



# TXR-BK3 SERIES INTELLIGENT HIGH-DEFINITION X-RAY & COLOR VISION DETECTION ALL-IN-ONE MACHINE

**TECHIK**<sup>®</sup> Polymerize X-ray, visible light, infrared multi-spectrum and AI intelligent algorithm, can realize the color, shape, density, material and other multi-directional intelligent detection. It can not only effectively detect the impurities in raw materials, but also identify the internal defects and external defects of raw materials. Accurately remove branches, leaves, paper, stones, glass, plastic, metal, wormholes, mildew, different color, special-shaped foreign matter and unqualified products. Solve a variety of problems at once, help achieve higher output, lower waste.

## > PRODUCT SUPERIORITY



### Integrated design

Multispectral detection is integrated in the same transmission device and reject device, which is powerful and occupies less space, greatly reducing the installation space requirements.



### Intelligent algorithm

AI intelligent algorithm is independently researched and developed by Techik. It can simulate human intelligence to analyze images, capture complex features of materials and identify subtle differences. Effectively improve the detection accuracy and reduce the false detection rate.



### Solve extreme problems

Multi-spectrum and AI algorithm support, break through the traditional X-ray detection problems, even leaves, plastic film, paper and other low-density foreign bodies can also be effectively identified.



### Super efficiency sorting

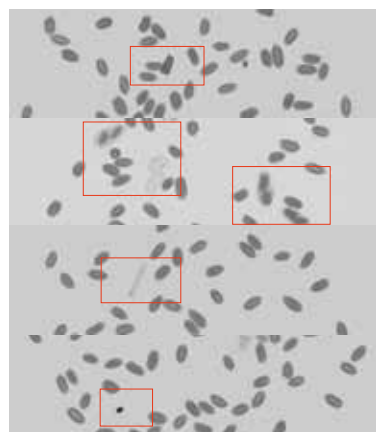
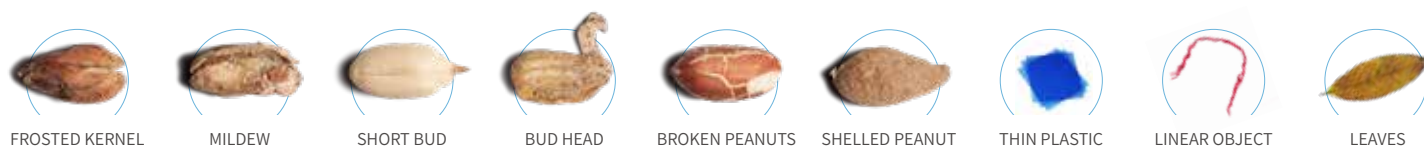
Taking peanut as an example, it can detect and sorting out the bud, mold, half grain, cigarette butt, shell, stone and other internal and external defects and foreign bodies and impurities. One machine can solve multiple problems, help to achieve high-speed, high-quality production line.

An integrated solution that integrates X-ray, color vision and other detection. Based on the internal shape, appearance color and other different dimensions, to achieve color, shape, material, foreign material and other comprehensive detection. For the quality and safety of nuts, seeds, frozen vegetables and other products escort.

## TECHIK INSTRUMENT (SHANGHAI) CO., LTD

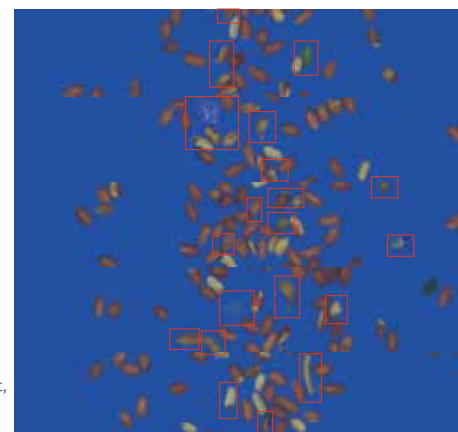
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## > PRACTICAL CASE



**X-ray + Color vision**

glass sheet    Buds, leaves, mildew  
 Peanuts, shells    Plastic, bud head, single peanut  
 cigarette butts    Peanuts, scraps of paper, half peanut  
 Stone, plastic    branch, broken peanut, peanut shells



More application areas and solutions:

Bulk materials: peanuts, sunflower seeds, pumpkin seeds, walnuts, etc.; Impurities detection: metal, thin glass, insects, stones, hard plastics, cigarette butts, plastic film, paper, etc.; Product surface detection: insect, mildew, stain, broken skin, etc.; Frozen vegetables: broccoli, carrot slices, pea pods, spinach, rape, etc. Impurity detection: metal, stone, glass, soil, snail shell, etc.; Quality inspection: disease spot, rot, brown spot, etc.

### X-RAY & COLOR VISION ALL-IN-ONE TXR-BK3 SERIES

Type		BK3-P1-4010-D2	BK3-P1-4010-DE
X-ray source		MAX.80KV 350W	
X-ray detectors		Standard 0.4	Dual energy 0.4
Color vision sensors		RGB Full color CCD camera	
Through width(mm)		400	
Height through(mm)		100	
Speed of conveyor belt (m/min)		10~90m/min	
Detector sensitivity	SUS304 ball (φ)	0.3mm	
	SUS304 wire	0.2×2mm	
	Glass ball (φ)	1.0mm	
	Ceramic ball (φ)	1.0mm	
Power supply		2kVA (220V AC single-phase 50Hz)	
Weight (KG)		850	
Raw material status		Bulk material	
IP Grade		Transmission part IP66, transmission part external IP65	
Air Pressure Request		0.8Mpa	
Safety index		≤1μSv/h, prevent X-ray leakage through safety protection device	
Working environment		Temperature -10~40°C, humidity 30~90%, no condensation	
Remove method		48/72 high speed air rejectors	
Cooling mode		Industrial Air Conditioners	
<b>OPTIONAL CONFIGURATION</b>			
Intelligent identification		Optional X - ray + color vision intelligent recognition algorithm	
infrared camera		InGaAs infrared camera is optional	
Conveyor belt material		Optional according to different types of materials, food grade surface (smooth/convex) belt	
External interface		"Tcp-ip /Modbus" communication can be added	
Display language		Multiple languages such as Chinese and English are optional	

Note: 1. The above mentioned detection accuracy is in the state of unload machine, and the actual detection accuracy shall be subject to the accuracy of the measured product.

2. The above machine specifications are standard specifications, other sizes and special requirements can be customized.

3. The products are subject to change without prior notice. Please refer to the sales representative for details.