MEYER

MEYER COLOR SORTER
TEA SORTING SOLUTIONS

HEFEI MEYER OPTOELECTRONIC TECHNOLOGY INC.

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MEYER INTELLIGENT SORTING SOLUTION

Engaged in the intelligent sorting industry for nearly 30 years in the leading position, Meyer is committed to providing intelligent and professional sorting solutions for customers. To improve the "performance, reliability" and other key indicators of products, Meyer Research & Manufacture Innovation Platform is built. It aims to create a high-level R&D talent team, increase investment in technology innovation, strengthen engineering, promote intelligent manufacturing, thus making Meyer color sorter the best.

The tea business environment is said to be more competitive with dynamic changes of customers in their preferences. To produce high quality tea but fewer cost is the common wish of each tea processor. With the concept of "quality first, customers foremost", Meyer pioneers the whole tea processing detection solutions. It covers fresh tea leaf sorting, raw tea sorting, high-end tea classification, impurity detection and removal and packaged products detection. Meyer guarantees the tea quality and creates higher benefits for tea enterprises.
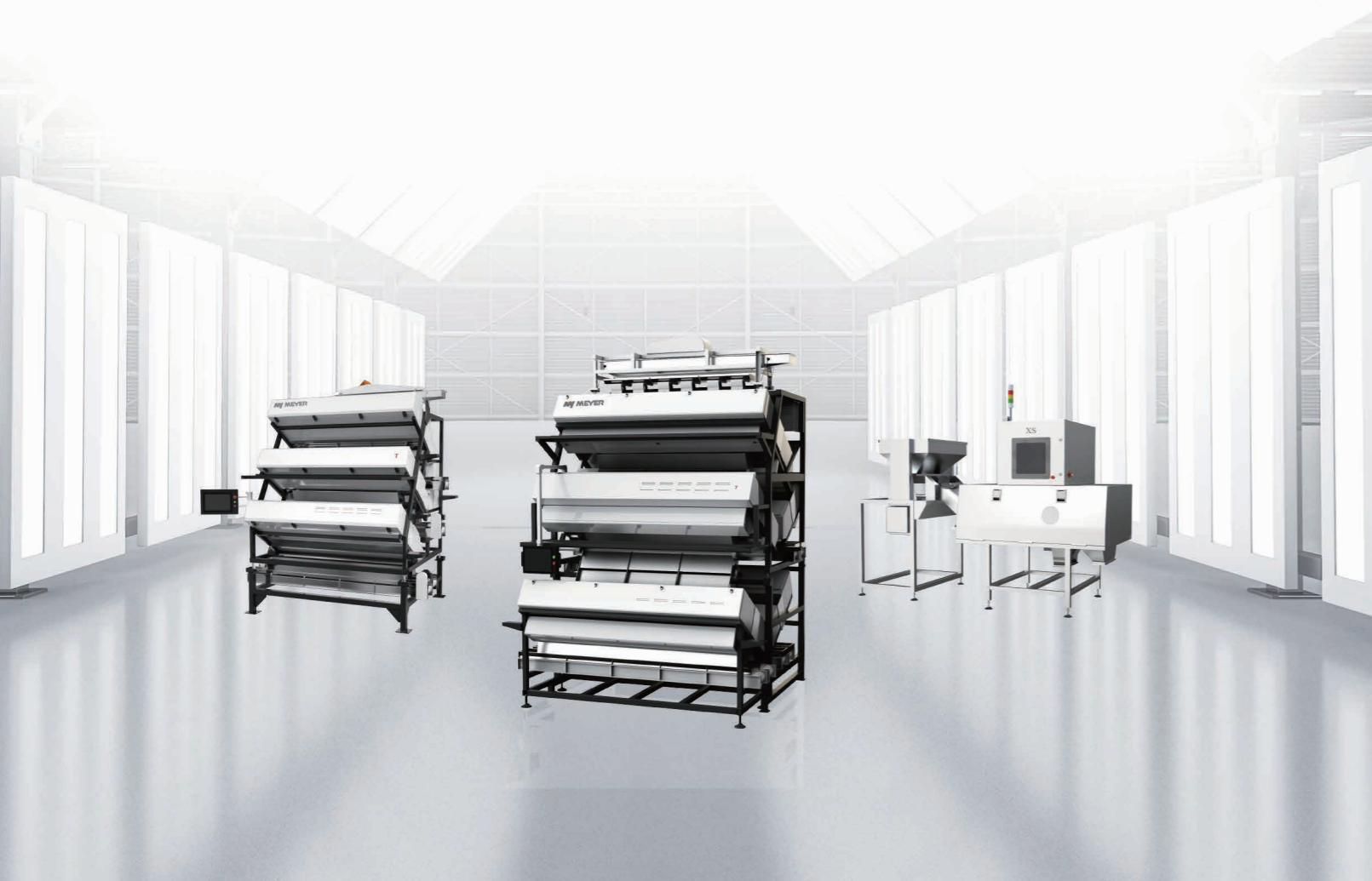
Tips Reverse Sorting From FTGFOP-1

