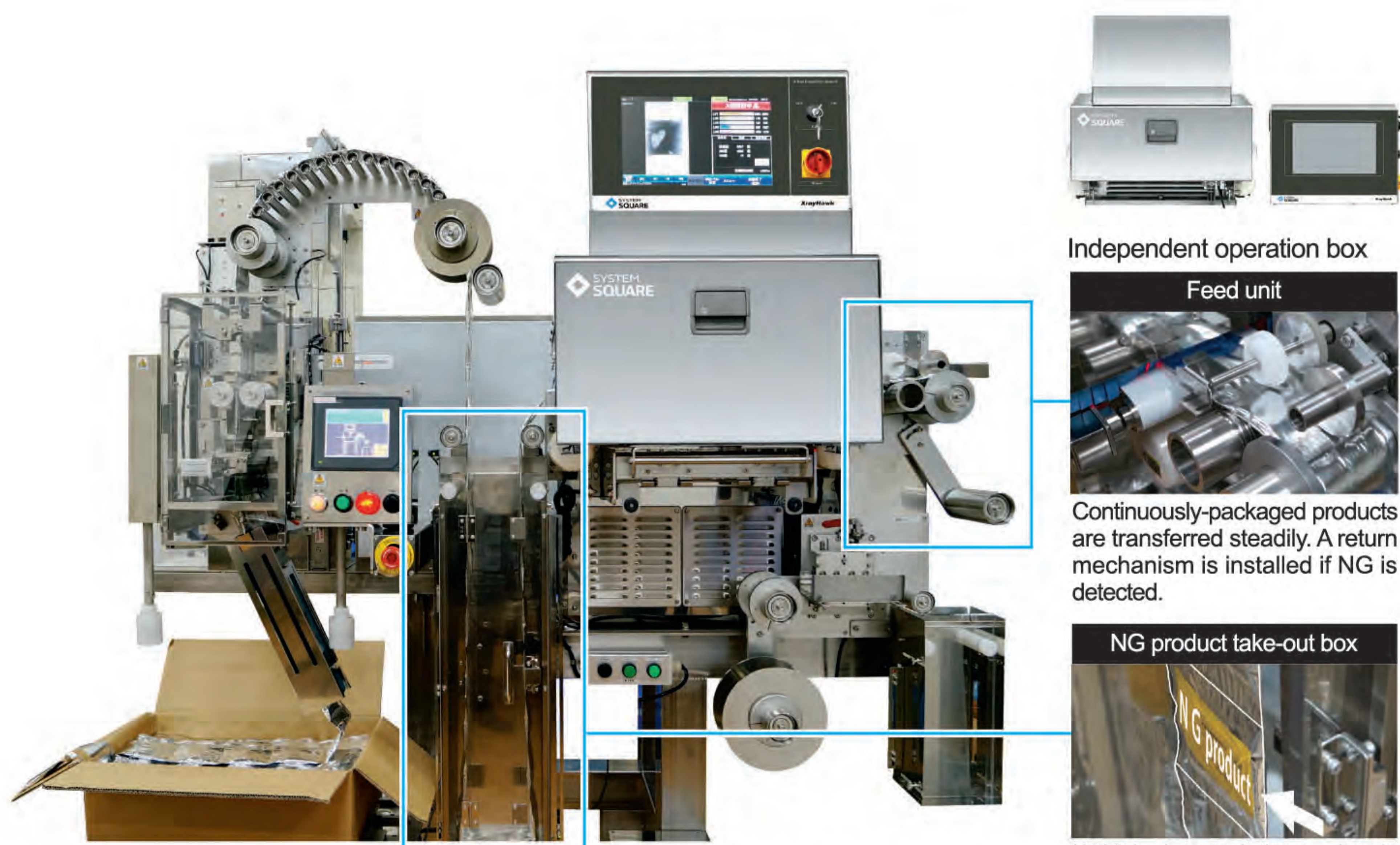


▲ Divided conveyer



## Features of continuously-packaged product inspection system

100%-inspection of powder particles such as soup, liquid such as sauce, desiccant, or oxygen scavenger in the continuously-packaged status can be performed. Foreign object, weight, and jam are inspected at the same time. A re-inspection system that operates if NG is detected is incorporated. The system is applicable to high-speed line after filling machine.



(Example of space-saving by incorporating an automatic holding machine. Single X-ray inspection system + feed unit type are also possible.)



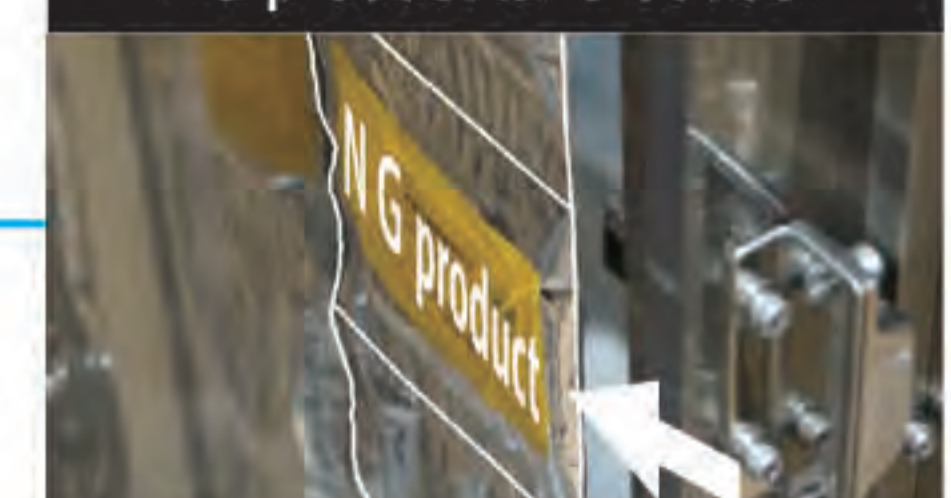
Independent operation box

Feed unit



Continuously-packaged products are transferred steadily. A return mechanism is installed if NG is detected.

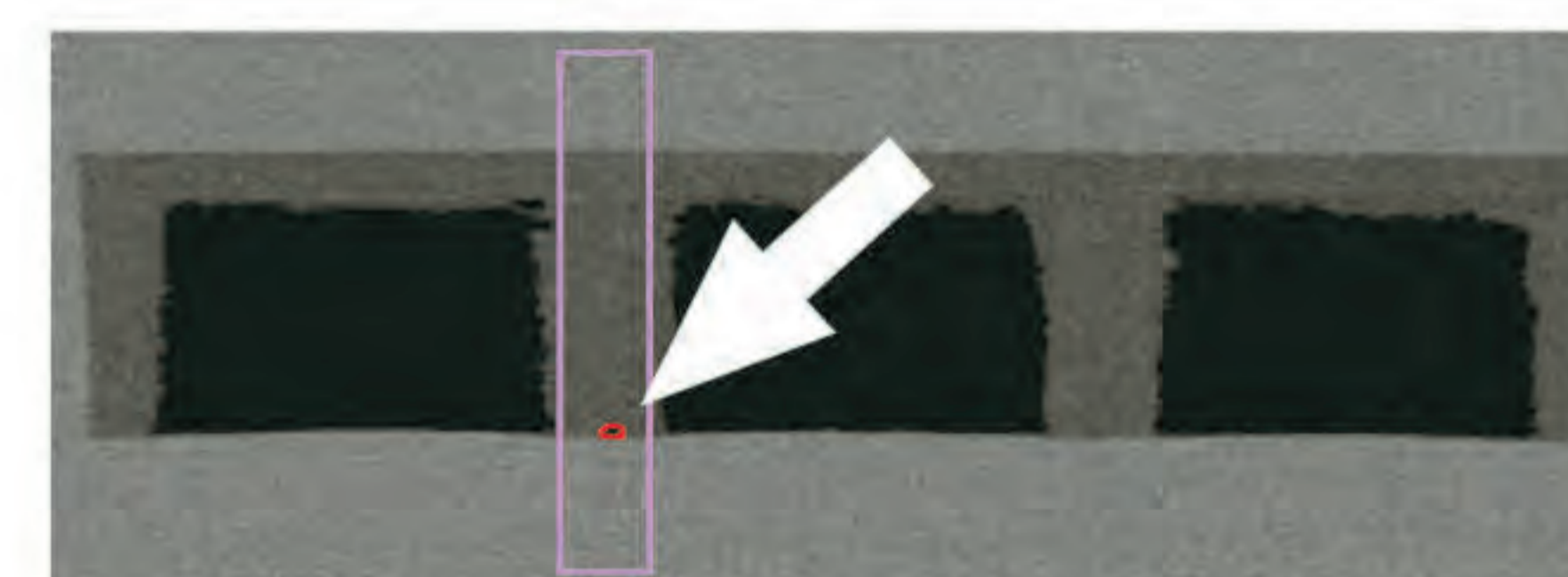
NG product take-out box



If NG is detected, the product is stopped at a specified position, allowing take-out and reconnection.

## High sensitivity inspection for thin products

X-ray output suitable for thin product characteristics, low leak measures, divided conveyor are provided to ensure the inspection with high sensitivity.

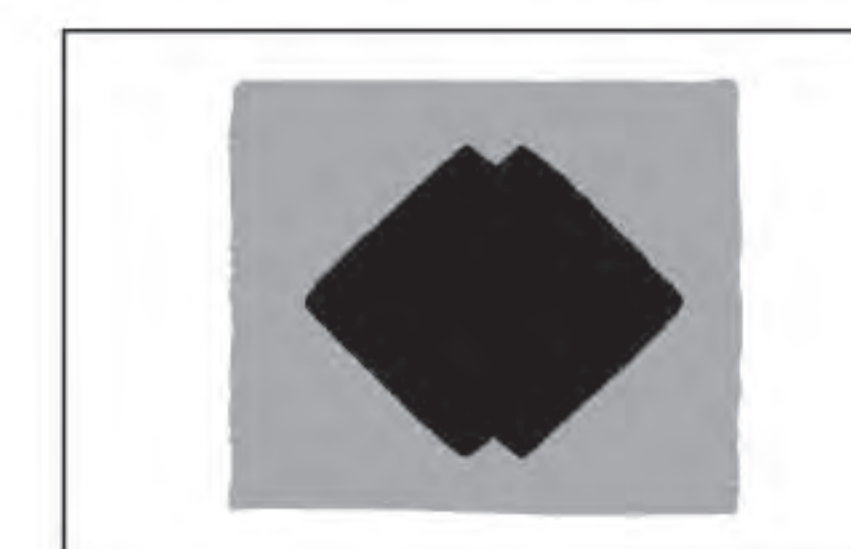


Example of jam inspection of continuously-packaged product

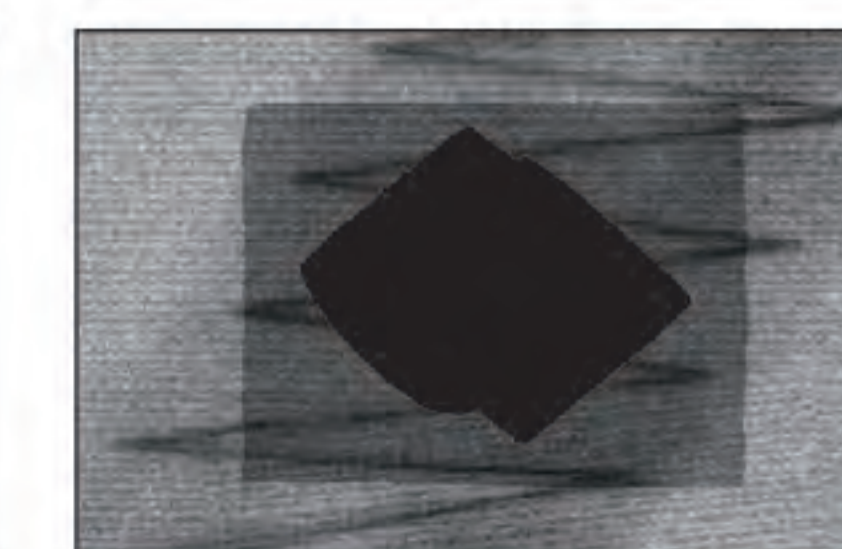


Example of jam inspection of individually-packaged thin product

## Clean images and high sensitivity



**Divided conveyor**  
The system obtains clean images without being adversely affected by the transport belt. This ensures less incorrect detection and stable high sensitivity.

