#### HD IMAGING FULL COLOR COMPOSITE ALGORITHM

Advanced image processing algorithm, clearly show the details of raw material defects.

#### INTELLIGENT "EASY" KEY SETTING PROCESSING SOLUTION

Specify material good or bad by photo, auto set material color and shape parameters.

**TECHNOLOGY** 

#### **DURABLE DESIGN**

Circuit design technology, circuit board design reasonable, stable performance, fine machinery manufacturing.



improved; Customize transmission System, ensure the stability of materials, and easily remove the defects; Quick release Structural, reduction maintenance cost.

# SORTING TECHNOLOGY

Simultaneous detection and rejection foreign matter.

# PROVIDE A COMPLETE SET OF SORTING & INSPECT SOLUTIONS

BUILD A PERFECT ANTI-CONTAMINANT SYSTEM TO HELP FULLY REALIZE 0 IMPURITY lim→



















#### **I3CAD INTELLIGENT STRUCTURE DESIGN**

2M/S ultra high detection speed, machine capacity greatly

# R、G、B、+ SIZE FOUR - DIMENSIONAL

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Please visit www.techikgroup.com for more information!

# THE SOLUTION OF **COFFEE BEANS**

INTELLIGENT SORTING

NTELLIGENT HIGH DEFINITION IIGH PRECISION HIGH YIELD

TECHIK INSTRUMENT (SHANGHAI) CO., LTD





Have a core research and development team, unique flash calculation method, AI high frequency, durable and efficient intelligence technology, visual imaging dynamic performance, improves higher technology technique and easy sorting productivity and reduces carry out ratio



HIGH OUTPUT

High performance ejector valve ensures

more efficient



**NEW GENERATION** 

FULLY UPGRADED PERFORMANCE,

FUNCTION & APPEARANCE

HIGH PRECISION

Using 5400 pixel full color chromatographic sensor, high speed linear scan frequency, minimum 0.08mm pixel



Hd color, 15 inches, large field of vision touch screen, easy to operate





composite sorting, normal and reverse and inspection solution



COLOR MODE

Unique color intelligent algorithm, Capable of providing a complete sorting





# MINI COLOR SORTER TCS SERIES

- It is small in size and does not take up space. It can be used in scientific research institutes, small coffee bean sorting households and other occasions where production requirements are not high.
- Equipped with a high resolution 5400 pixel full-color sensor, high resolution snapshot function, ultra-high-speed linear scanning speed, improvement of the ability to accurately identify little defects.
- Intelligent multiple-type and easy-sorting algorithm system, with one-key setting of sorting modes. Equipped with a quadruple quick-installation high-frequency injection valve, which reduces the installation space, increases productivity, has a wide range of applications, and is highly flexible.
- The whole machine can be equipped with stainless steel full anti-corrosion treatment body, which is suitable for food coffee bean condiment mineral industries and laboratories



#### COMPACT COLOR SORTER

- Small size, small space occupation, 5400 pixel camera, strong applicability for occasions with low output.
- Equipped with a high resolution 5400 pixel full-color sensor, high resolution snapshot function, ultra-high-speed linear scanning speed, improvement of the ability to accurately identify little defects.
- Intelligent multiple-type and easy-sorting algorithm system, with one-key setting of sorting modes. Equipped with a quadruple quick-installation high-frequency injection valve, which reduces the installation space, increases productivity, has a wide range of applications, and is highly flexible.
- The whole machine can be equipped with stainless steel full anti-corrosion treatment body, which is suitable for food, coffee bean, condiment, mineral industries and laboratories.



## MULTIFUNCTION COLOR SORTER TCS SERIES

- Equipped with a high resolution 5400 pixel full-color sensor, high resolution snapshot function, perfect restoration of the true color of the material, 8 times magnification of photos, ultra-high-speed linear scanning speed, improvement of the ability to accurately identify little defects.
- · The intelligent multiple-type easy-sorting algorithm system enhances parallel analysis and processing capabilities, with one-key setting of sorting modes, which can realize multiple color independent sorting, normal sorting, reverse sorting, multiple sorting, etc., so eventually achieving the durable and stable sorting with more prominent
- · High-brightness LED cold light source, shadowless lighting, to ensure stable and durable lighting environment.
- Targeted dust removal system and anti-breakage system, design for coffee bean sorting.