Raw Material

Tips Accepts

Tips Rejects

Dryer Mouth Material Sorting

Raw Material

Accepts

Rejects

FOP Sorting

Final Accepts
(1st outlet)

Rejects to Be Circulated
(2nd outlet)

Dull Stalks
(3rd outlet)

Yellow Leaves and Yellow Stalks
(4th outlet)

OP Color and Size Sorting

Raw Material

Final OP Accepts
(1st outlet)

Big Leaves from OP Accepts
(2nd outlet)

Dull Stalks(3rd outlet)

Yellow Leaves and
Yellow Stalks（4th outlet)

Impurity Removal

Dead Insect

Twig

Broom

Glass

Butt

Metal

Stone

BRAND NEW MEYER COLOR SORTER DEFINES A NEW STANDARD FOR INTELLIGENT SORTING

PART 1

MACHINE STRUCTURE IS HIGHLY STABLE AND RELIABLE

Engineering Design
Manufactured by Smart Factory
Standardized Production

IMPROVE RELIABILITY, ENGINEERING DESIGN IS THE PRIORITY

Standardization
Modularization

More than **70%** parts realize intelligent production

Parts general rate increases to **70%**

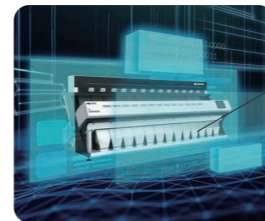**IMPLEMENTING RELIABILITY, INTELLIGENT MANUFACTURING IS THE KEY**

PART 2

OPERATION PROCESS IS HIGHLY STABLE AND RELIABLE

The new digital electrical topology structure controls the sudden failure of the core components from the source to ensure the stable and reliable operation of the production line.

THE NEW DIGITAL ELECTRICAL TOPOLOGY STRUCTURE

Reduce redundant control modules of traditional color sorters by **45%**

High integration, strong anti-interference ability

Provide a standardized PLC interface, which can be connected to the factory's centralized electronic control system to help the digital operation of the production line

INNOVATIVE REMOTE CONTACTLESS SERVICE

Remote Control
Users can adjust color sorting parameters, switch color sorting solutions, and grasp operating indicators such as output and processing accuracy online
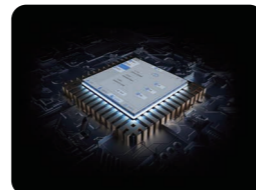
Smart Backup
The user can back up the ideal sorting parameters and solutions to the cloud at any time, so that can be called in time in subsequent processing

Smart Checkup
Real-time monitoring and correction of signals, lights and the operation effect of key components to help equipment run stably

Remote Debugging
When the effect is abnormal, you can seek online service experts for remote debugging, so that the equipment can be restored to a good running state in

PART 3

SORTING EFFECT IS HIGHLY STABLE AND RELIABLE

Reliability with independent technological innovation makes the performance advantages of high accuracy, low rejection ratio and large throughput stable, and the value of Meyer color sorter has been greatly improved.

MEYER CORE TECHNOLOGIES
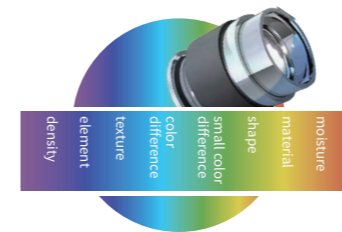
Meyer Multispectrum Confocal System
Meyer multispectrum confocal system provides multi-dimensional sorting and detection solutions such as color, shape, texture, material, etc. to meet users' differentiated processing needs.