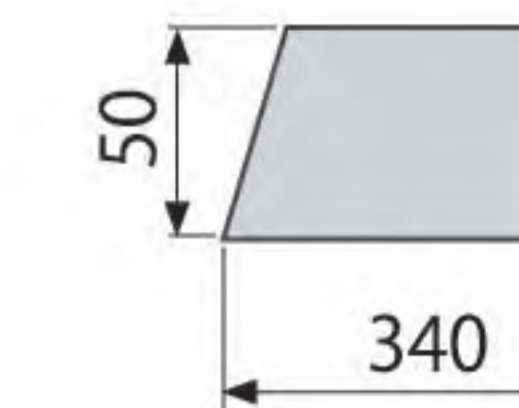
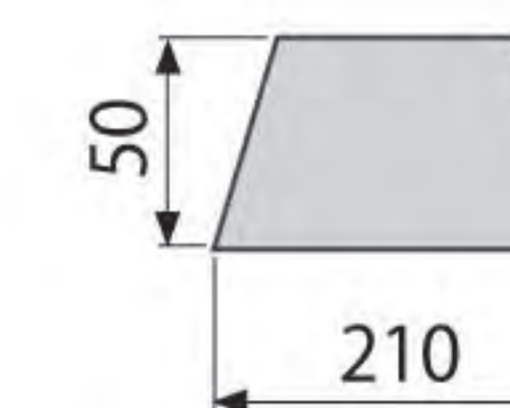


**Conventional X-ray inspection system**  
As the transport belt is projected, the images are unclear and the sensitivity becomes poor.

## Inspectable range

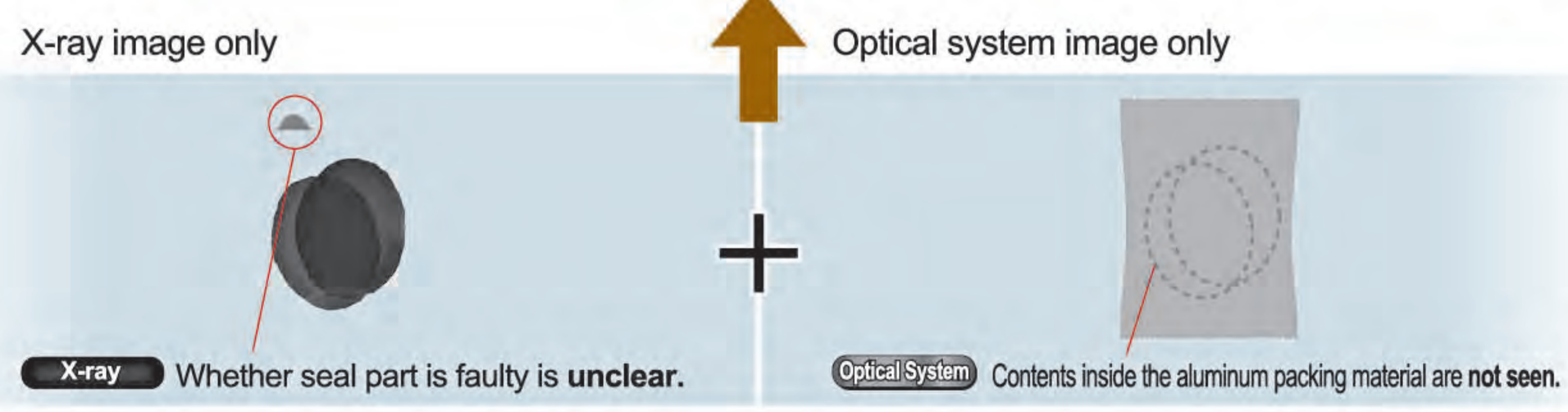
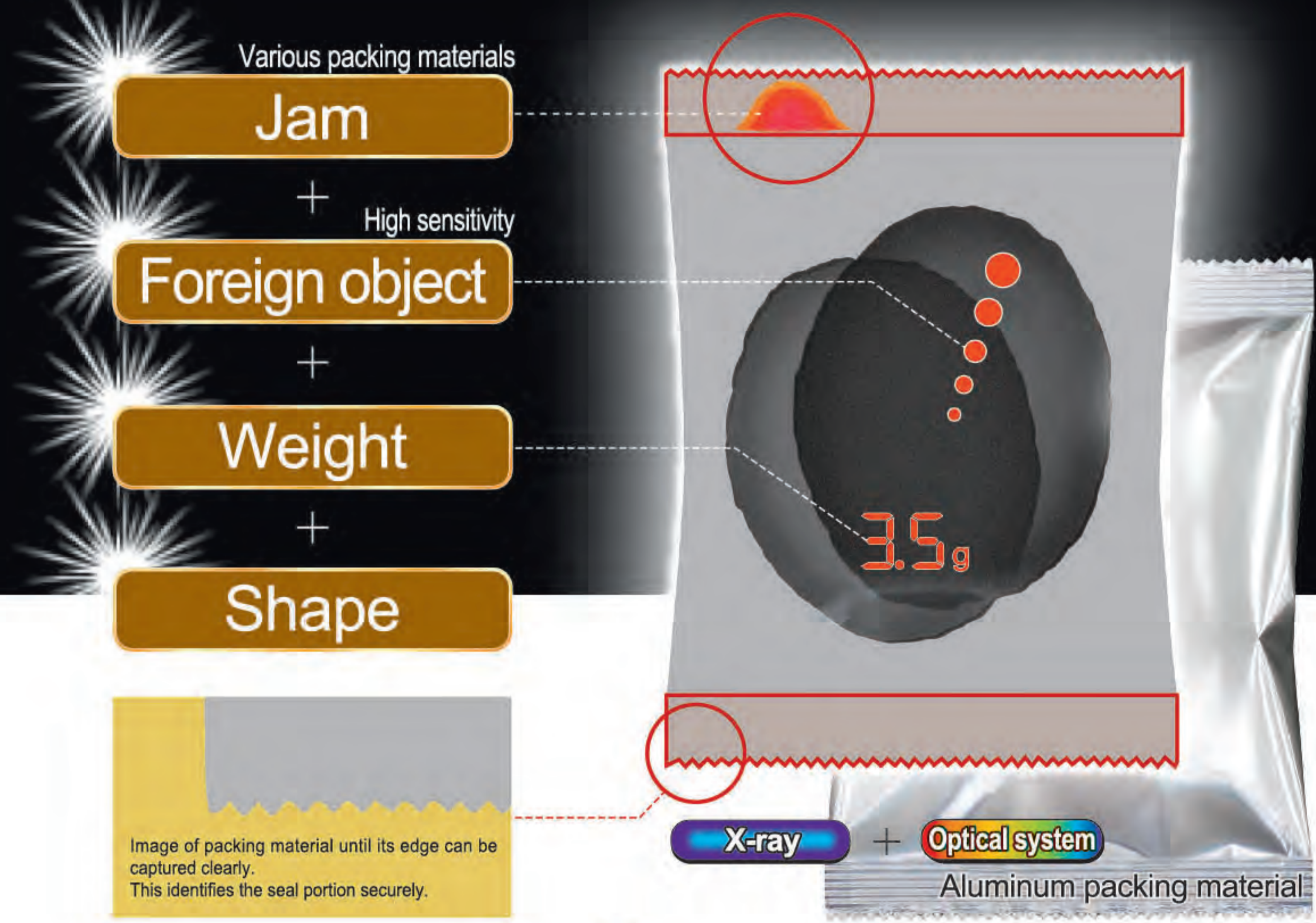
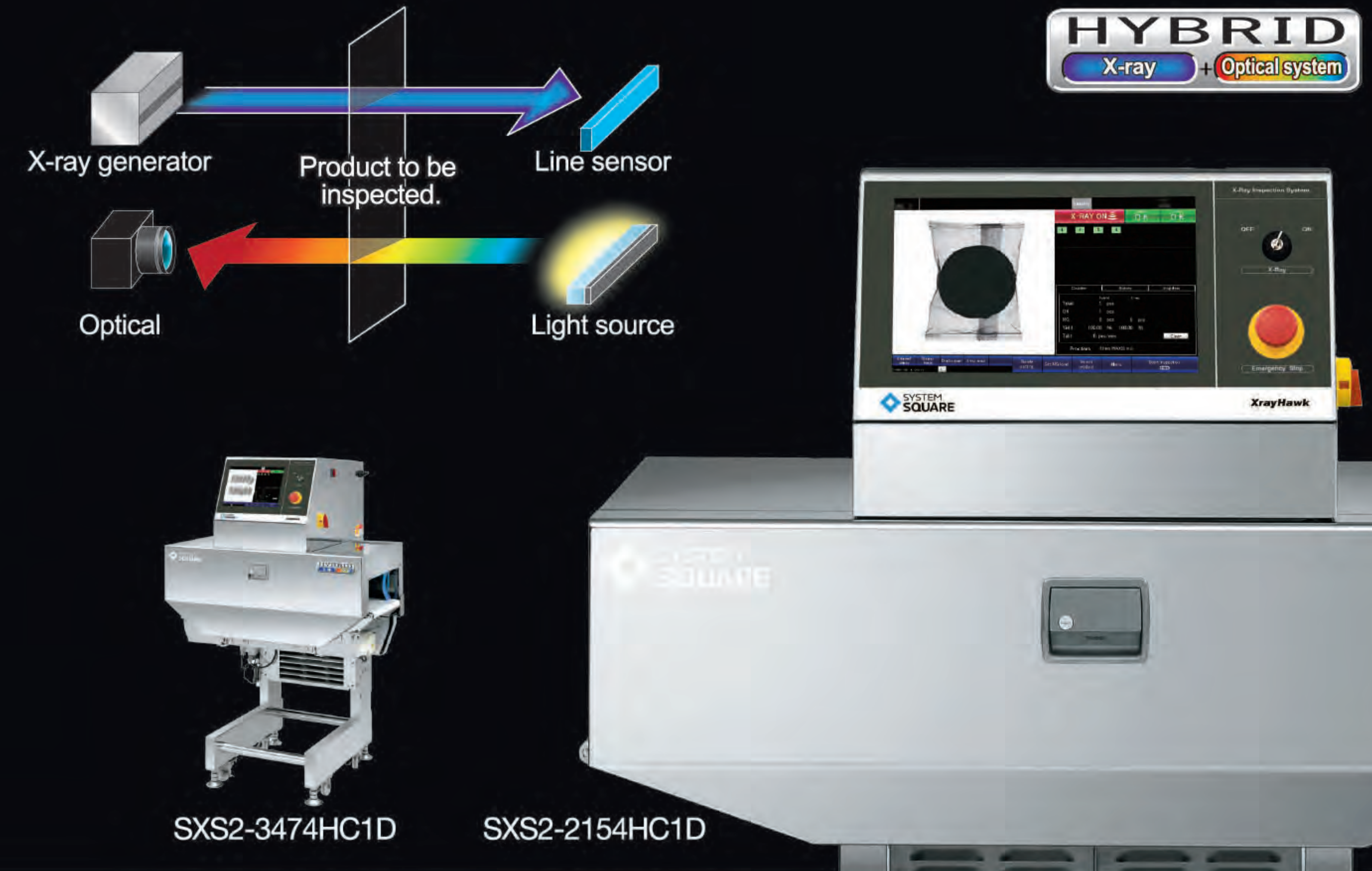
SX2-2154W

SX2-3474W



# X-ray Seal Inspection System

For packaged products SXS2-2154HC1D / SXS2-3474HC1D

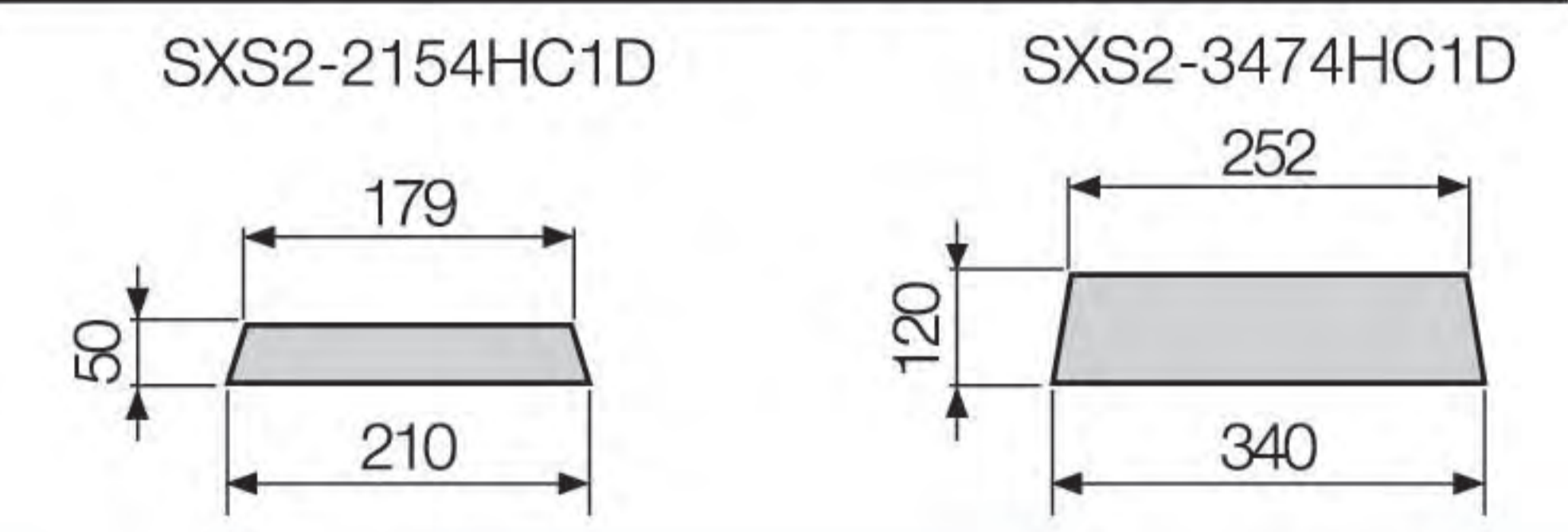


- All of jam, foreign object, weight, and shape are inspected with high sensitivity!
- Jam inspection of various packing materials including aluminum packing material is achieved!
- Packing seal part can be identified securely!

