

AI智选 · 数字分选技术开创者

AI Sort · Global Intelligent Manufacturer

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*因公司产品技术不断革新,本画册所列示的产品若涉及外观或性能等升级的,以实际升级后的产品性能为准。
Due to continuous innovation of our product technologies and in case of any upgrading of appearance or performance
if the products listed in the catalogue, the actual upgraded product performances shall prevail.

2023年3月



泰禾AI智选·数字分选技术开创者

Taiho AI Sort · Global Intelligent Manufacturer

2004: Taiho was founded;
合肥泰禾智能科技集团
股份有限公司成立;
2004年

2008: The first company to apply
high-speed and high-resolution CCD
technology to the field of sorting;
首家将高速高分辨率CCD
技术应用于分选领域;
2008年

2017: Taiho was listed on A-share
main board, code:603656;
上海证券交易所成功上市,
股票代码:603656;
2017年

2018: First application of AI
Intelligent Technology in the color
sorting industry;
首创将人工智能应用于
智能分选领域;
2018年

2022: AI Sort digital sorting technology
was officially released.
AI智选数字分选技术
正式发布;
2022年



AI SORT RELEASE THE BURDEN OF RICE COLOR SORTING

AI智选 让大米色选再无困扰



过度加工粮损高

High loss of the grains over-processed

AI智选, 实现谷糙分离, 留存糙米价值

AI Sort realizes the separation of grain and brown rice, and Maximize retain the value.



大米浅水黄不易选

Difficulty of Shallow yellow rice sorting

AI智选, 精准剔除, 再无遗漏

AI Sort realizes accurately removal and no more omissions.



大米安全难保障

Difficulty of food Safety

AI智选, 让品质传递安全

AI Sort guarantees the food safety by the high quality selection.



大米色选高能耗

High energy consumption for rice color sorting

AI智选, 设备低能耗, 生产更高效

AI Sort realizes the low energy consumption and more efficient production.

每一次的技术突破, 都将改变一个行业的竞争新格局

Every technological breakthrough will change the new competition pattern of an industry

糙米稻谷草籽分选 / Color sorting of Brown rice and paddy straw seed



糙米
Brown rice



稻谷
Paddy rice



草籽
Grass seed

黄白碎分选 / Color sorting of yellow and white broken rice



浅黄
Light yellow



腹白
Chalky rice



碎米
Broken rice

粳米籼米糯米分选 / Color sorting of Japonica, Indica and Glutinous Rice



粳米
Japonica Rice



籼米
Indica Rice



糯米
Glutinous rice

浅黄深黄透明分选 / Color sorting of light yellow, dark yellow and transparent rice



浅黄
Light yellow



深黄
Dark yellow



透明
Transparent rice

边白芯白全白分选 / Color sorting of edge white, core white and purely white rice



边白
Edge white



芯白
Core white



全白
Purely white

AI SORT REALIZES 20% IMPROVEMENT OF EXTREME LIGHT YELLOW RICE SORTING

AI智选, 极浅黄分选效果提升20%

01

CMOS

↑ 20%

全“芯”速度, 工业相机的未来

“Core” speed power,
the future of industry camera



CMOS传感器集成度更高, 减少数据传输阻力, 增强算力, 实现海量数据的实时处理。

优秀的图像色彩还原能力, 实现极高的帧速率及几乎无损的画质。

搭载智能相机系统并行处理能力4倍升级, 数据吞吐量升级2倍以上。

CMOS sensors have higher integration, reduce data transmission resistance, and enhance computing power to realize real-time processing of massive data.
Excellent image color reproduction ability, achieving extremely high frame rate and almost lossless image quality.
The parallel processing capability of the smart camera system is upgraded by 4 times, and the data throughput is upgraded by more than 2 times.