Meyer Maglev Ejector 3.0
Ultra-high-speed response, shorter start time of ejector for higher accuracy
Millisecond-level start and stop, gas supply and cutoff completely, resulting in greater output and lower loss

"Dark factory" production

Integrated structure Modular Design
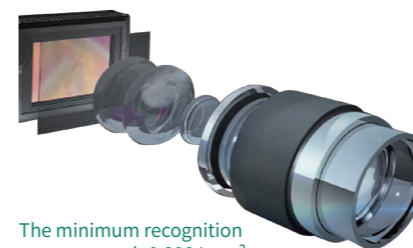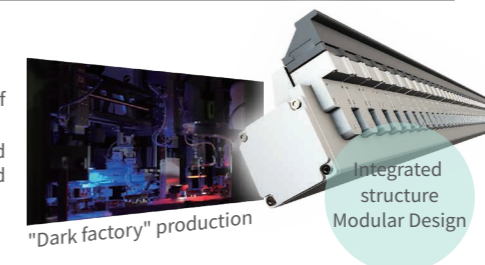
Meyer Ultra HD Imaging System
Low-distortion camera lens, with ultra-high-definition resolution, ensure clearer identification of materials

The minimum recognition area can reach 0.0004mm²

Meyer Deep Learning Technology
Complex defects detect in complex scenarios and meet customers' changing sorting needs

Large sample library for the sorting industry

Data Advantage
Nearly 10,000 connected devices worldwide

Platform Advantage
Key software enterprises in national planning

Innovation Advantage
Breaking through the industry bottleneck of small target detection
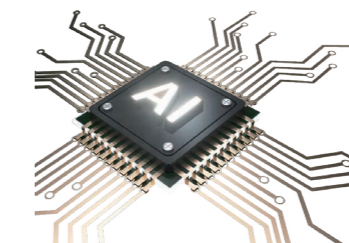
MORE INTELLIGENT TECHNOLOGIES

Sniper system

Smart vacuum device

One-key double intelligence algorithm

Extremely simple operation

Channel intelligent thermostat

Infrared image system

Intelligent anti-shattering system

Shape sorting

EXPERT LEVEL TO GUARANTEE LARGE TEA LEAVES QUALITY

3+1+1 Structure Design
Gets high quality finished tea, high purity leaves and tea sticks

One-key Double Intelligent Algorithm
Provides obvious color difference sorting and the nuance of color sorting

Outstanding Output
High-frequency feeding system, provides steady feeding and large input without adhesion

High Net Selection Rate
Equipped with the ultra-clear camera, foreign objects can be seen at a glance

Strong Shape Sorting Ability

Intelligent Anti-shattering
Equipped with soft material protection cushion, lower breakage

Meyer color sorter·Five-stage sorter

The product is equipped with Ultra HD imaging system, one-key double intelligence algorithm, targeted removal and other AI algorithms. It can separate tea accepts from yellow leaves, tea stalk, tea seeds and other impurities. Due to its structure unique advantages, it has a remarkable effect on sorting large tea leaves.

Name	Model	Power （KW)	Voltage (V)	Air pressure (MPa)	Air Consumption (m³/min)	Dimension (L*W*H)(mm)	Weight (kg)
TD-W	6CSX-1500A	6.5	340-420	0.6~0.8	<7.5	2990X4130X4000	5700
1500TD2	6CSX-1500TD2	6.47	340-420	0.6~0.8	<7.5	3350X3190X4230	4600

GET TEA ACCEPTS, STALKS, LEAVES AT A TIME

Four-stage Structure Design
gets tea accepts, leaves and stalks easily at a time

One-key Double Intelligent Algorithm
Provides obvious color difference sorting and the nuance of color sorting

Outstanding Output
High-frequency feeding system, provides steady feeding and large input without adhesion

Strong Shape Sorting Ability

Low loss

Intelligent Anti-Shattering
Equipped with soft material protection cushion, lower breakage

Highly Reliable, More Intelligent
Standardized and modular design, built by the Intelligent Factory

Meyer color sorter·Four-stage sorter

The product is equipped with Ultra HD imaging system, one-key double intelligence algorithm, targeted removal and other AI algorithms. It can separate tea accepts from yellow leaves, tea stalk, tea seeds and other impurities. It features a high cleaning rate, quite low consumption, stable function and cost-effective price.