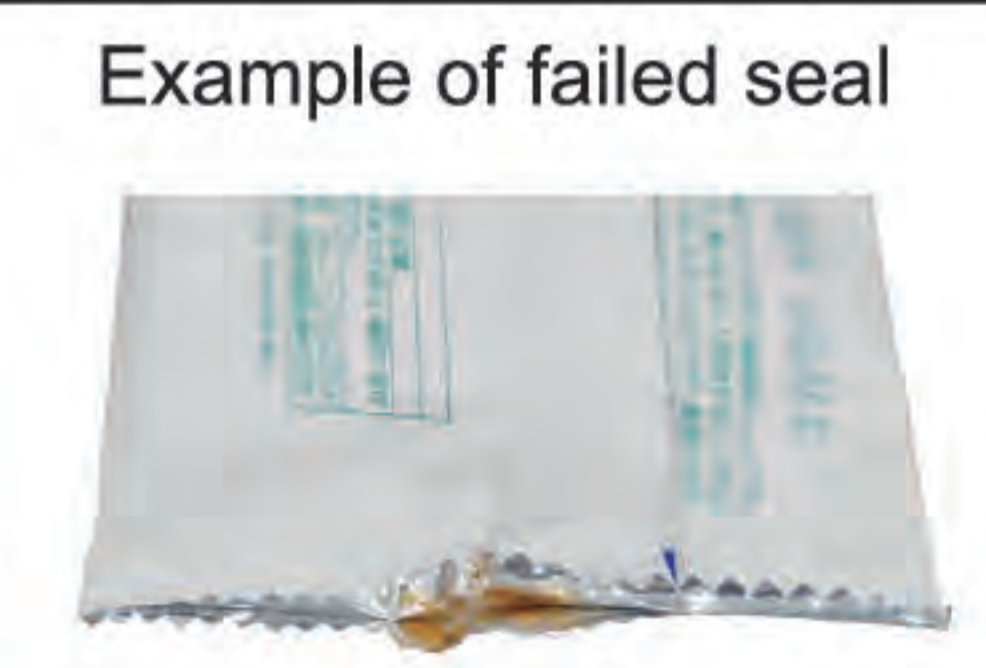
## Differences in sensitivity by packing bag

	Aluminum deposition			Transparent packing material		
	Jam	Foreign object	Weight	Jam	Foreign object	Weight
X-ray seal inspection system (SXS2) X-ray + Optical system	○	○	○	○	○	○
X-ray inspection system (SX2) X-ray	△	○	○	×	○	○
Seal inspection system (SLS) Optical System	×	×	×	○	×	×

## Inspectable range



## Example of seal inspection



Thermoforming package



Tray package



Flat pouch package



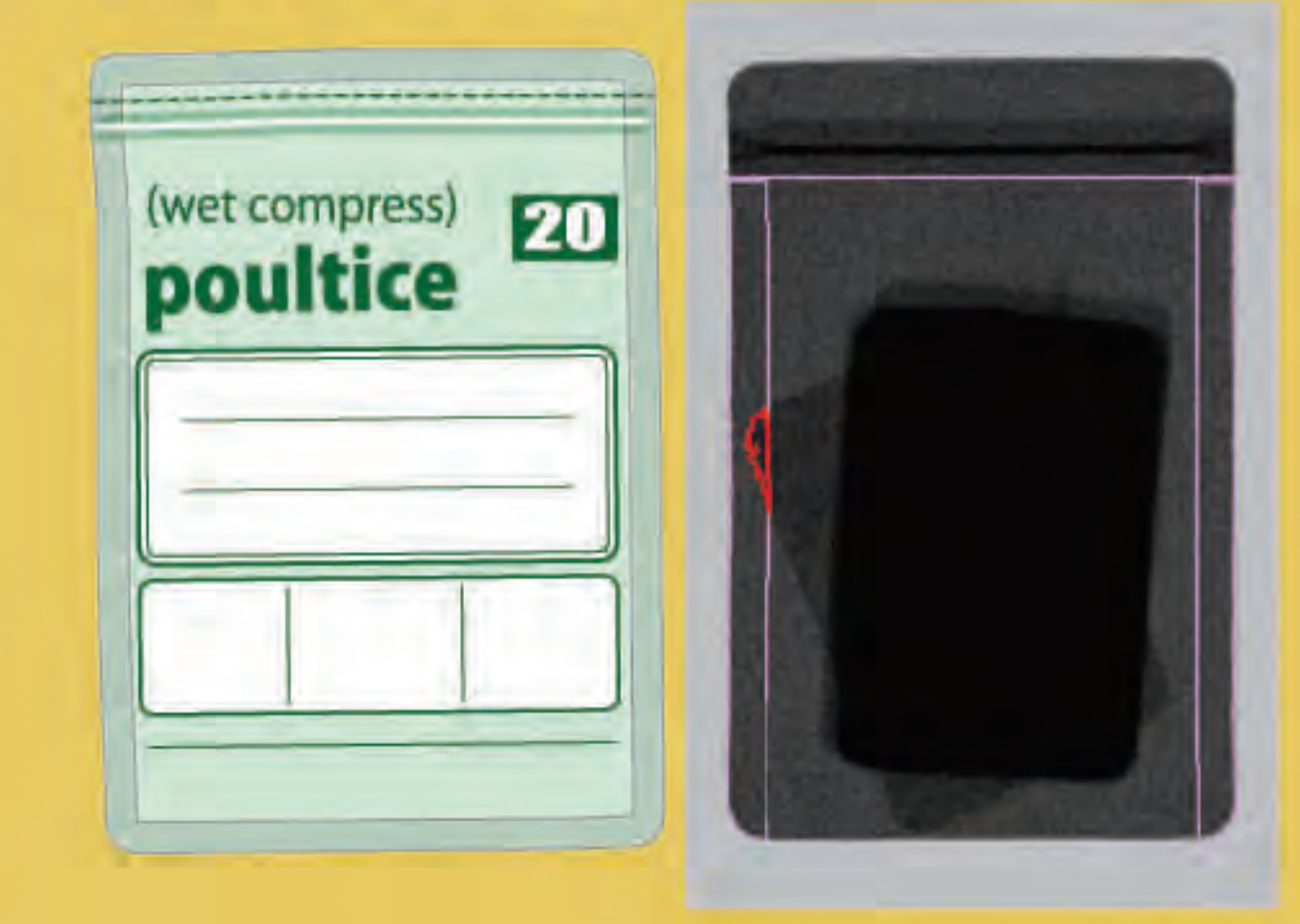
Pillow package



Pillow package

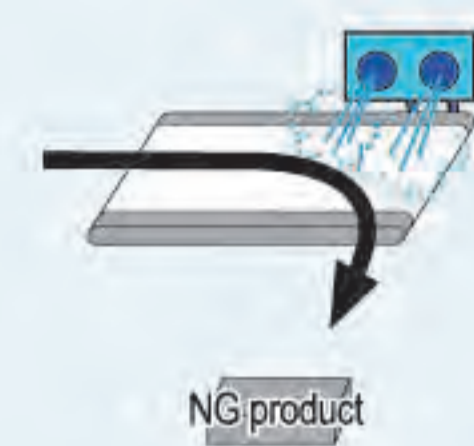
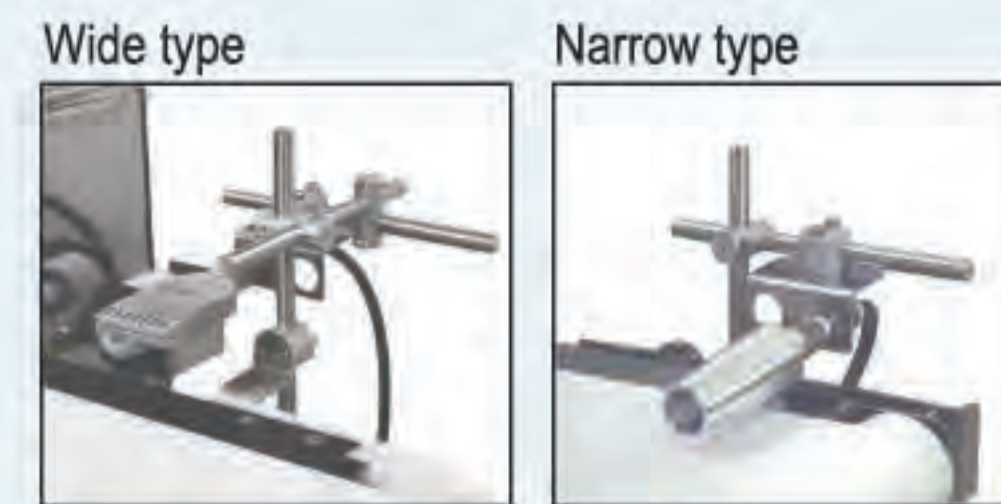


Chuck package



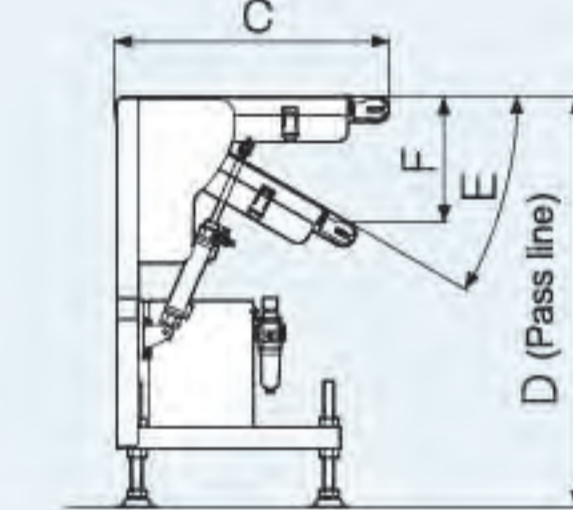
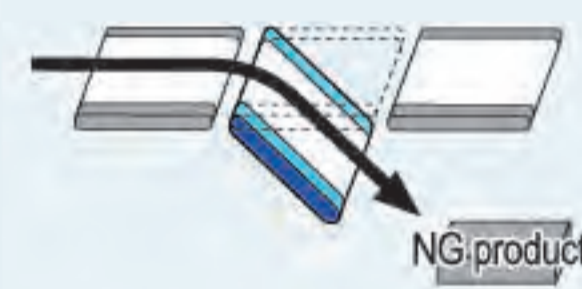
# Sorting machines

## Air jet system



Model	AR001
Sorting direction	2 directions
Transport weight	0.3kg at Max. *
Compressed air source	0.5Mpa - 0.85Mpa
Air consumption	16L/time (ANR)
Weight	3kg

## Dropout system (with belt)



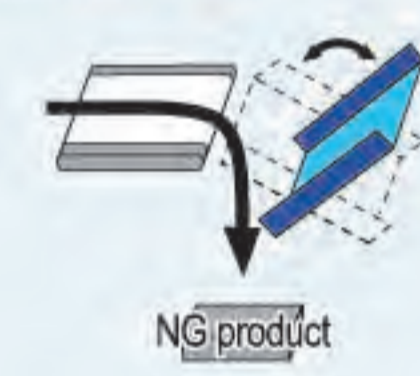
Model	DV250W	DV400BW	DV540BW
A	250mm	400mm	540mm
B	350mm	500mm	730mm
C	350mm	500mm	650mm
D	750±50mm	750±50mm	750±50mm
E	25°	30°	24.1°
F	133mm	230mm	253mm

Model	DV250W	DV400BW	DV540BW
Sorting direction	2 directions		
Transport weight	5kg at Max. *		
Compressed air source	0.5Mpa - 0.7Mpa		
Air consumption	1.0L/time (ANR)		
Weight	22kg	28kg	37kg
Dimension	W350xL350	W500xL500	W730xL650