处理能力升级4倍



数据吞吐量升级2倍



4次成像, 极浅黄“镜”在掌握

4 times of imaging,
control all the extreme light yellow sorting



分时光源系统, 减少杂散光源影响, 获取前后视不同光源照明下的图像, 单次采集四副图片, 根据不同的图像设定配套的算法。

独家多视角4成像算法, 拟合大米数据模型, 真实再现极浅黄、腹白、芯白。

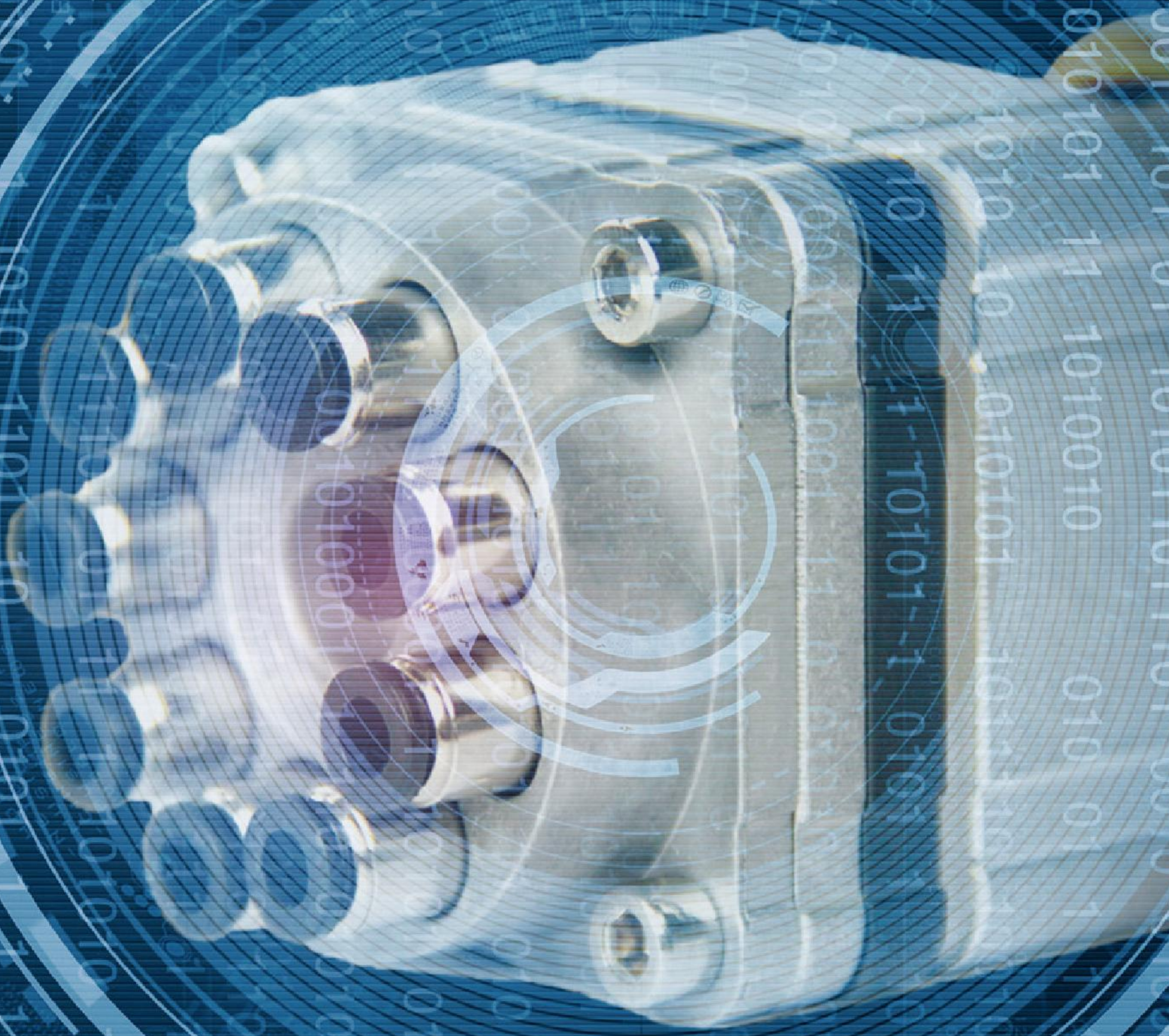
The time-sharing light source system reduces the influence of stray light sources, acquires images under the illumination of different light sources for front and rear views, collects four pictures at a time, and sets matching algorithms according to different images.
Exclusive multi-view 4 imaging algorithms fit the rice data model, and truly reproduce extreme light yellow, belly white, and core white.