Name	Model	Power （KW)	Voltage (V)	Air pressure (MPa)	Air Consumption (m³/min)	Dimension (L*W*H)(mm)	Weight (kg)
TD-S	6CSX-300 IIIB	6.0	340-420	0.6~0.8	<6.5	3094X2812X4054	4800
1200TD2	6CSX-1200TD2	6.0	340-420	0.6~0.8	<6.5	3350X2820X4220	4000

TEA SORTING EXPERT WITH HIGH COST-EFFECTIVENESS

- **Three-stage Structure Design**
  Ensures high quality of final tea accepts

- **One-key Double Intelligent Algorithm**
  Provides obvious color difference sorting and the nuance of color sorting

- **Outstanding Output**
  High-frequency feeding system, provides steady feeding and large input without adhesion

- **Strong Shape Sorting Ability**

- **Intelligent Anti-Shattering**
  Equipped with soft material protection cushion, lower breakage

- **Highly Reliable, More Intelligent**
  Standardized and modular design, built by the Intelligent Factory

Meyer color sorter·Three-stage sorter

The product is equipped with Ultra HD imaging system, one-key double intelligence algorithm, targeted removal and other AI algorithms. It can separate tea accepts from yellow leaves, tea stalk, tea seeds and other impurities. It features rich tea sorting solutions to meet various demands.

Name	Model	Power (KW)	Voltage (V)	Air pressure (MPa)	Air Consumption (m³/min)	Dimension (L*W*H)(mm)	Weight (kg)
TD	6CSX-300 IIIA	5.0	340-420	0.6~0.8	<5.4	3290X2360X3710	3800
	6CSX-900TD3	5.0	340-420	0.6~0.8	<4.8	3150X2600X3550	2800

WITH NIR INFRARED TECH, REMOVE ALL IMPURITIES

- **NIR Infrared Technology**
  Precisely detects and removes dead insects, plastics, butt, sawdust and other impurities

- **One-key Double Intelligent Algorithm**
  Provides obvious color difference sorting and the nuance of color sorting

- **Outstanding Output**
  High-frequency feeding system, provides steady feeding and large input without adhesion

- **Strong Shape Sorting Ability**

- **Intelligent Anti-Shattering**
  Equipped with soft material protection cushion, lower breakage

- **Highly Reliable, More Intelligent**
  Standardized and modular design, built by the Intelligent Factory

Meyer color sorter·Three-stage infrared sorter

The product is equipped with Ultra HD imaging system, one-key double intelligence algorithm, targeted removal and other AI algorithms. It can separate tea accepts from yellow leaves, tea stalk, tea seeds and other impurities. It features rich tea sorting solutions to meet various demands.

Name	Model	Power (KW)	Voltage (V)	Air pressure (MPa)	Air Consumption (m³/min)	Dimension (L*W*H)(mm)	Weight (kg)
TF	6CSX-900TF	6.0	340-420	0.6~0.8	<5.4	2750X2850X3860	4000

PACKAGED TEA INSPECTION EXPERT

Clear Imaging
350W German beryllium window radiation source can detect impurities with similiar density

Outstanding Foreign Matters Detection
Detect metals, stones, clods, glass, ceramics and other impurities

Abundant and Flexible Rejection Devices
Equipped with a variety of rejection structures such as swing-arm, flap, push-plate and air blowing to meet the needs of multiple scenes

Support Deep Learning
Match the optimal recognition algorithm for more accurate detection

Support Remote Maintenance and Commissioning
know equipment operating status in real-time

Meyer X-ray Machine·XM series

XM series X-ray foreign matter detector for packaged tea is mainly used for foreign matter detection in small and medium-sized packages, such as metal, stone, glass, dirt, hard rubber and other types of impurities in the packaging bag. It provides a full range of detection and accurate rejection and provides protection for the quality of tea.