## Dropout system (with chute)



### Downward



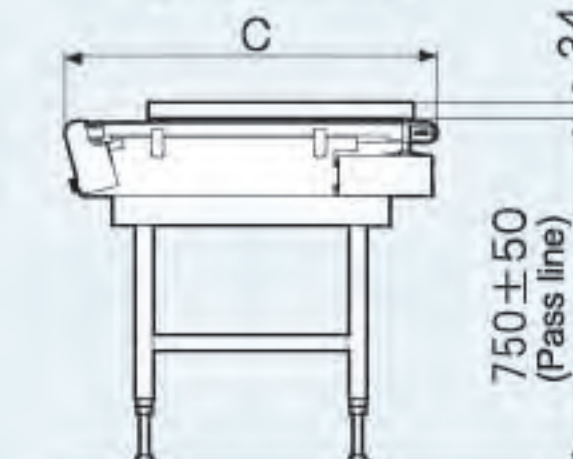
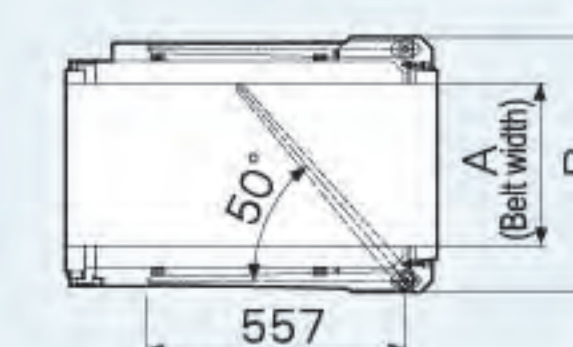
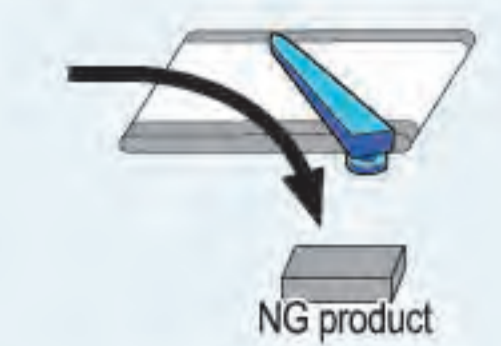
### Upward



Model	DS220W	DS350W	DS500W
Sorting direction	2 directions		
Transport weight	5kg at Max. *		
Compressed air source	0.5Mpa - 0.7Mpa		
Air consumption	0.5L/time (ANR)		
Weight	7kg	8kg	10kg

Model	US220W	US350W	US500W
Sorting direction	2 directions		
Transport weight	5kg at Max. *		
Compressed air source	0.5Mpa - 0.7Mpa		
Air consumption	0.5L/time (ANR)		
Weight	7kg	8kg	10kg

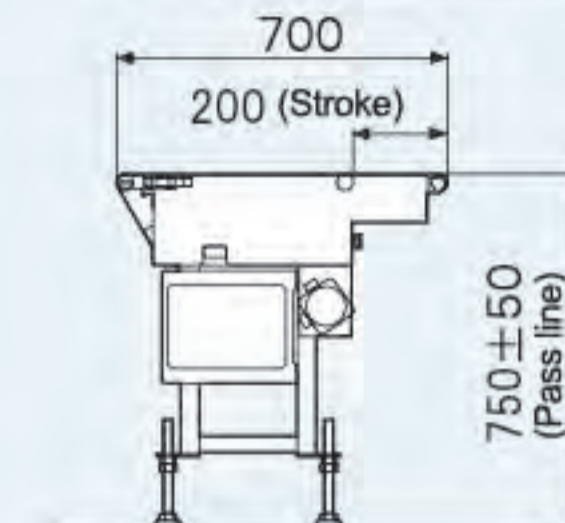
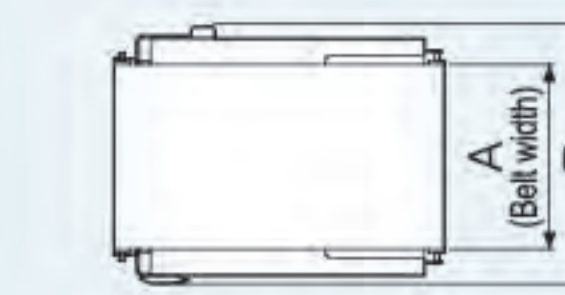
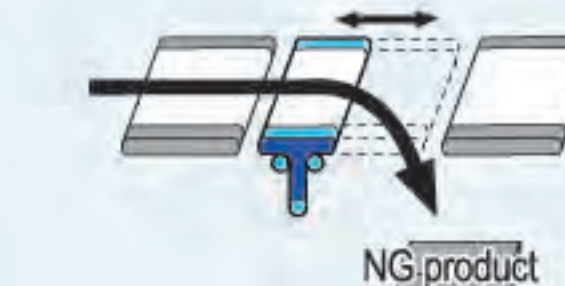
## Flipper system



Model	FL220D/W	FL350D/W
A	220mm	350mm
B	400mm	550mm
C	700mm	800mm

Model	FL220D/W	FL350D/W
Sorting direction	3 directions	
Transport weight	3kg at Max. *	
Compressed air source	0.5Mpa - 0.7Mpa	
Air consumption	0.4L/time (ANR)	
Weight	37kg	70kg
Dimension	W400xL700	W550xL800

## Shuttle conveyor



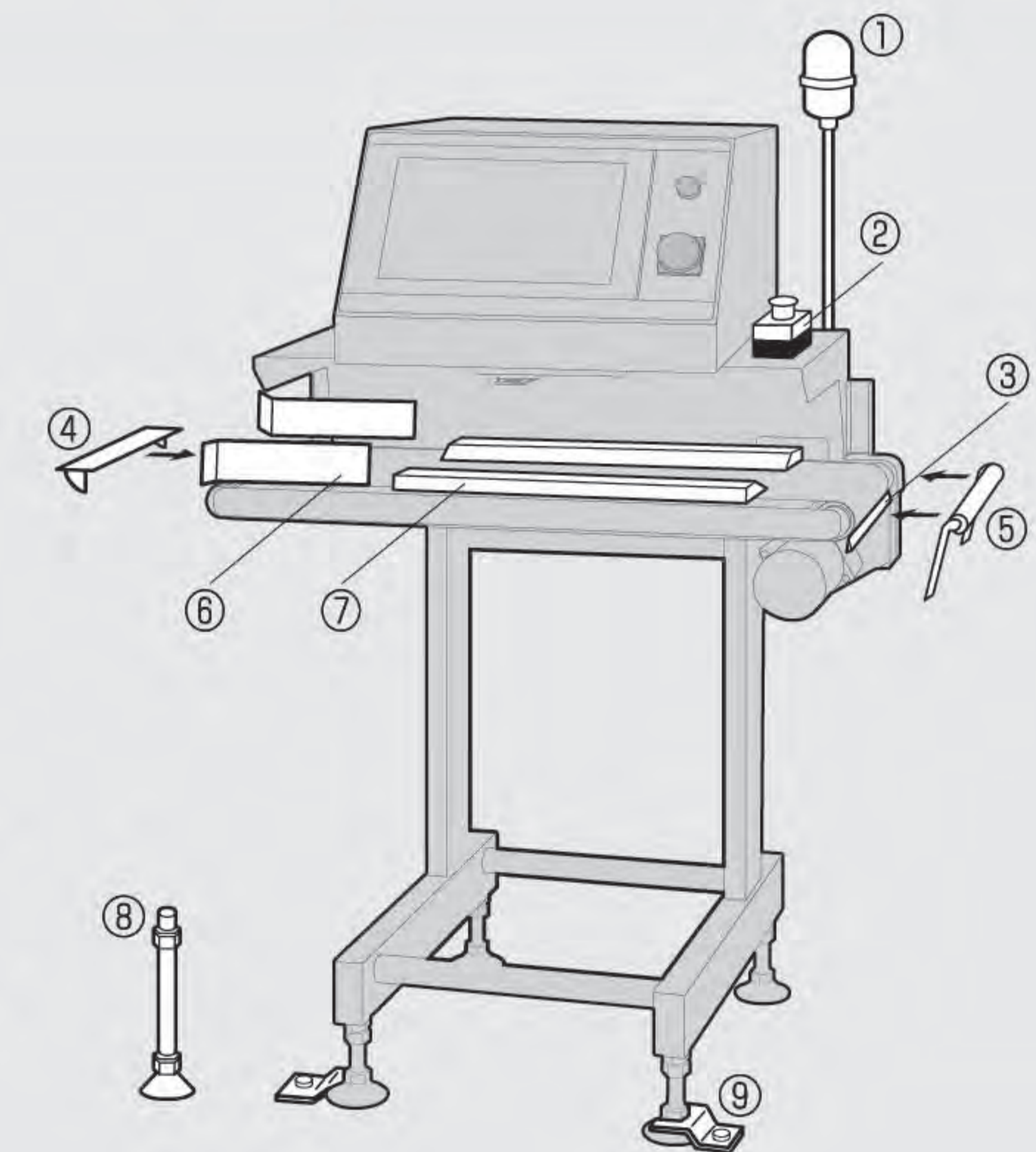
Model	SS250W	SS400W
A	240mm	390mm
B	393mm	543mm

Model	SS250W	SS400W
Sorting direction	2 directions	
Transport weight	5kg at Max.	
Compressed air source	0.5Mpa - 0.7Mpa	
Air consumption	2.8L/time (ANR)	
Weight	40kg	50kg
Dimension	W393xL700	W543xL700

W: Dimension in belt width direction, L: Dimension in transport direction (The dimensions are reference values.) Unit: mm  
\*Sorting capacity depends on product that is let passing through.

## Options

- ① Signal lamp
- ② Emergency stop switch
- ③ Scraper
- ④ Transfer plate
- ⑤ Transfer roller
- ⑥ Workpiece guide
- ⑦ Overflow prevention guide
- ⑧ Conveyor height adjuster
- ⑨ Anchor metal fittings