AI SORT REALIZES 30% DECREASE OF ENERGY CONSUMPTION

AI智选, 功耗降低30%

02



↓ 30%

LED光学感知系统, 节能更耐用

LED optical perception system,
less energy consumption, more durable

采用低温聚光LED光源, 智能调光, 1600万种混色, 节能更耐用。

Using low temperature concentrating LED light source, intelligent dimming,
16 million colors mixing to achieve energy saving and more durable.

颜色还原度算法, 清晰更真实

Color reduction algorithm,
clearer and more real

融合光、质、色、形等多维数据, 实现对大米原料的量子级识别,
还原物料真实本色。

Integrate multi-dimensional data such as light, quality, color, and shape to
achieve quantum-level identification of raw materials and restore the true
nature of the rice.

智能变频电磁阀, 省气更省电

Intelligent frequency conversion solenoid
valve saves gas and electricity

自适应喷吹系统, 无尾气、不漏气, 响应速度快、功耗低、寿命长。

Adaptive injection system, no exhaust, no leakage, fast response, low power
consumption and long life.

中心定位剔除算法, 高效更精准

Center location elimination algorithm,
more efficient and precise

算法拟合缺陷物料数字模型, 标记物料中心点, 实现小气量、更
精准的中心剔除。

Algorithm fitting digital model could mark the center point of the material
and achieve small air volume and more precise center removal.

Global Intelligent Manufacturing
AI Vision Expert
世界智造•AI视觉专家

AI SORT REALIZES 20% INCREASE OF PRODUCTION

AI智选, 产量大增20%

03

↑ 20%

智能全息闪视相机, 高分辨更清晰

Intelligent holographic flash camera, high resolution and clearer

适配CMOS图像传感器, 灵活切换可见或红外光学镜头, 可实现35K高速成像+3.5亿像素超清分辨。

Adapt to CMOS image sensors, flexibly switch visible or infrared optical lenses, and achieve 35K high-speed imaging + 350 million pixel ultra-clear resolution.

AI智芯处理平台, 速度快更智能

AI processing platform, faster and smarter

搭载SOC智芯, 融合AI深度学习算法, 构架出集成度更高、运算更快、处理能力更强的分选平台。

Equipped with SOC intelligent core, integrated with AI deep learning algorithm, a sorting platform with higher integration, faster operation and stronger processing capacity is constructed.

智能清灰5.0系统, 大吸力更干净

The 5.0 system of intelligent dust self-cleaning, clean better with large suction.

全覆盖渐变式清灰处理系统, 可选配上抽风吸尘装置, 结构更合理, 吸力更强劲, 除尘更干净。

The full-coverage gradient cleaning system can be equipped with an upper suction and dust collector. The structure is more reasonable with the stronger suction and cleaner removal.

自适应喂料系统, 大产量更均匀

Self-adaptive feeding system, large output is more evenly

适配智能料位传感器, 无接触实时监控下料情况, 通过PID闭环控制, 平衡通道下料量, 实现均匀下料。

Adapted to intelligent material level sensor, non-contact real-time monitoring of the feeding situation, through PID closed-loop control, to balance the channel feeding amount to achieve uniform feeding.

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AI SORT FITS ALL KINDS OF THE SELECTION DEMAND

AI智选, 随心所选, 样样心动

04

分选方案
灵活配置

形状分选

颜色分选

恶杂分选

形状分选

Shape sorting

长、碎、细、圆, 全方位物料形态学特征识别, 可与色选功能同时使用。

Long, broken, thin, round, all feature recognition of materials morphology can be used at the same time with the color sorting function.

颜色分选

Color sorting

支持**灰度、色差、SVM、HSV算法**, 分别在一维、二维、三维颜色坐标系中进行运算, 实现基于物料颜色的识别和剔除。

Supporting grayscale, color difference, SVM, HSV algorithms, respectively perform operations in one-dimensional, two-dimensional, and three-dimensional color coordinate systems to realize identification and rejection based on material color.

恶杂分选

Impurities sorting

应用多谱共焦+红外分选技术, 实现玻璃、干燥剂、透明塑料粒子、杂色塑料、米色塑料、米色石子、烟头、袋绳、铁片等**恶性杂质**精准剔除。

The application of multi-spectral confocal + infrared sorting technology can accurately remove malignant impurities such as glass, desiccant, transparent plastic particles, variegated plastics, beige plastics, beige stones, cigarette butts, bag ropes, and iron pieces.