# MULTIFUNCTION CONVEY BELT COLOR SORTER TCS SERIES

- Equipped with a high resolution 5400 pixel full-color sensor, high resolution snapshot function, perfect restoration of the true color of the material, 8 times magnification of photos, ultra-high-speed linear scanning speed, improvement of the ability to accurately identify little defects.
- · The intelligent multiple-type easy-sorting algorithm system enhances parallel analysis and processing capabilities, with one-key setting of sorting modes, which can realize multiple color independent sorting, normal sorting, reverse sorting, multiple sorting, etc., so eventually achieving the durable and stable sorting with more prominent
- High-brightness LED cold light source, shadowless lighting, to ensure stable and durable lighting environment.
- Efficient and stable transmission system, convenient for belt replacement, good for protecting fragile materials, with wide range of use and high sorting efficiency, special for green coffee bean.



### X-RAY INSPECTION SYSTEM FOR BULK PRODUCTS

- Techik 48-channel air blowing X-ray machine can simultaneously perform online detection of foreign objects with different attributes. The unique 27-level image analysis technology separates the foreign objects from the product layer by layer, so as to achieve accurate and efficient detection of foreign objects. The addition of 48-channel high-speed spray valve rejection system achieves greater output,
- Suitable for the sorting and detection of bulk materials such as peanuts, nuts, beans and other agricultural products and of small-bag packaging materials, bringing greater output, higher precision, and less raw materials to carry out.



#### CONVEYOR BELT METAL DETECTOR

- Made of materials, with the original phase tracking, product tracking and automatic balance correction functions, the detection sensitivity and stability of the metal detector have been improved, and the detection range is wider. The optimized circuit structure can keep the detection accuracy constant in a wide
- Based on the II-generation machine, new functions such as dual-channel detection, high and low frequency switching, etc., have improved the detection performance and adaptability of the equipment. For products with more types and greater differences, different frequency detection can be replaced to improve the detection effect. The panel adopts double-row LED strips, which is simple and beautiful.



# GRAVITY FALL METAL DETECTOR IMD SERIES

- Detecting and rejecting metal contaminants in powder and particles.
- Using flip-type rejection, increasing production capacity and production efficiency.
- A variety of probes are available for option, which is an indispensable testing equipment on the particle production line.
- Optimized the main board circuit parameters, compared with the previous accuracy and stability have been significantly improved.



# CHECKWEIGHER FOR LARGE PACKAGES IXL SERIES

- High-speed, high -precision, high-stability dynamic detection, with high-precision sensors.
- Instead manual to complete the re-inspection of the weight of large package goods, with continuous and efficient inspection as you go.
- Can be connected with front-end packaging equipment, improve production line efficiency.
- Ensure the stability of packaging weight, maximum reinspection accuracy  $(3\sigma) \pm 2g$ .
- Applicable scope: woven bags, plastic bags, aluminum foil bags, vacuum packaging, etc.