## Special machines

Randomly placed products (unpacked products)  
Sorting machine integrated type

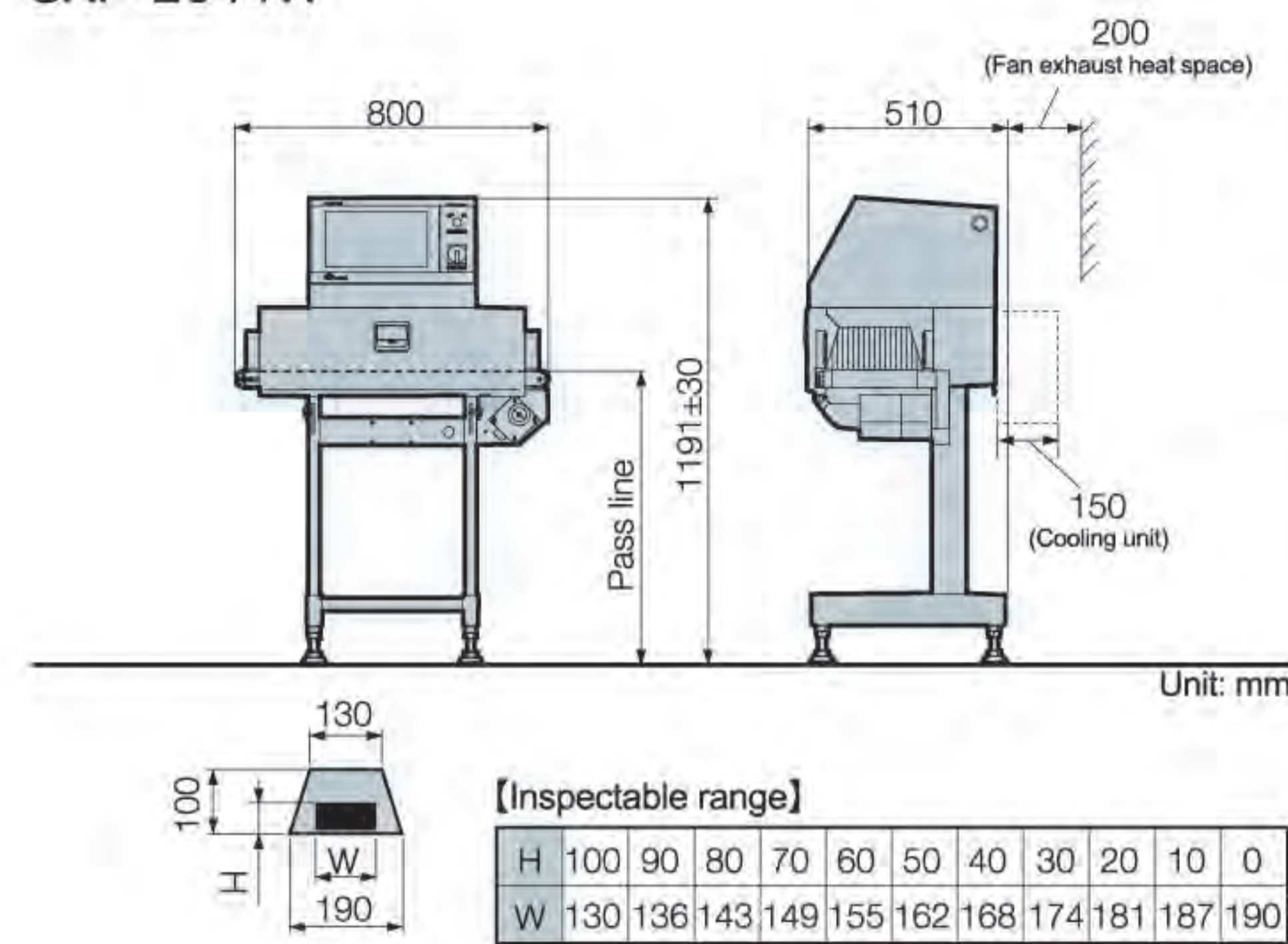


Wide width (Belt width: 1 m)  
No curtain type



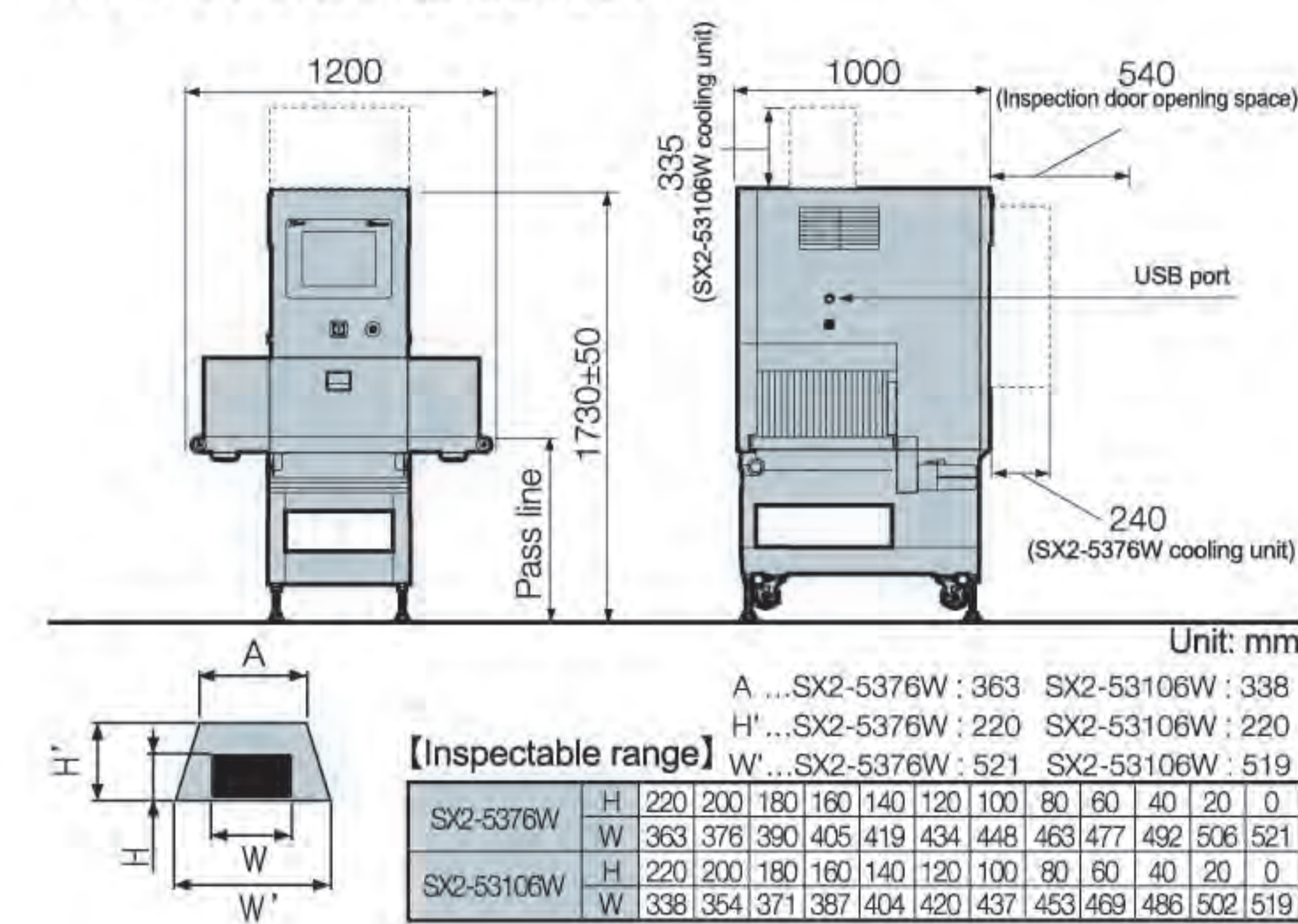
# Dimensional Drawings and Specifications

SXP-2044W



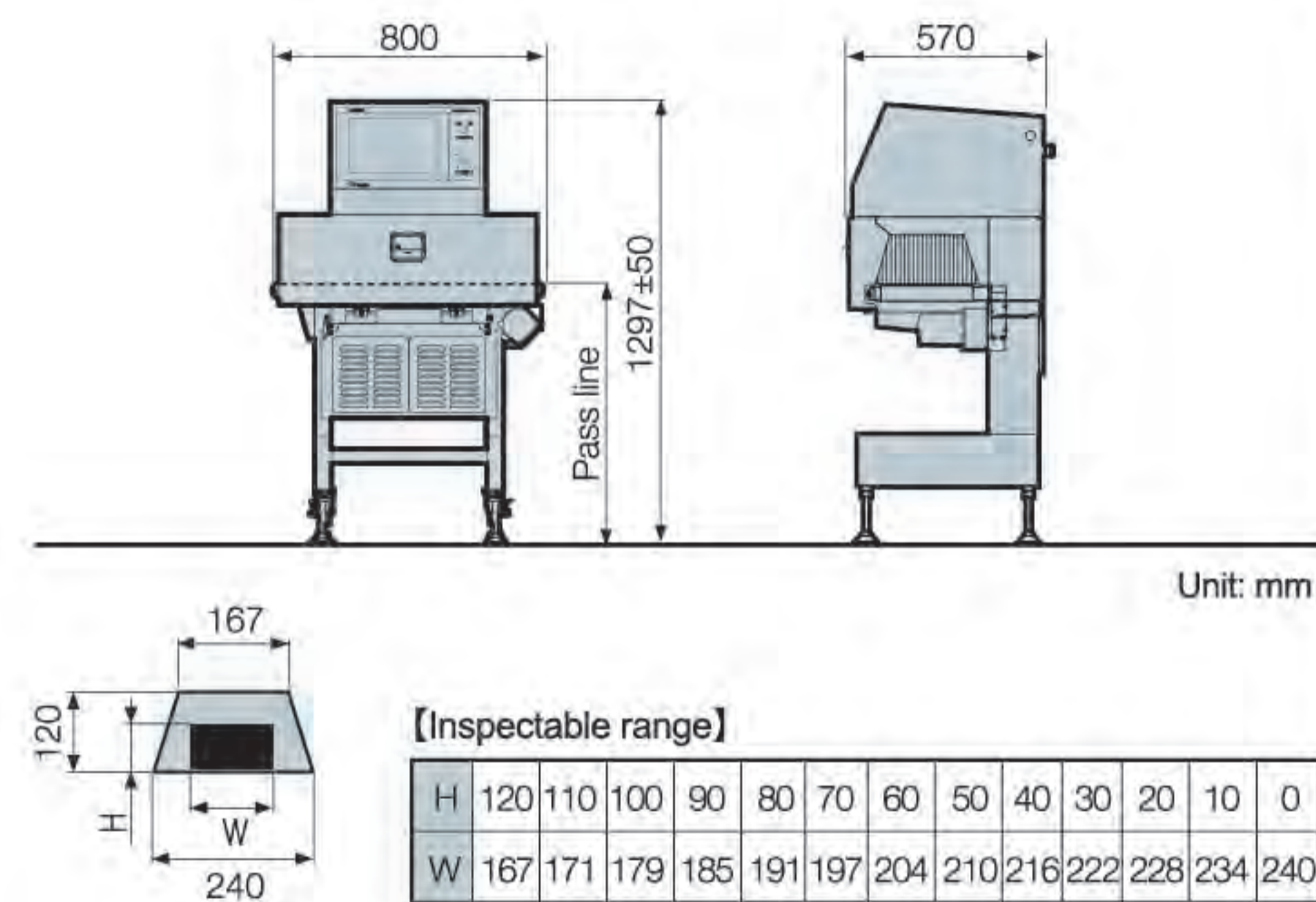
Model	SXP-2044W
Dimension of inspection product*1	Maximum passage width 190mm, Maximum passage height 100mm (no curtain type, 40mm)
Weight capacity	5kg *2
Transport belt speed	15-45m/min *3
Belt width	220mm (without meandering-less function) (220mm with meandering-less function is optional.)
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	12.1 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure (Conveyor): equivalent to IP66
Pass line	750±30mm
Max. X-ray output	Tube voltage: 40kV, Tube current: 1.5mA (Max: 60W)
Operating environment	Temperature: 0 to 37°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	80kg
Main power supply	AC100V±10%/AC200V±10%, 550VA, 50/60Hz *6

SX2-5376W/SX2-53106W



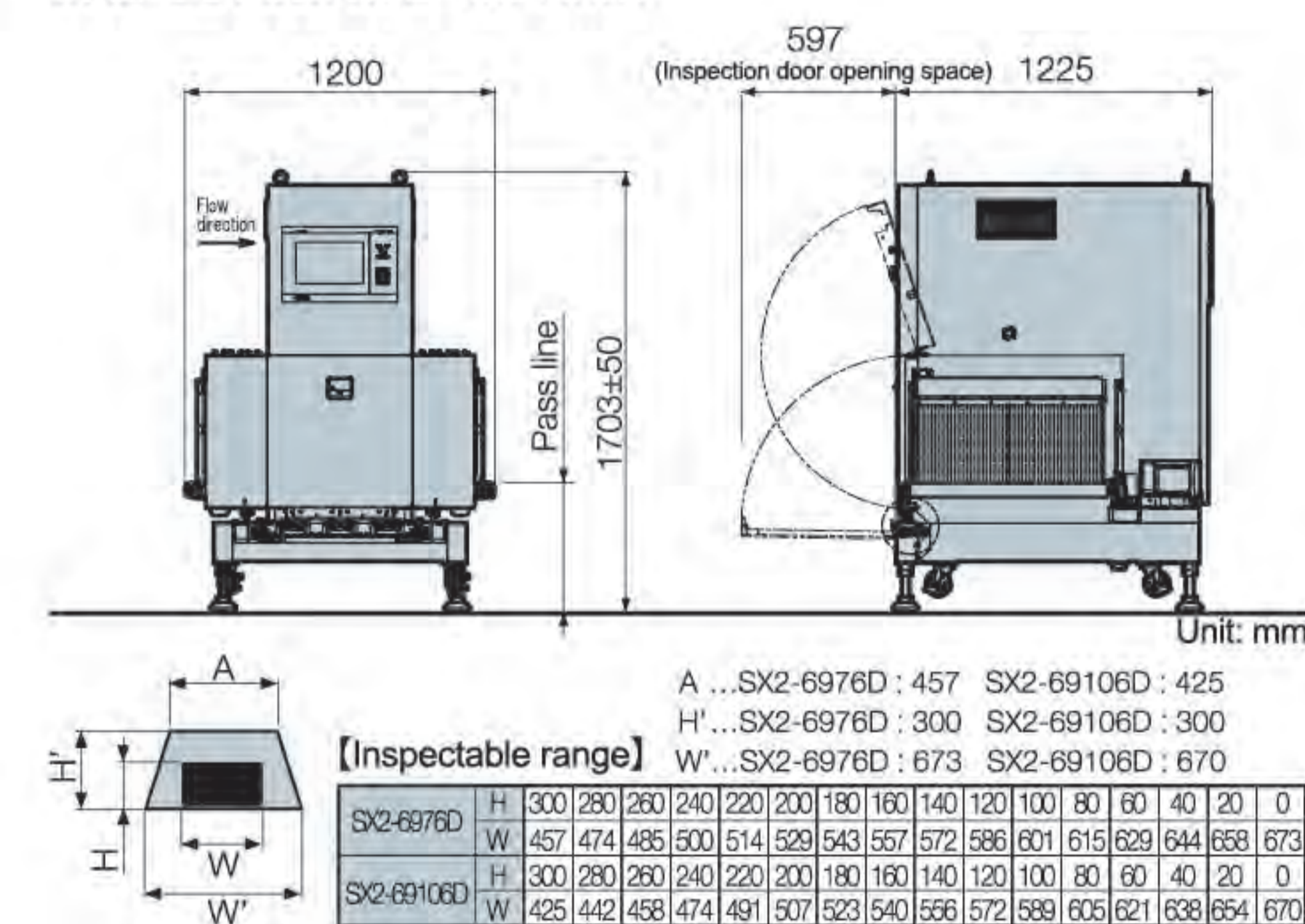
Model	SX2-5376W	SX2-53106W
Dimension of inspection product*1	Maximum passage width 521mm, Maximum passage height 220mm	Maximum passage width 519mm, Maximum passage height 220mm
Weight capacity	20kg *2	
Transport belt speed	10-30m/min *3	
Belt width	570mm	
Detection sensitivity	φ0.5mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4	
Display unit	15.6 inches-wide TFT color LCD (with touch panel)	
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure (Conveyor): equivalent to IP66	
Pass line	750±50mm	
Max. X-ray output	Tube voltage (Max.): 75kV, Tube current: 8.0mA (Max: 300W.)	Tube voltage (Max.): 100kV, Tube current: 5.0mA (Max: 300W.)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)	
Weight	530kg	
Main power supply	AC100V±10%/AC200V±10% *5, 1.5kVA, 50/60Hz *6, 7	

