



X-ray + Color Vision AI — All-in-One

- One system for foreign material detection, defect inspection and quality sorting.
- Combines X-ray imaging, Color Vision and intelligent recognition algorithms to inspect product density, color, shape, size, surface condition and material characteristics in a single process.

TYPICAL APPLICATIONS

Suitable for a wide range of bulk food and agricultural products:



General specifications

Detector	0.1/0.4mm TDI Detector
X-ray tube	80KV- MAX.350W/500W (Beryllium Window)
Tunnel Height	100mm
Tunnel Width	400mm
Camera	RGB Full color CCD camera
Best Inspection Ability (Under no-product conditions)	0.2 mm(SUS304 ball)
	0.2*2mm(SUS wire)
	0.8 mm (Glass Ball)
	0.8 mm(Ceramic)
	Black hair, 3 mm long
	Colored glove fragment, 3×3×3 mm
Conveyor Parameter	Thread - Colored nylon string, 3 mm long
	Plastic fragment, 3×3×3 mm
	Mouse droppings, Insects / Pests
	Speed: 10-120m/min
Capacity	Width: 400mm
	Max Height: 100mm
	Max Load: 10kg
Conveyor Height	300kg-2000kg per hour (depending on the product)
Working Direction	900+100 mm (750+100mm is optional)
Screen	From left to right
O/S	Full-color TFT 15" Touch Screen
Connectivity	Windows 7/10 & Real-Time System
Product Management	LAN port, USB port
Parameter Adjustment	Complete product log/
Image Management	Auto learning/Manual setting
Power Supply	Auto image save/print/analyses
Body Material	220V, AC, 50/60Hz
Purification	SUS304
Cooling method	Easy to wash
Operation temperature	Air conditioned cooling
Operation humidity	0-40°C
X-ray emissions	30-90%
X-ray protection	< 1microsievert per hour
Rejector	Lead/Lead-free protective curtain
	64 tunnel air jet rejector

**Actual throughput and detection sensitivity may vary depending on the product type, size and shape of foreign materials, product density, material layer thickness, operating speed, and working conditions. Certain intelligent recognition algorithms, infrared cameras, and extended communication interfaces are available as optional configurations.*



MULTI-TECHNOLOGY INSPECTION

MULTI-SPECTRAL. HIGHER ACCURACY. A SAFER TOMORROW.



X-RAY
Internal structure & density analysis



RGB COLOR VISION
Color, shape & surface inspection



AI RECOGNITION
Complex feature analysis & subtle defect detection



Optional InGaAs infrared imaging extends multi-spectral inspection capability for selected applications.



MULTI-SPECTRAL INSPECTION

ADVANCED INSPECTION TECHNOLOGY FOR FOOD SAFETY AND QUALITY

RELIABLE DETECTION HIGHER QUALITY GREATER CONFIDENCE

FOREIGN MATERIAL DETECTION

High-Density & Low-Density Contaminants

Detects and removes a wide range of foreign materials, including:

 Metal / SUS	 Plastic fragments & thin plastic film
 Stones & gravel	 Paper fragments
 Glass & ceramic	 Twigs & leaves
 Hair & thread	 Insects
 Rubber glove fragments	 Cigarette filters / fragments
 Nylon strands	



Intelligent multi-spectral analysis helps identify selected low-density contaminants that may be difficult for conventional X-ray systems to detect.

SMART INSPECTION | SAFE PRODUCTS | A CLEANER WORLD

X-ray + Color Vision AI - All-in-One

Internal & External Quality Control

Identifies a wide range of product defects and abnormalities, including:

- Color deviation & discoloration
- Shape defects & deformation
- Mold
- Insect damage / holes
- Stains
- Surface damage & cracks
- Sprouts & germ tips
- Broken / half kernels
- Shell contamination
- Disease spots
- Brown spots & rot
- Selected internal defects





MTC-8800XPRO

Combo X-ray Visual Inspection System

Precision Air-Jet Rejection

Fast, Accurate & Low Product Loss

Once a defect or contaminant is detected, the system identifies its position and activates the corresponding high-speed air-jet channel for targeted rejection. This helps:

- Minimize good-product carryover
- Reduce product loss
- Improve sorting accuracy
- Support continuous high-speed operation

ALL-IN-ONE QUALITY CONTROL

More than an X-ray inspection system.

A multi-technology platform combining:

X-RAY + COLOR VISION + INTELLIGENT RECOGNITION

for integrated:



FOOD SAFETY



FOREIGN MATERIAL
DETECTION



DEFECT
INSPECTION



QUALITY
SORTING



MatriXcope LLC (USA)



sales@matrixcope.com



www.matrixcope.com