# **COLOR SORTER CONFIGURATION INDEX LIST**

UNIT		ITEM CONTENT	CHUT	E COLOR SO	CONVEY BELT COLOR SORTER		
Civii	ITEM	TECHNICAL DESCRIPTION	TCSmini SERIES	TCS SERIES	TCS+ SERIES	TCS SERIES	TCS+ SERIES
	15 inch touch screen	Strong anti-interference ability, high resolution, high brightness	-	*	*	*	*
	10-inch touch screen	Strong environmental resistance, high temperature and low temperature resistance	*	-	-	-	-
Core	Swing arm touch-screen structure	Can be rotated 180 degrees at any Angle	-	-	-	*	*
components	Full color ultra-definition sensor	Full color, 5400 pixels, 0.08mm per pixels		*	*	*	*
components	Natural cold lighting system	Full orientation light, no blind Angle	-	*	*	*	*
	Colorful background light	Can change different background color	-	*	*	*	*
	Imported high frequency valve	Imported from Italy	☆	☆	*	☆	*
	Preferred customize high frequency valve	Preferred customize ultra-high speed valve	*	*	☆	*	☆
	Linear high frequency vibrator	The material can be evenly transported to the feeding place	*	*	*	*	*
	Easy sorting technology	Independent research and development of AI intelligent technology	*	*	*	*	*
	Hd snapshot	It can realize 8 times magnification of photos	*	*	*	*	*
	Easy operate software with touch screen	Easy operation interface	*	*	*	*	*
	Shape sorting function	Shape recognition technology	*	*	*	*	*
Core	High speed shape sorting technology	Can be used in high speed and large capacity condition	☆	☆	*	*	*
technology	Tracking and rejecting function	Improve the rejection accuracy of ejector	☆	*	*	*	*
technology	High pressure low pulse width spray valve system	Ejector high-speed response technology, improve the drive efficiency	*	*	*	*	*
	Low Pressure high Pulse Width Spray Valve System	Traditional valve reject technology	-	-	-	-	-
	24V Solenoid Valve Power Supply System	Low voltage 24V safety voltage	*	*	*	*	*
	Air Curtain View Zone Dust proof Technology	Remove dust and floating objects in sight area	-	*	*	*	*
Life	Ejector life	Optimize the response speed of ejector valve	>5 billion	>5 billion	>5 billion	>5 billion	>5 billion
indicators	Lighting Life	24 hours of continuous service life	>50000 h	>50000 h	>50000 h	>50000 h	>50000 h
marcators	Design Life of Whole Machine	High strength frame design concept	>50000 h	>50000 h	>50000 h	>50000 h	>50000 h
	Contact material part	Stainless	*	*	*	*	*
Machine	Anti-crushing treatment	Buffer optimized structure design	*	*	*	*	*
structure	Equipment framework	All stainless steel anti-corrosion treatment	☆	☆	☆	☆	☆
	Taiwan Mingwei Industrial power supply	Taiwan Mingwei special power supply is preferred	*	*	☆	*	☆
Configura- tion	SMC Pneumatic Unit	SMC Pneumatic Unit is preferred	-	☆	*	*	*
	YSC Pneumatic Unit	YSC Pneumatic Unit is preferred	-	*	☆	☆	☆

Note: the above parameters are measured at room temperature 25°C, raw material containing 2% impurities, specific indicators vary with different environments, materials and impurities; \*\pi\ represents the standard; \*\pi\ Represents optional; - None

#### **COLOR SORTER TECHNICAL INDEX LIST**

CATEGORY	SERIES	MODEL	CAPACITY	NUMBER OF EXECUTION UNITS	POWER	RATED VOLTAGE	AIR PRESSURE	GAS CONSUMPTION	SPECIFICATION & DIMENSION	WEIGHT
Mini series	TCS	1T - MI	0.3 ~ 1.0t/h	32	0.8kW			$\leq 0.3 m^3 / min$	1214×426×1412	150kg
	TCS/TCS+	1T	0.6 ~ 1.2t/h	64	1.0kW		0.6 ~ 0.8MPa	$\leq 0.6 \text{m}^3/\text{min}$	1030×1600×1600	400kg
		2T	1.0 ~ 2.5t/h	128	1.5kW	180 ~ 240V		$\leq 1.2 m^3 / min$	1330×1660×2185	615kg
		3T	2.0 ~ 4.0t/h	192	2.0kW			$\leq 2.0 \text{m}^3/\text{min}$	1645×1660×2185	763kg
		4T	3.0 ~ 6.0t/h	256	2.5kW			$\leq 2.4 \text{m}^3/\text{min}$	2025×1660×2185	915kg
Chute series		5T	3.0 ~ 8.0t/h	320	3.0kw			$\leq 2.8 \text{m}^3/\text{min}$	2355×1660×2185	1250kg
		6T	4.0 ~ 9.0t/h	384	3.4kW			≤3.2m³/min	2670×1660×2185	1450kg
		7T	5.0 ~ 10.0t/h	448	3.8kW			$\leq 3.5 \text{m}^3/\text{min}$	2985×1660×2195	1650kg
		8T	6.0 ~ 11.0t/h	512	4.2kW			$\leq$ 4.0 $m^3$ /min	3300×1660×2195	1850kg
		10T	8.0 ~ 14.0t/h	640	4.8kW	50Hz		$\leq$ 4.8 $m^3$ /min	4100×1660×2195	2250kg
	TCS/TCS+	300S	0.7 ~ 1.3t/h	63	1.5kW			$\leq 1.5 m^3 / min$	3780×1050×2000	950kg
Single helt conice		600S	1.0 ~ 2.6t/h	126	2.0kW			$\leq 2.5 \text{m}^3/\text{min}$	3780×1350×2000	1100kg
ingle belt series		900S	2.0 ~ 4.0t/h	189	3.0kW			$\leq 3.0 \text{m}^3/\text{min}$	3780×1650×2000	1250kg
		1200S	3.0 ~ 6.0t/h	252	4.5kW			$\leq$ 4.5 $m^3$ /min	3780×1950×2000	1400kg
	TCS/TCS+	300SD	0.7 ~ 1.3t/h	126	-			-	-	-
Double layer		600SD	1.0 ~ 2.6t/h	252	-			-	-	-
belt series	1C5/1C5+	900SD	2.0 ~ 4.0t/h	378	-			-	-	-
		1200SD	3.0 ~ 6.0t/h	504	-			-	-	-