SX2-2554W



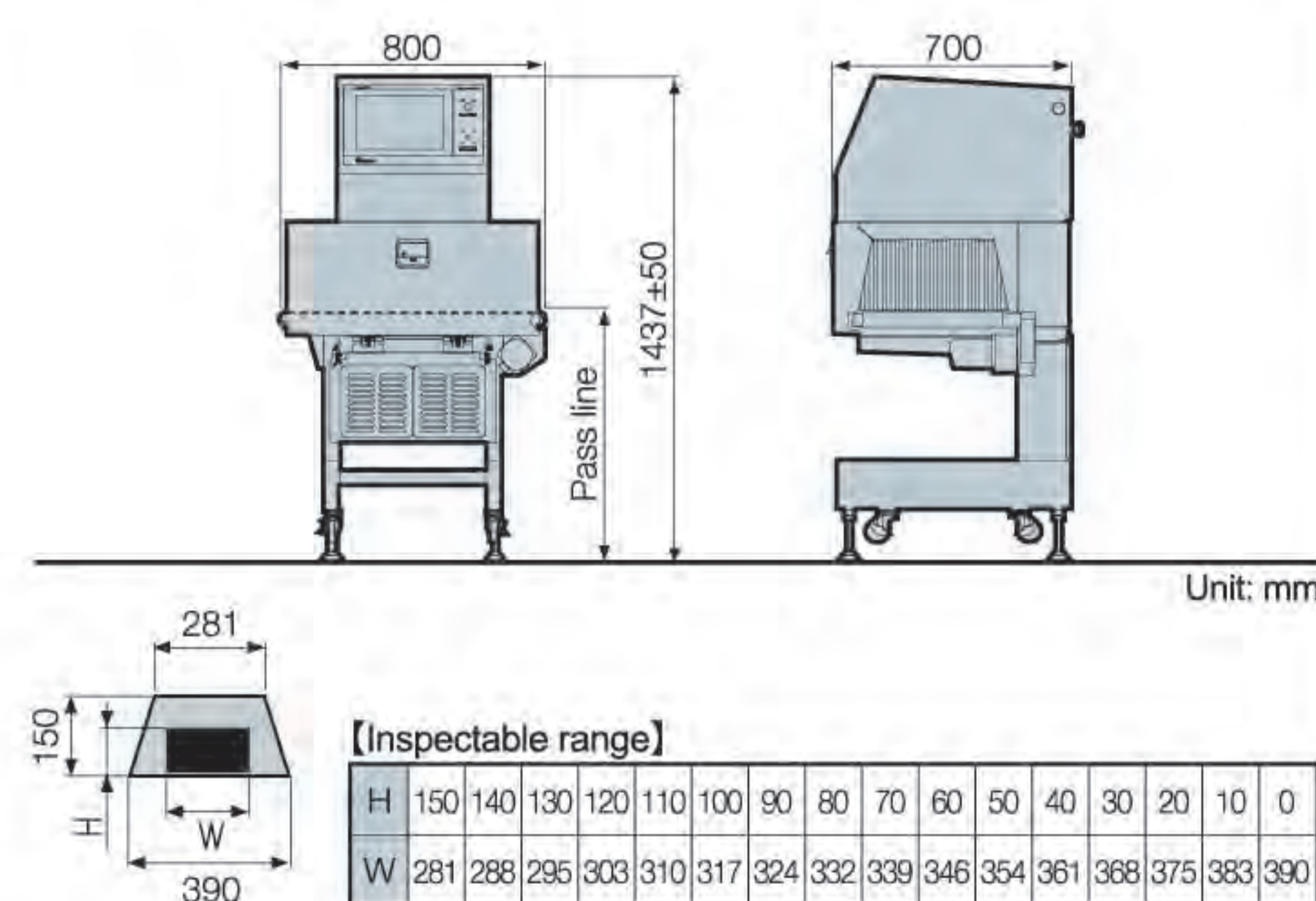
Model	SX2-2554W
Dimension of inspection product*1	Maximum passage width 240mm, Maximum passage height 120mm
Weight capacity	5kg *2
Transport belt speed	15-45m/min *3
Belt width	270mm (without meandering-less function) (270mm with meandering-less function is optional.)
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	15.6 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure: Main unit equivalent to IP66
Pass line	750±50mm
Max. X-ray output	Tube voltage: 50kV, Tube current: 5.0mA (Max: 150W)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	135kg
Main power supply	AC100V±10%/AC200V±10%, 1.0kVA, 50/60Hz

SX2-6976D/SX2-69106D



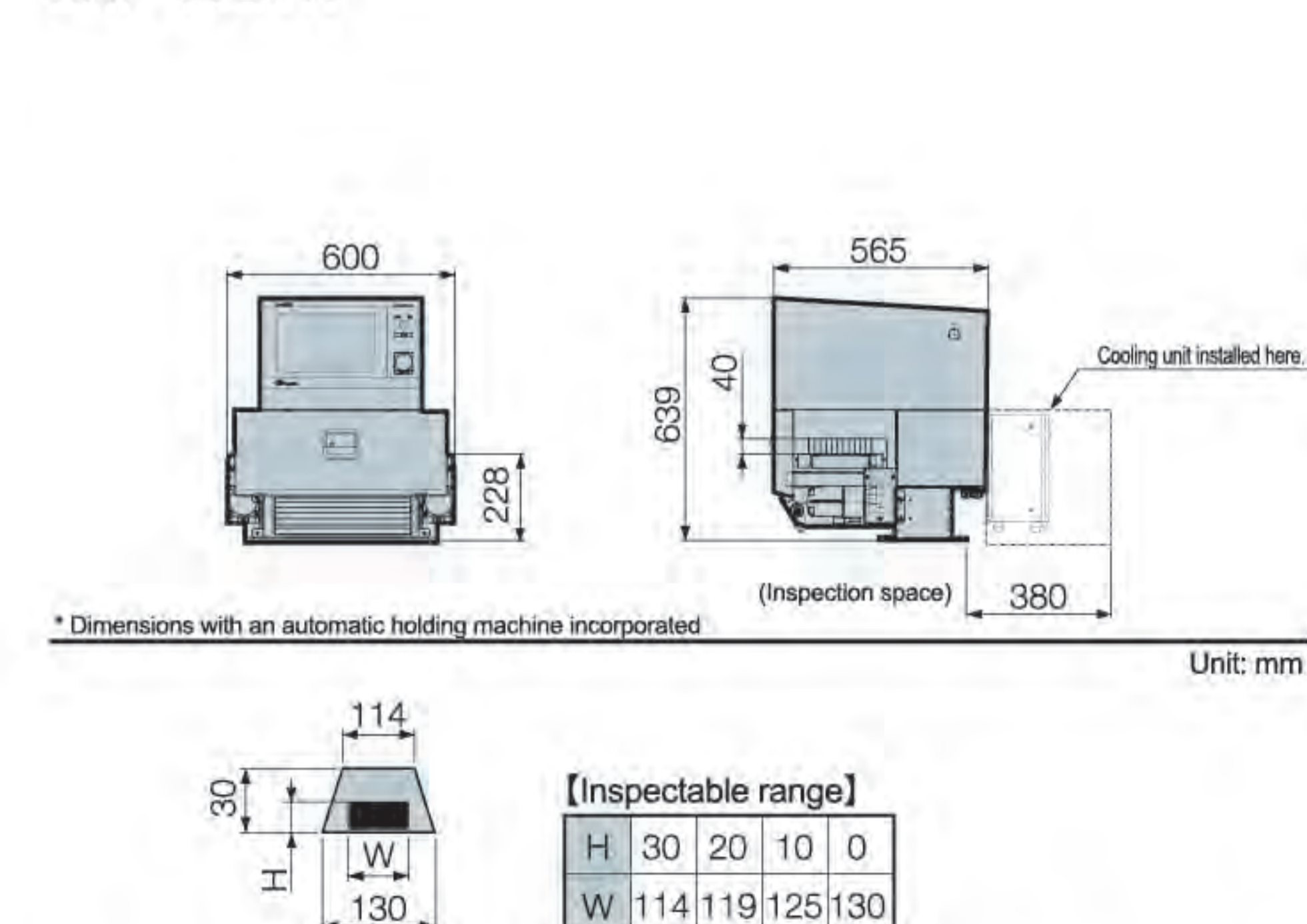
Model	SX2-6976D	SX2-69106D
Dimension of inspection product*1	Maximum passage width 673mm, Maximum passage height 300 (400)mm	Maximum passage width 670mm, Maximum passage height 300 (400)mm
Weight capacity	25kg x 2 pcs. *2	
Transport belt speed	10-30m/min *3	
Belt width	730mm	
Detection sensitivity	φ0.5mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4	
Display unit	15.6 inches-wide TFT color LCD (with touch panel)	
Structure	Main unit/Base: All-stainless (SUS304) IP4*	
Pass line	550±50mm	
Max. X-ray output	Tube voltage (Max.): 75kV, Tube current: 8.0mA (Max: 300W.)	Tube voltage (Max.): 100kV, Tube current: 5.0mA (Max: 300W.)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)	
Weight	700kg	
Main power supply	AC100V±10%/AC200V±10%, 1.5kVA, 50/60Hz *6	

SX2-4074W



Model	SX2-4074W
Dimension of inspection product*1	Maximum passage width 390mm, Maximum passage height 150mm
Weight capacity	5kg *2
Transport belt speed	15-45m/min *3
Belt width	420mm (without meandering-less function) (420mm with meandering-less function is optional.)
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	15.6 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure: Main unit equivalent to IP66
Pass line	750±50mm
Max. X-ray output	Tube voltage: 75kV, Tube current: 8.0mA (Max: 300W)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	185kg
Main power supply	AC100V±10%/AC200V±10%, 1.5kVA, 50/60Hz

SXP-1354W

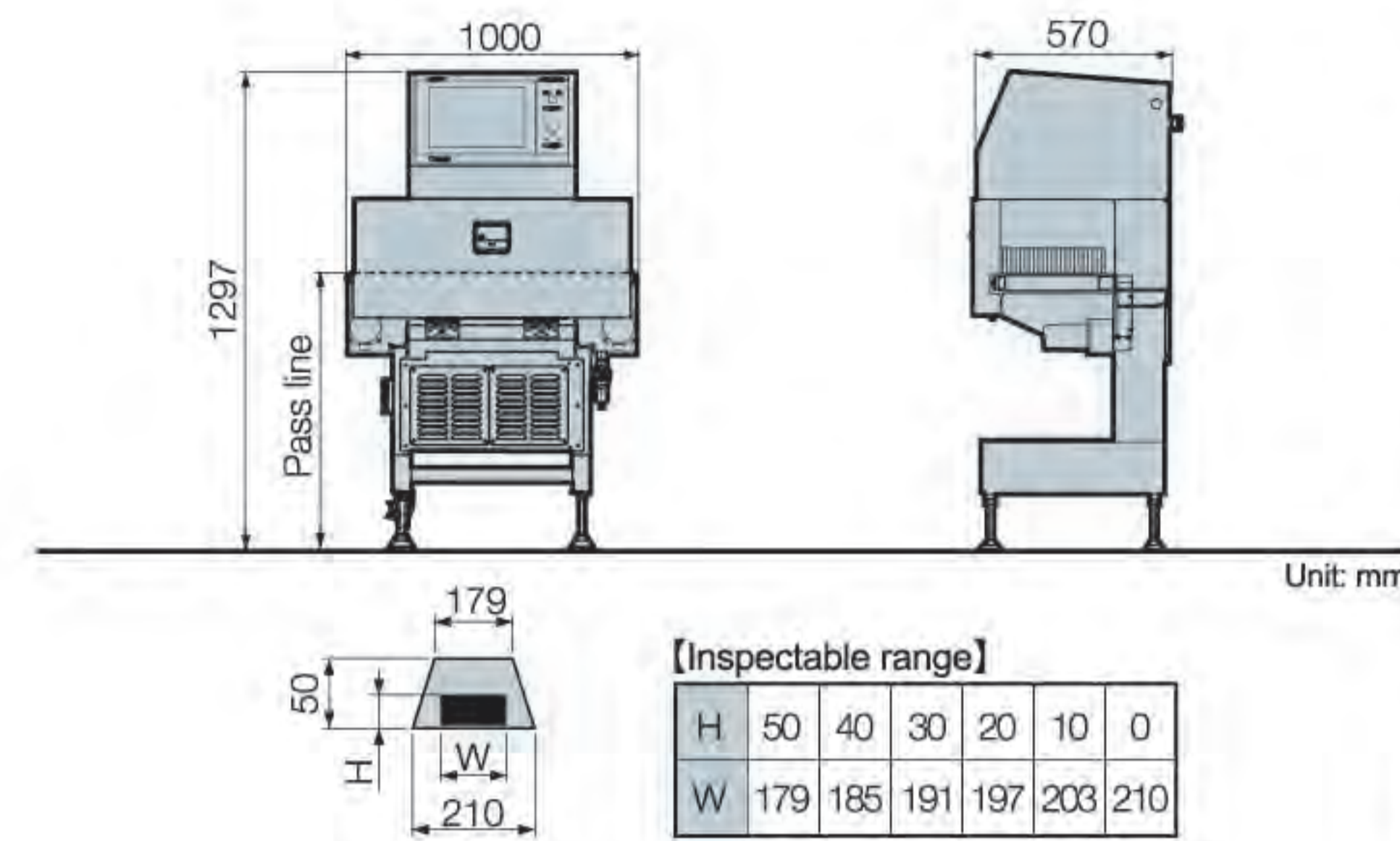


Model	SXP-1354W
Dimension of inspection product*1	Maximum passage width 130mm, Maximum passage height 30mm
Weight capacity	1kg *2
Transport belt speed	20-60m/min *3
Belt width	150mm (without meandering-less function) (150mm with meandering-less function is optional.)
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	12.1 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure: Main unit equivalent to IP66
Max. X-ray output	Tube voltage: 50kV, Tube current: 5mA (Max: 100W)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	100kg
Main power supply	AC100V±10%/AC200V±10%, 1.0kVA, 50/60Hz *6

\*1 For details, see the drawing of the possible inspection range. \*2 For other weight levels, contact System Square. \*3 For other transport speed models, contact System Square. \*4 The detection capacity may vary depending on the type of inspection product and the operating environment. \*5 AC200V±10% specifications are also available as optional specifications. \*6 Power consumption is different when cooling unit is equipped. \*7 Power supply specification is AC200V±10% when cooling unit is equipped. \* The detection sensitivity to be used actually may vary depending on the physical properties (contents and shape, etc.) of inspection product and/or the operating environment. \* The cover to prevent the X-ray leak may be required at the inlet and outlet according to the length of inspection product.

