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The machine appearance and specifications described in this catalog are subject to change without any notification.

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X-ray Inspection System

IX-PD Series





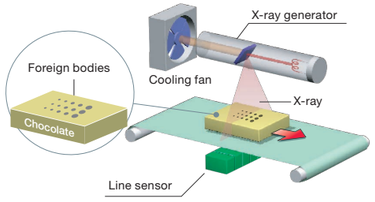
Our best sensitivity ever has been realized by employing a new sensor and image processing technology

- **Detects both low-density and minute foreign bodies with high accuracy**
  Improved detection sensitivity against not only low-density foreign bodies such as bones in meat and fish but also minute foreign bodies such as stainless steel wires. It contributes to minimizing oversights from visual inspection and alleviating the burden of manual intervention.
- **Maintains high detection performance even with overlapping and uneven products**
  Improved inspection on overlapping and uneven products that can be challenging for conventional models.
- **Reduced false positive detection**
  New image processing technology recognizes the difference between food and foreign bodies with high accuracy. It helps reduce the rate of false positive detection.

Energy analysis for highly sensitive detection

Image processing compares two images with different characteristics and detects foreign bodies by recognizing the differences in their physical property.

Clearly detects foreign objects and even bones trapped in overlapping products which under normal circumstances are difficult to detect as foreign objects.



Example: chocolate

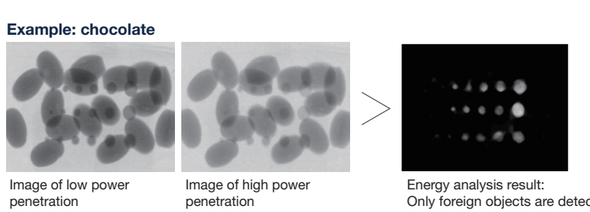


Image of low power penetration | Image of high power penetration | Energy analysis result: Only foreign objects are detected

Product and foreign object separated according to physical property

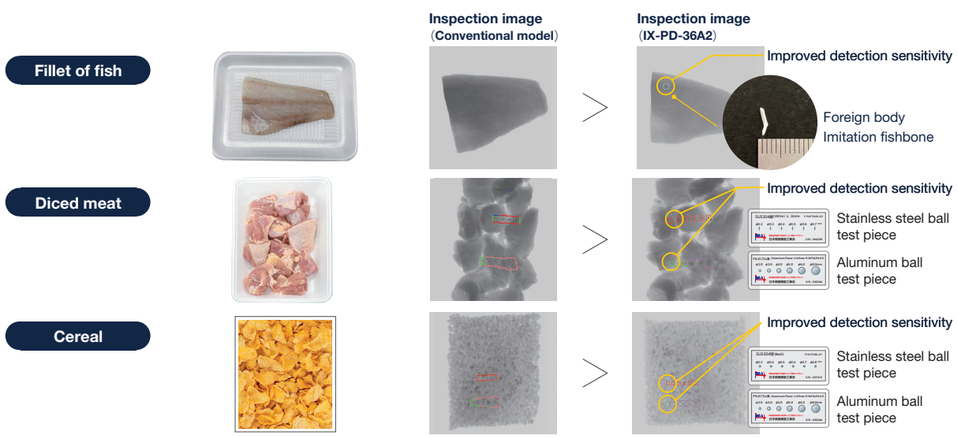
1 H Hydrogen	2 He Helium	3 Li Lithium	4 Be Beryllium	5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Florine	10 Ne Neon	11 Na Sodium	12 Mg Magnesium	13 Al Aluminum	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine	18 Ar Argon	19 K Kalium	20 Ca Calcium

Elements which are often included in food (hydrogen, carbon, nitrogen, oxygen)

Elements which are often included in foreign objects (stones & glass = silicon, bone = calcium, etc.)

Detects both low-density and minute foreign bodies with high accuracy

Comparison of detection sensitivity with conventional model



Option

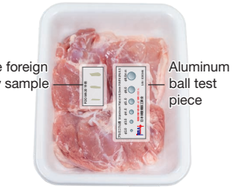
Utilize Ishida's unique AI technology (deep learning) to enhance inspection accuracy.

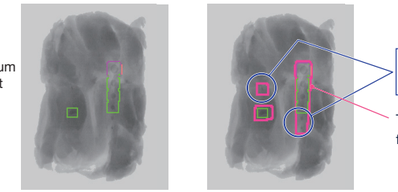
Pre-installed software which was learned through inspection images so that inspection accuracy can be improved in conjunction with conventional image processing.

Foreign body detection in chicken
Improves bone detection sensitivity

Chicken

Attaches an aluminum test piece (6 pieces in a row) and a bone foreign bodies sample, and compare the sensitivity with the conventional model.





Improve the accuracy of identifying quantity and shape defects

Sausage

Inspection of the bending and count of sausages
Inspects sausages with overlaps or bends

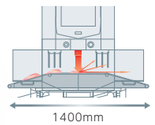


A wide range of model lineup



Curtain less type [-H model]

IX-PD-36A2-H
IX-PD-45A2-H



Designed for unwrapped products like meat and loose products such as solid spices. With a trapezoidal conveyor, even a short protective cover will prevent x-ray leakage, shortening the machine.



Waterproof type [-K model]

IX-PD-36A2-K
IX-PD-45A2-K

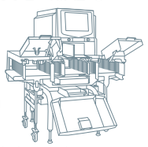


High-pressure wash-down equivalent to IP69K is available.



Single conveyor type [-S model]

IX-PD-36A2-S
IX-PD-45A2-S



Fewer transfers in a stand-alone style conveyor allows products to be pass through more smoothly.

Production Monitoring and Data Management System i-FORT

Linking with i-FORT enables you to monitor the operating status of each IX model and record the inspection data, even when working remotely.

Inspection result can be saved in the form of electronic data. This helps you efficiently record and manage the data. Products distributed to the market can be traced via a unique identification number for each product enabling you to quickly retrieve the respective inspection images.