分选方案灵活配置

Flexible configuration of sorting scheme

自选谷糙分离模式、异色粒模式、病斑粒模式、乳白粒模式、糯米中选透明米模式、黄白同选并分离模式、黄碎同选并分离模式。

Grain and brown rice sorting mode, heterochromatic grain sorting mode, diseased grain sorting mode, milky white grain sorting mode, glutinous and transparent rice sorting mode, yellow and white selection and separation mode, yellow and broken grain selection and separation mode.

AI SORT, INTELLIGENT SERVICE, ONE-CLICK MANAGEMENT

AI智选, 智能管家, 一“键”倾心

05

OPTICAL
SCI-FI FLARES



智慧物联, 自动交互

Intelligent IoT, automatic interaction



一机配网, 全家共享

All-in-one distribution network



自我诊断, 故障自检

Self-diagnosis, fault self-check



远程协助, 跨越距离

Remote assistance

TAI+智造互联平台

TAI+ Intelligent Manufacturing
Interconnection Platform

利用TAI+智造互联平台, 实现企业、客户、设备互联互通, 机器数据的实时采集和状态的实时监控。

Use TAI+ platform to realize the interconnection of enterprises, customers and equipment, real-time collection of machine data and real-time monitoring of status.

工业物联网专用定制4G/5G网关, 具备路由, 4G/5G、WIFI和有网上网功能, 用户利用手机、电脑随时随地查看设备的实时工作状态; 还可以通过微信小程序发起售后服务申请, 提出改善意见, 以获取优质快捷的贴心服务。

Customized 4G/5G gateway for industrial IoT, with routing, 4G/5G, WIFI and wired Internet access functions, users can use mobile phones and computers to check the real-time working status of equipment anytime, anywhere; they can also initiate after-sales service applications through WeChat and propose improvements Opinions, in order to obtain high-quality and fast caring service.

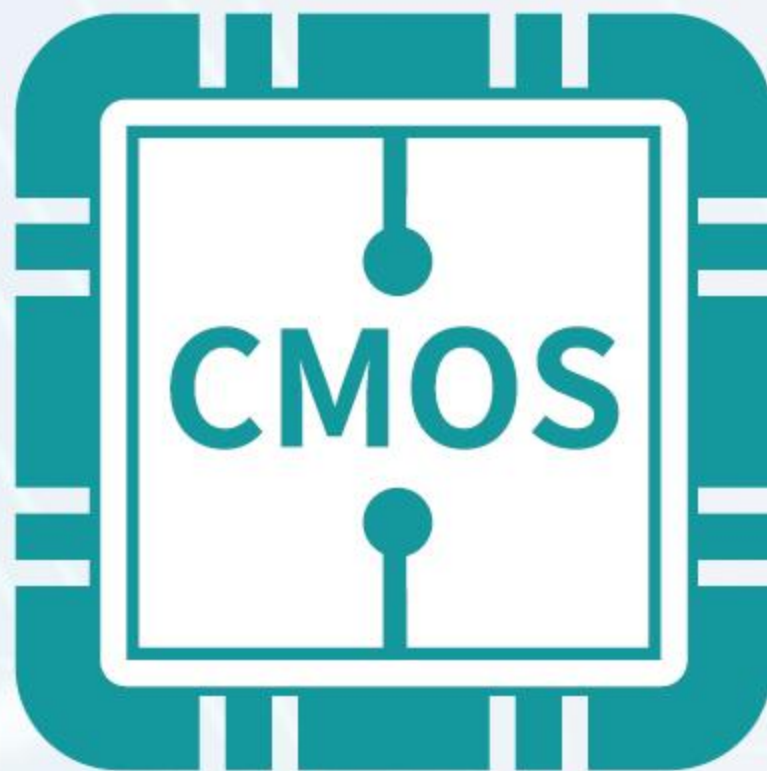
具备机器自检功能, 在开机过程中自动检测机器核心部件故障, 例如: 灯光故障、相机故障等, 及时向生产管理人员报警, 并对异常结果做出相应处理。

It has the function of machine self-checking, which can automatically detect the failure of the core components of the machine during the startup process, such as light failure, camera failure, etc., and promptly alarm the production management personnel, and deal with the abnormal results accordingly.