Name	400XM	Name	400XM	Name	400XM
Model	MY8045-XM	Size of materials(mm)	Width≤445, Height≤200	X-Ray output(W)	350 (Max)80kV/8.0mA adjustable
Sensitivity (no-load)	SUS ball≥φ0.3	Conveyor belt width(mm)	510	Conveyor belt speed (m/min)	10-80 adjustable
	SUS wire≥φ0.2x2	Configuration(mm)(LxWxH)	1100x1200x2050	Removal device	Selected according to material
	Glass ball≥φ1.0	Net weight(kg)	500	Main material	SUS 304
	Ceramic ball≥φ1.0	Load(kg)	10	Power supply (V)	Single phaseAC220V±10%, 50/60Hz, 2kw
Service environment		(Ambient temperature)-10~40℃, Relative humidity30-90%, No condensation,no freezing,upheaval		Protection Level	Transmission part IP66, Other IP65

# X-RAY INSPECTION FOR COMPREHENSIVE QUALITY GUARANTEE

Four-stage Structure Design
350W German beryllium window radiation source can detect impurities with similiar density

Outstanding Foreign Matters Detection
Detect metals, stones, clods, glass, ceramics and other impurities

Integrated Structure Design
Easy for installation and highly reliable

Support Deep Learning
Match the optimal recognition algorithm for more accurate detection

Support remote maintenance and commissioning
know equipment operating status in real-time

Meyer X-ray Machine·XS series

According to the difference in density, thickness and material, the XS series X-ray machine can detect various impurities in the raw material, such as metals, stones, glass, clods, hard rubber and plastic. It provides high-quality assurance for bulk tea.

| Model	MY8060-80XS	MY8045-60XS
Sensitivity (no-load)	SUS ball≥Φ0.3mm SUS wire≥Φ0.2×2mm glass ball≥Φ1.0mm ceramic ball≥Φ1.0mm	SUS ball≥Φ0.3mm SUS wire≥Φ0.2×2mm glass ball≥Φ1.0mm ceramic ball≥Φ1.0mm
Material size	Bulk（Detection Width Range 588mm）	Bulk（Detection Width Range 440mm）
Infeed belt width	620mm	470mm
Dimensions	2650×1442×2350mm	3060×1250×2280mm
Net weight	950kg	850kg
Load	6kg	5kg
X-Ray output	350W Max 80kV/8.0mA	350W Max 80kV/8.0mA
Infeed belt speed	10-100m/min adjustable	10-100m/min adjustable
Interface	17"LCD touch screen	17"LCD touch screen
X-Ray leakage	<1μ Sv/h	<1μ Sv/h
Protection Level	IP65 for drive parts , IP54 for others	IP65 for drive parts , IP54 for others
Power supply	single phase AC220V10%, 50/60Hz,2.5kW	single phase AC220V10%, 50/60Hz,2.5kW
Service environment	Ambient temperature 0-40℃ Relative humidity 30-85%℃ No condensation,no freezing,upheaval	Ambient temperature 0-40℃ Relative humidity 30-85%℃ No condensation,no freezing,upheaval