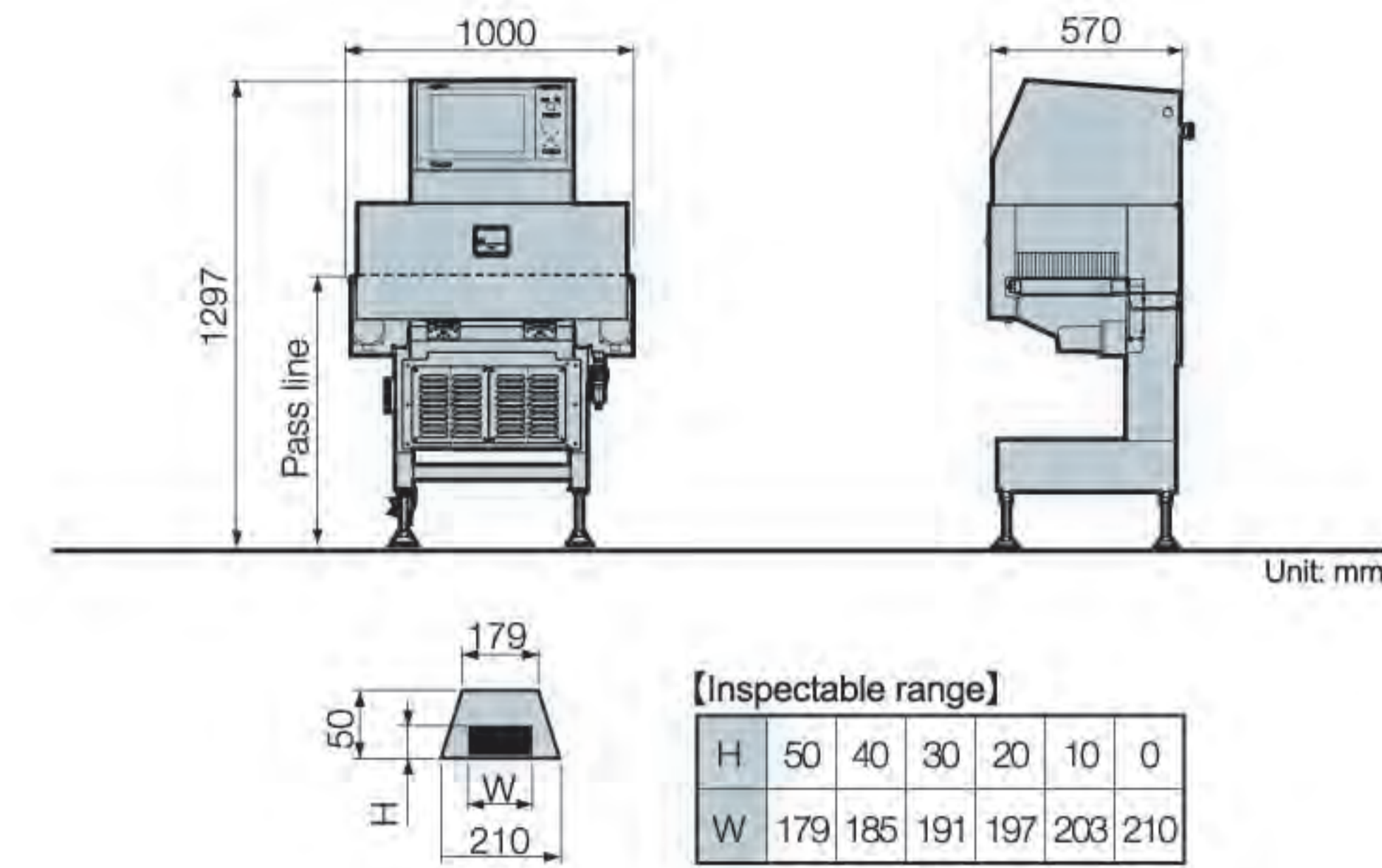
# Dimensional Drawings and Specifications

SX2-2154W



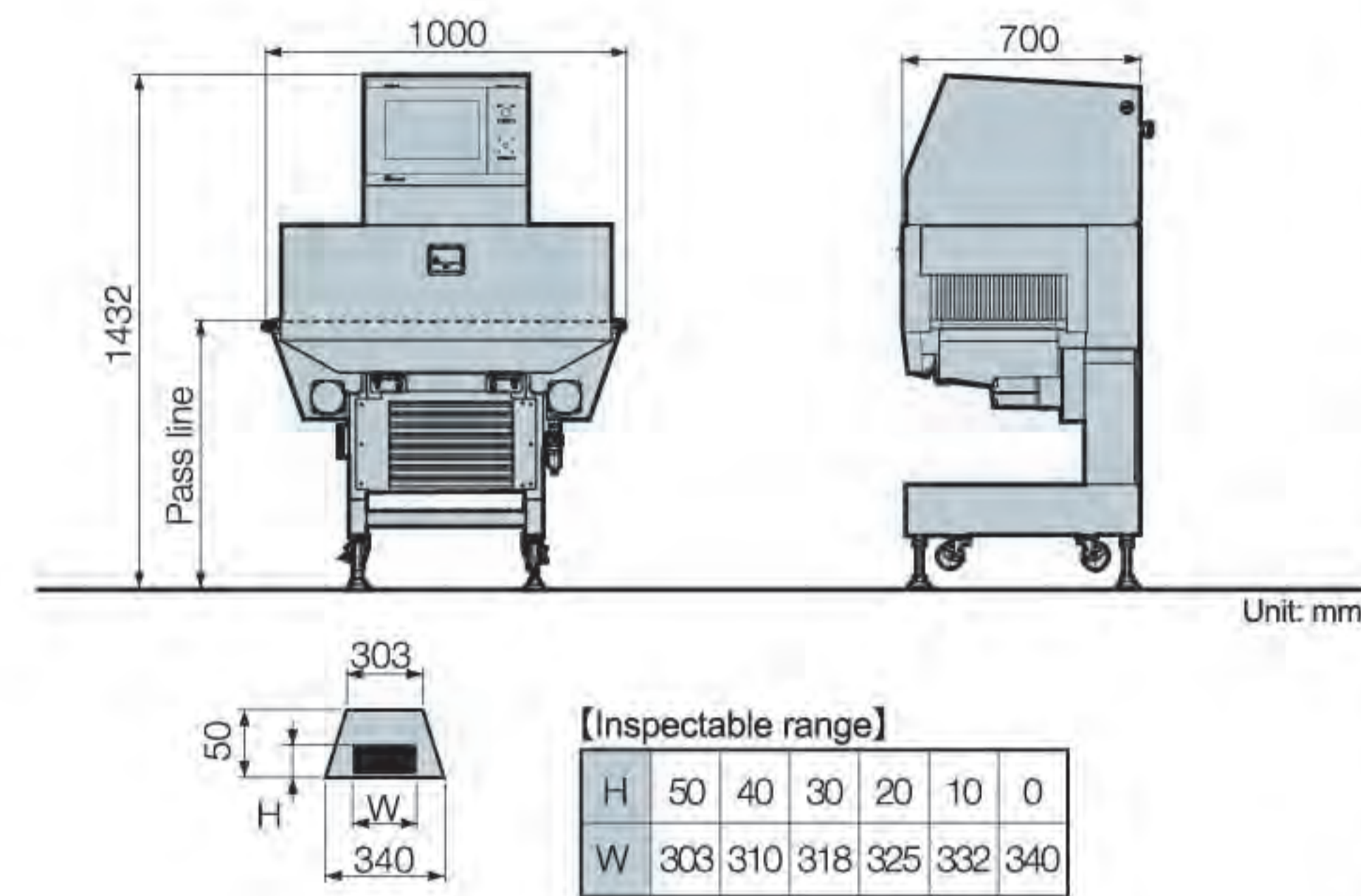
Model	SX2-2154W
Dimension of inspection product*1	Maximum passage width 210mm, Maximum passage height 50mm (no curtain type, 20mm)
Weight capacity	1kg *2
Transport belt speed	20-60m/min *3
Belt width	240mm
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	15.6 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure: Main unit equivalent to IP66
Pass line	750±50mm
Max. X-ray output	Tube voltage: 50kV, Tube current: 5.0mA (Max: 150W)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	145kg
Weight capacity	AC100V±10%/AC200V±10%, 1.0kVA, 50/60Hz *6

SXS2-2154HC1D



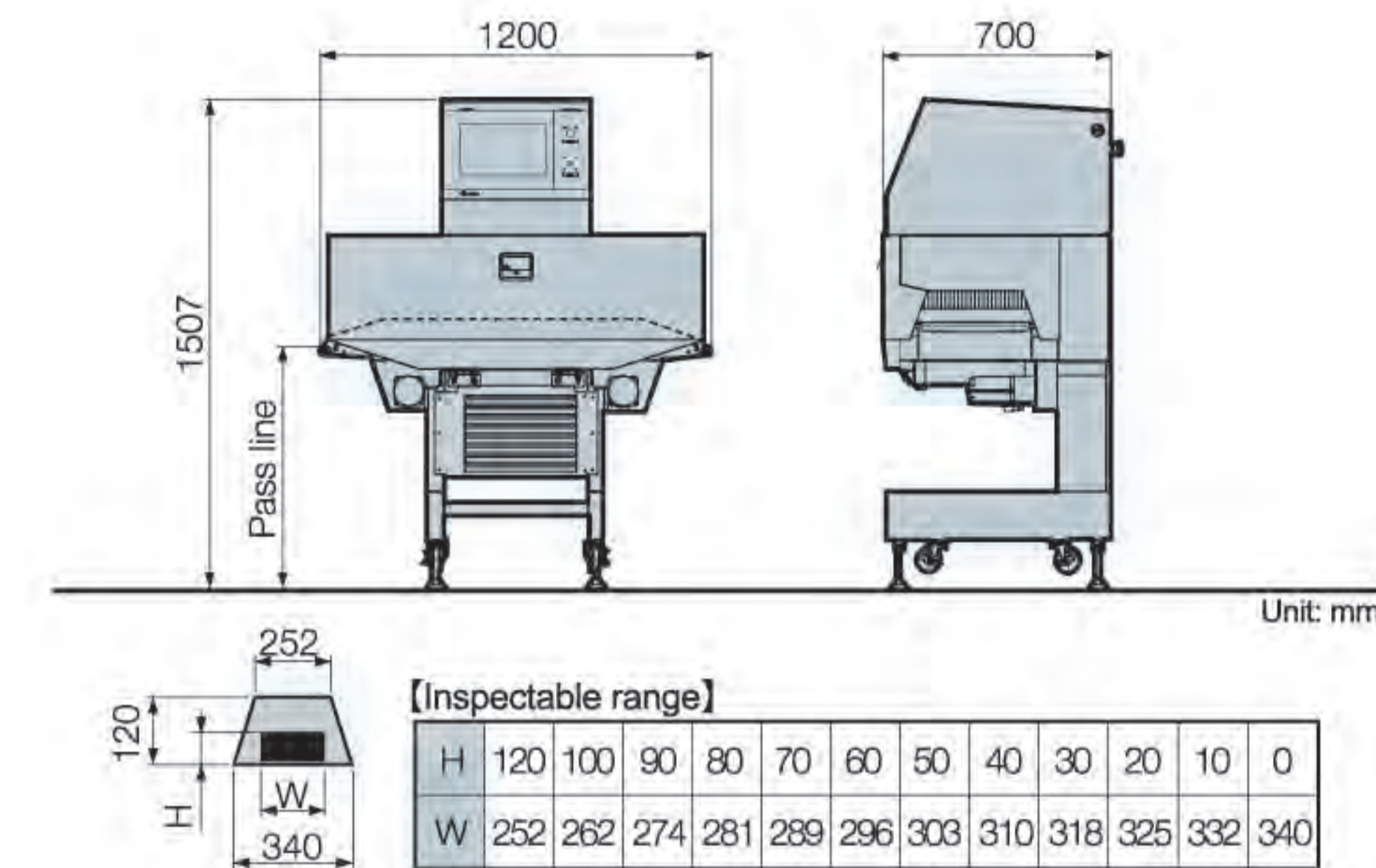
Model	SXS2-2154HC1D
Dimension of inspection product*1	Maximum passage width 210mm, Maximum passage height 50mm
Weight capacity	1kg *2
Transport belt speed	20-60m/min *3
Belt width	240mm
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	15.6 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure: Main unit equivalent to IP63
Pass line	750±50mm
Max. X-ray output	Tube voltage: 50kV, Tube current: 5.0mA (Max: 150W)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	150kg
Main power supply	AC100V±10%/AC200V±10%, 1.0kVA, 50/60Hz *6