Note: This parameter table takes coffee bean as an example (containing 2% impurity), the specific parameters vary with different materials and impurity content; The product is subject to update without prior notice. This machine does not attach conveyor, air supply system and other auxiliary equipment, optional; The whole machine can be equipped with stainless steel anti-corrosion models.

# X-RAY INSPECTION SYSTEM FOR BULK PRODUCTS TECHNICAL INDEX

CATECODY	SERIES	MODEL	MAXIMUM DETECTION WIDTH	MAXIMUM DETECTION HEIGHT	X-RAY SOURCE	REJECTER MODE	OPTIMUM DETECTION ACCURACY		
CATEGORY					A-RAY SOURCE	REJECTER MODE	Stainless steel ball	Stainless steel wire	
Low speed type		4080LP	400mm	50mm	MAX.80kV,210W	32valves blowing out	Ф0.3mm	Φ0.2×2mm	
High speed type	TXR	4080GP	400mm	50mm	MAX.80kV,350W 48valves blowing out		Ф0.3mm	Φ0.2×2mm	
High speed type		6080GP	400mm	50mm	MAX.80kV,350W	72valves blowing out	Ф0.3mm	Φ0.2×2mm	

# **CONVEY BELT METAL DETECTOR TECHNICAL INDEX**

CATEGORY	SERIES	S MODEL	detection width	detection height	belt width	To a Physical Control Section	Optimum detection sensitivity		
				detection neight	beit width	loading capacity	Fe ball	SUS304	
Ⅱ型	IMD	4008	400mm	80mm	360mm		Ф0.5mm	Φ1.2mm	
		4012		120mm		10kg	Ф0.6mm	Φ1.5mm	
		4015		150mm			Φ0.7mm	Φ1.5mm	
		4018		180mm			Φ0.8mm	Ф2.0mm	
III型	IMD	5020	400mm	200mm	460mm	1001	Φ1.0mm	Ф2.0mm	
		5025	400mm	250mm		100kg	Φ1.2mm	Ф2.5mm	

# POWDER PARTICLES METAL DETECTOR TECHNICAL INDEX

SERIES	DETECTION DIAMETER	A (mm)	B (mm)	C		DETECTION CAPACITY t/h <sup>Note 2</sup>	REJECTER MODE	PRESSURE REQUIREMENT	POWER	MAIN MATERIAL	DETECTION SENSITIVITYΦD(mm) <sup>Note1</sup>		
	(mm)			(mm)							Fe	SUS	
IMD-I-P	50	486	182	696	661	1	Automatic flap rejecter		180 ~ 240V MPA 50Hz	SUS304	0.5	1.2	
	75	486	224	738	665	3		≥0.5MPA			0.5	1.2 ~ 1.5	
	100	537.5	256	882	665	5					0.7	1.5	
	150	666	324	1032	665	10					0.8	1.5	

Note: The optimal detection accuracy mentioned by the above X-Ray inspection system for bulk products and metal detector is in the state of empty machine, and the actual detection accuracy is subject to the accuracy of the tested product; Metal detector can be selected to exclude a variety of ways, detailed consultation sales representative; Product is subject to change without notice, subject to the actual machine shall prevail; The above machine specifications are standard specifications, other sizes and special requirements can be

Note 1: When the above detection sensitivity is in the state of empty machine, the actual detection sensitivity is affected by the product environment, or changes due to the different position of metal mixing.

Note 2: The inspection capacity per hour is related to the specific gravity of the product. The density of the object (water) measured in the table is 1000kg/m³.