TEA SORTING PROCESSING LINE
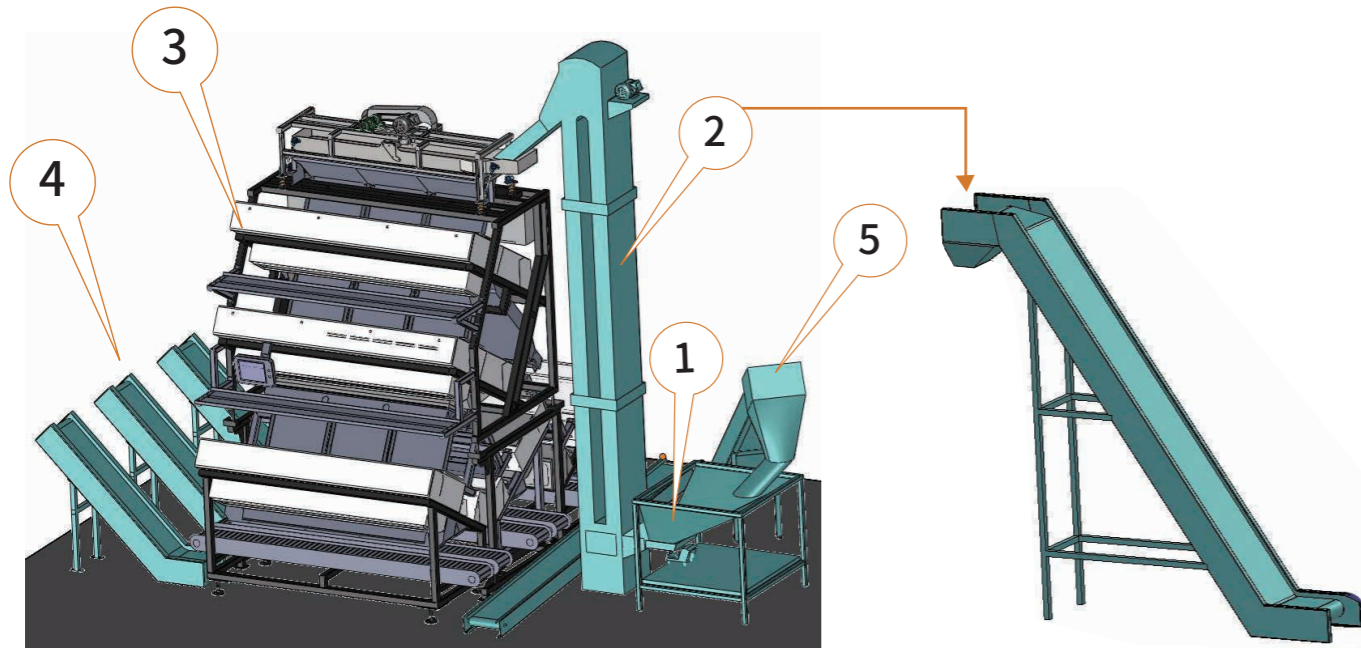
five-stage tea color sorter installation sketch map

1、Feeding Hopper
2、Feeding Bucket Elevator(optional)   4、Discharging Conveyor(optional)
3、Color Sorter   5、Circulating Conveyor(optional)

Dimension of Tea Sorting Processing Line(mm)

Type	Elevator	Length	Width	Height
3-stage sorter	Z type	10720	2460	4020
	Bucket	6740	2670	4470
4-stage sorter	Z type	9500	3400	4430
	Bucket	7100	3400	5000
5-stage sorter	Z type	9500	3400	4430
	Bucket	7100	3400	5000

Sorting Process Schematic Diagram
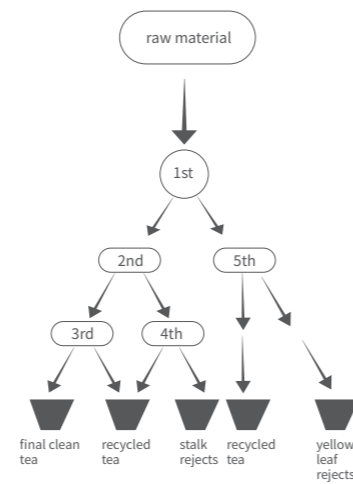
CONFIGURATION

		Item	900STD2	TD	TD-S	TD-W
Performance	Key parts	High Capacity Chip	●	○	○	○
		15-Inch LCD Screen	●	●	●	●
		Ultra HD True-Color Camera	●	●	●	●
		Customized Industry Lens Pro	●	○	○	○
		Infrared Camera	-	-	-	-
	Service Life	Maglev Ejector	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
		LED	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
	Performance	AI Self-learning	●	●	●	●
		Targeted Positioning	●	●	●	●
		Flexible Removal	●	●	●	●
		Material 3D Info Reconstruction	●	○	●	●
		Photo Preview	●	●	●	●
		Video Preview	●	-	-	-
		Infrared Imaging System	●	-	-	-
		Throughput	☆☆☆	☆☆☆	☆☆☆☆	☆☆☆☆☆
		Sorting Accuracy	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆
		Stalk & Leaf Separation	☆☆☆	☆☆☆	☆☆☆☆	☆☆☆☆
		Shape Sorting	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
		Foreign Matters	-	-	-	-
	Machine Protection	Stable Feeding System	●	-	-	-
		Multiple Protection For Wiper Cylinder	●	-	-	-
		Long Distance Protection Of Sorting Chamber	●	-	-	-
	Air Circuit System	High-efficient Air Circuit System	●	-	-	-
Intelligence	Sorter Care	Sorter Care App	●	-	-	-
		Remote Control	●	●	●	●
		Online Upgrade	●	●	-	-
		Intelligent Backup	●	-	-	-