SX2-3474W



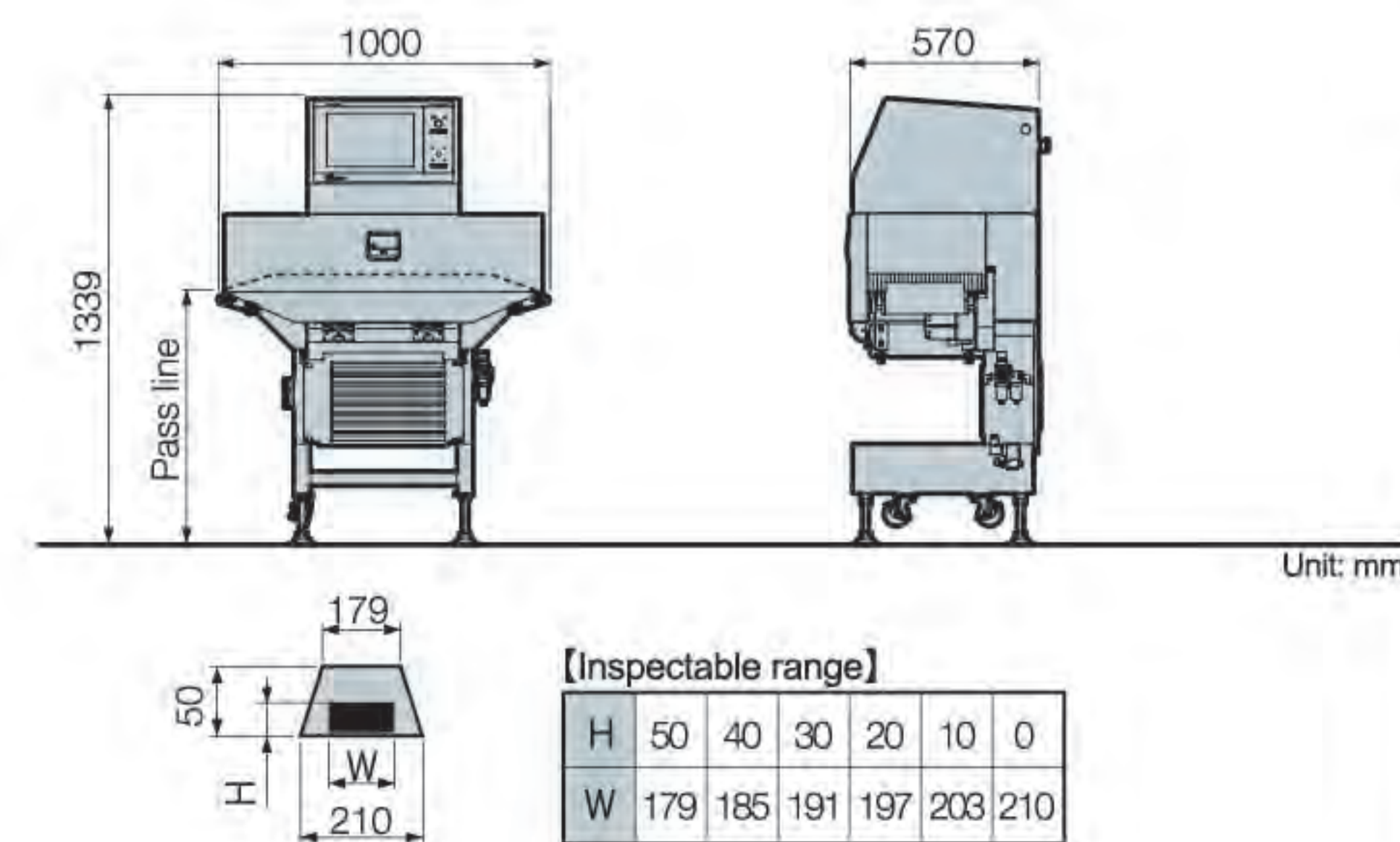
Model	SX2-3474W
Dimension of inspection product*1	Maximum passage width 340mm, Maximum passage height 50mm (no curtain type, 20mm)
Weight capacity	3kg *2
Transport belt speed	20-60m/min *3
Belt width	300mm
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	15.6 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure: Main unit equivalent to IP66
Pass line	750±50mm
Max. X-ray output	Tube voltage: 75kV, Tube current: 8.0mA (Max: 300W)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	200kg
Main power supply	AC100V±10%/AC200V±10%, 1.5kVA, 50/60Hz *6

SXS2-3474HC1D(Trapezoid)



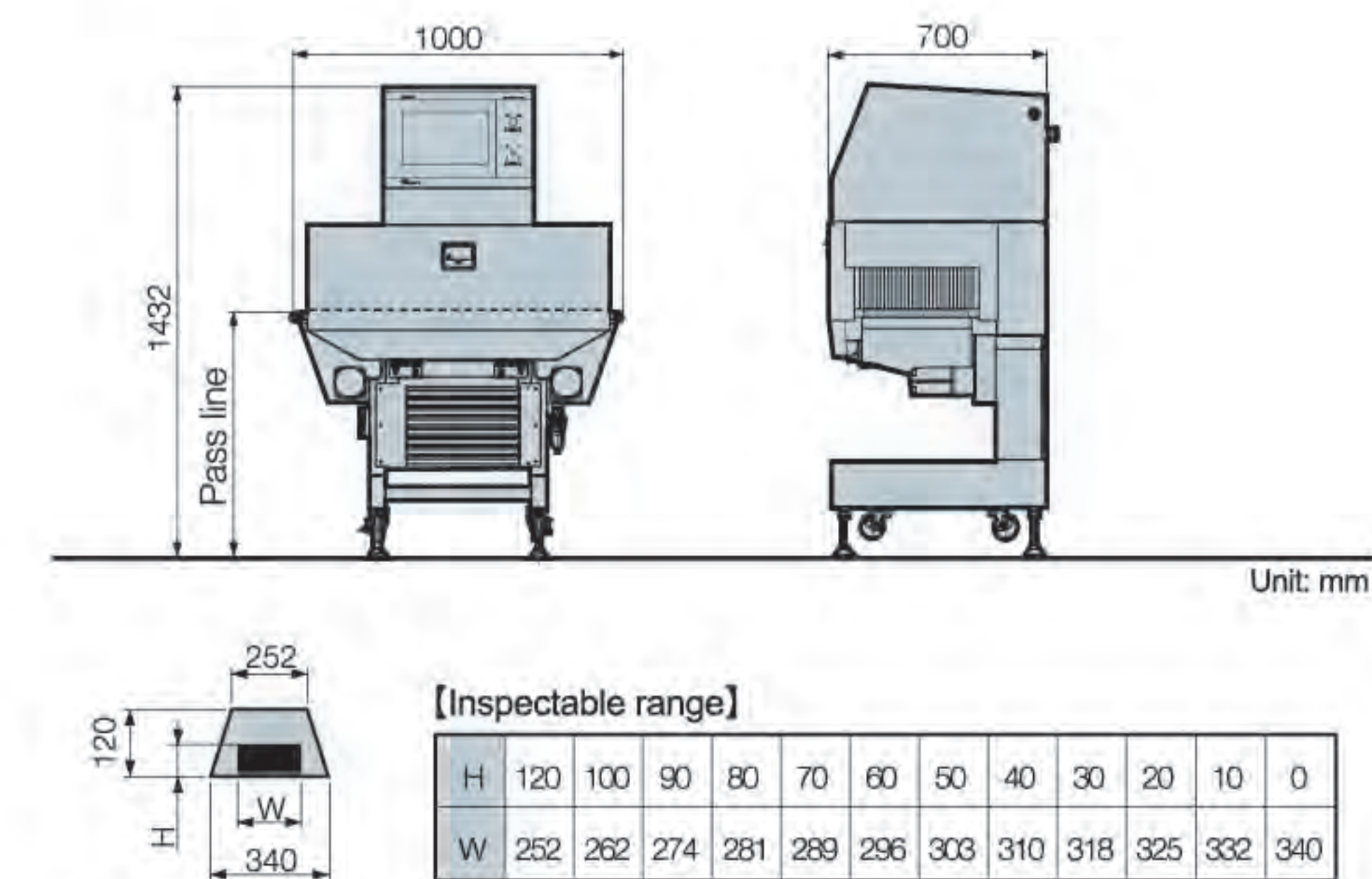
Model	SXS2-3474HC1D(Trapezoid)
Dimension of inspection product*1	Maximum passage width 340mm, Maximum passage height 120mm (no curtain type, 40mm)
Weight capacity	1kg *2
Transport belt speed	20-60m/min *3
Belt width	300mm
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	15.6 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure: Main unit equivalent to IP63
Pass line	750±50mm
Max. X-ray output	Tube voltage: 50kV, Tube current: 8.0mA (Max: 300W)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	190kg
Main power supply	AC100V±10%/AC200V±10%, 1.5kVA, 50/60Hz *6

SXS2-2154HC1D(Trapezoid)



Model	SXS2-2154HC1D (Trapezoid)
Dimension of inspection product*1	Maximum passage width 210mm, Maximum passage height 50mm (no curtain type, 25mm)
Weight capacity	1kg *2
Transport belt speed	20-60m/min *3
Belt width	240mm
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	15.6 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure: Main unit equivalent to IP66
Pass line	750±50mm
Max. X-ray output	Tube voltage: 50kV, Tube current: 5.0mA (Max: 150W)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	150kg
Main power supply	AC100V±10%/AC200V±10%, 1.0kVA, 50/60Hz *6

SXS2-3474HC1D



Model	SXS2-3474HC1D
Dimension of inspection product*1	Maximum passage width 340mm, Maximum passage height 120mm
Weight capacity	1kg *2
Transport belt speed	20-60m/min *3
Belt width	300mm
Detection sensitivity	φ0.3mm iron or stainless ball, stone, glass, hard bone, and high density plastic pieces, etc. *4
Display unit	15.6 inches-wide TFT color LCD (with touch panel)
Structure	Main unit/Base: All-stainless (SUS304) Waterproof structure: Main unit equivalent to IP63
Pass line	750±50mm
Max. X-ray output	Tube voltage: 50kV, Tube current: 8.0mA (Max: 300W)
Operating environment	Temperature: 0 to 35°C, Humidity: 30 to 85%, No dew condensation allowed. (It is necessary to clean the filter periodically.)
Weight	190kg
Main power supply	AC100V±10%/AC200V±10%, 1.5kVA, 50/60Hz *6

\*1 For details, see the drawing of the possible inspection range. \*2 For other weight levels, contact System Square. \*3 For other transport speed models, contact System Square. \*4 The detection capacity may vary depending on the type of inspection product and the operating environment. \*5 AC200V±10% specifications are also available as optional specifications. \*6 Power consumption is different when cooling unit is equipped. \*7 Power supply specification is AC200V±10% when cooling unit is equipped.  
 \* The detection sensitivity to be used actually may vary depending on the physical properties (contents and shape, etc.) of inspection product and/or the operating environment.  
 \* The cover to prevent the X-ray leak may be required at the inlet and outlet according to the length of inspection product.



Agents



Japan office

For more information, contact our office listed below.  
The contents of the specifications are subject to change without  
prior notice due to continual improvement.

---



**System Square Inc. Japan**

Head Office / Head Plant  
157 Kanawa, Kitamachi, Nagaoka, Niigata 9402121, Japan  
TEL +81-258-47-1377 FAX +81-258-47-0161

Agents  
Korea · Taiwan · China · Philippines · Thailand · Singapore  
Australia · Europe · United Arab Emirates · Malaysia · Indonesia  
Vietnam · Mexico · Brazil · Chile

Japan office  
Sapporo · Iwate · Sendai · Niigata · Tokyo · Shizuoka · Toyama  
Nagoya · Kansai · Hiroshima · Shikoku · Fukuoka · Kagoshima

[www.system-square.com/en/](http://www.system-square.com/en/)