		Item	TF	900TD3	1200TD2	1500TD2
Performance	Key parts	High Capacity Chip	○	●	●	●
		15-Inch LCD Screen	●	●	●	●
		Ultra HD True-Color Camera	●	●	●	●
		Customized Industry Lens Pro	○	●	●	●
		Infrared Camera	●	○	-	-
	Service Life	Maglev Ejector	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
		LED	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
	Performance	AI Self-learning	●	●	●	●
		Targeted Positioning	●	●	●	●
		Flexible Removal	●	●	●	●
		Material 3D Info Reconstruction	○	●	●	●
		Photo Preview	●	●	●	●
		Video Preview	-	●	●	●
		Infrared Imaging System	○	○	-	-
		Throughput	☆☆☆	☆☆☆☆☆	☆☆☆☆	☆☆☆☆☆
		Sorting Accuracy	☆☆☆☆	☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
		Stalk & Leaf Separation	☆☆☆	☆☆☆☆☆	☆☆☆☆☆	☆☆☆☆☆
		Shape Sorting	☆☆☆☆☆	☆☆☆	☆☆☆☆☆	☆☆☆☆☆
		Foreign Matters	☆☆☆☆	-	-	-
	Machine Protection	Stable Feeding System	●	●	●	●
		Multiple Protection For Wiper Cylinder	-	●	●	●
		Long Distance Protection Of Sorting Chamber	-	○	●	●
	Air Circuit System	High-efficient Air Circuit System	-	●	●	●
Intelligence	Sorter Care	Sorter Care App	●	●	●	●
		Remote Control	●	●	●	●
		Online Upgrade	-	●	●	●
		Intelligent Backup	-	●	●	●

Parameters above are tested on the environment of 25℃ and 2% impurities rate and may change in different conditions.
☆：Function strength，●：Standard，○：Selection -：No
The maglev ejector and LED can work throughout color sorters' life under ideal conditions.

ABOUT MEYER

BRIEF INTRODUCTION

WORLD-LEADING SUPPLIER OF INTELLIGENT IDENTIFICATION EQUIPMENT

Hefei Meyer Optoelectronic Technology INC (stock code: 002690) is a high & new tech company focused on the R&D of core technology and products in the field of intelligent sorting and inspection. With "for product quality, for customer satisfaction" at its value, Meyer has been dedicated to safeguarding the food safety and industrial products quality over the almost 30 years. As an innovation-driven company, Meyer invests about 6% of its turnover every year in R&D where over 35% employees work in.

In the future, Meyer will keep developing AI sorting and X-ray inspection where technical reserves and talents construction inevitably play a key role in sustainable development. Moreover, Meyer will expand application area of products, stick to innovation of service and management, and strive to be a world top high-tech company.

· Products cover more than 100 countries and regions

· 60,000+ machines in operation worldwide

· National Science & Technology Progress Award

· National Innovative Enterprises

· National Technological Innovation Model Enterprises

· National Intellectual Property Demonstration Enterprise

· Key Software Enterprise under National Planning

· Major High Technology Expertise under China Torch Program

· National Engineering Technology Research Center of Intelligent Sorting Equipment for Agricultural Products

· National Certified Enterprise Technology Center

· National Post-doctoral Research Workstation

· Hurun China 500 Most Valuable Private Companies

· China 500 Most Valuable Listed Companies

CUSTOMER PRODUCTION LINES

THE 1ST SMART FACTORY IN THE INDUSTRY

STANDARDIZATION   MODULARIZATION   INTELLIGENTIZATION   DIGITALIZATION

Sheet metal flexible processing production line

Color sorter final assembly line

Unmanned maglev ejector production line

Chute assembly robot workstation

Automatic circuit board SMT production line

Automatic frame powder spraying production line

· Over 20 automatic intelligent production lines and unmanned core component workshops
· World-leading machining equipment ensure high consistency and precision of parts
· Advanced production technology and strict debugging ensure the stable performance of core components
· The only high-standard intelligent painting workshop in the industry makes Meyer color sorter more corrosion-resistant and more environment-friendly
· The only final assembly line in the industry, with the CNC system automatically monitoring the whole process, boosts production's efficiency
· Making products to the best, whether 1 or 10,000 sets, always with the consistent quality.