工程师远程连接客户机器, 了解机器状态, 调整色选参数, 实现色选效果的优化, 为客户提供更快捷的售后服务。同时实现设备远程运维、智能分选、方案备份、软件升级等。

The engineer connects the customer's machine remotely, checks the machine status, adjusts the color sorting parameters, realizes the optimization of the color sorting effect, and provides customers with faster after-sales service. At the same time, it realizes remote operation and maintenance of equipment, intelligent sorting, program backup, software upgrade, etc.

Global Intelligent Manufacturing
AI Vision Expert
世界智造•AI视觉专家



AI全“芯”升级,天生强大与众不同

AI "core" upgrade, naturally powerful and unique

AI智选V系列, 独家应用CMOS图像传感技术, 35K天生强大的行频让“V系列”拥有更高的图像解析能力和色彩还原能力, 与众不同之处在于独特的嵌入式设计让每一台智能相机都拥有独立的操作系统和管理系统。标配多谱共焦功能, 玻璃、干燥剂、透明塑料粒子无所遁形。

先进的人工智能算法赋予设备强大的学习能力和自我升级能力, 自适应复杂物料分选, 未来不再受限。

AI sort of V series are exclusively applied with CMOS image sensing technology. 35K inherently powerful line frequency allows "V series" to have higher image resolution capabilities and color reproduction capabilities, the difference is that the unique embedded design allows each a smart camera has an independent operating system and management system. Glass, desiccant, transparent plastic particles are invisible with standard multi-spectral confocal function. Advanced AI algorithms endow the equipment with powerful learning ability and self-upgrading ability, and self-adaptive sorting of complex materials will no longer be limited in the future.



备注 / Note



- 1、以上色选性能均以含杂低于2%的大米为例；
2、产品若有更新以实际机器为准。
1. The above color sorting performance is based on rice with impurities less than 2% as an example;
2. If the product is updated, please refer to the actual machine.

产品系列 product series	型号 model	处理量 throughput (t/h)	带出比 carry over ratio	整机功率 power (kw)	电源电压 supply voltage (v)	气源压力 air pressure (mpa)	气源消耗 air consumption (m³/min)	规格尺寸 size (mm)	机器重量 weight (kg)
V系列 V SERIES	6SXM-504V	9.0-18.0	>140:1	4.7	AC220V±10%	0.5-0.8	3.5-4.5	3091*1460*1960	1686
	6SXM-630V	11.0-22.0	>140:1	5.8	AC220V±10%	0.5-0.8	4.5-6.5	3719*1460*1960	2047
	6SXM-819V	13.0-26.0	>140:1	7.8	AC220V±10%	0.5-0.8	5.0-7.5	5125*1450*1980	2615

智选

天眼系列
Observation Series

品质由我“摄”定, AI赋能多维智选

Quality priority, AI empowers multi-dimensional intelligent sorting

AI智选天眼系列, 应用行业最高3.5亿像素超清影像+类太阳光谱技术, 实现360度多维成像。搭载AI自协同传感技术, 匹配军工级通讯系统, 打造高集成、快传输、更智能的分选系统。应用多谱共焦技术, 实现对大米中玻璃、干燥剂、透明塑料粒子的有效剔除。

The AI sort of observation series uses the industry's highest 350 million pixel ultra-clear image + solar-like spectrum technology to achieve 360-degree multi-dimensional imaging. Equipped with AI self-collaborative sensing technology, it matches the military-grade communication system to create a highly integrated, fast transmission, and more intelligent sorting system. Multi-spectral confocal technology is applied to effectively remove glass, desiccant and transparent plastic particles in rice.

干燥剂
Desiccant

玻璃
Glass

透明塑料粒子
Transparent plastic particles

产品系列 product series	型号 model	处理量 throughput (t/h)	带出比 carry over ratio	整机功率 power (kw)	电源电压 supply voltage (v)	气源压力 air pressure (mpa)	气源消耗 air consumption (m³/min)	规格尺寸 size (mm)	机器重量 weight (kg)
天眼系列 OBSERVATION SERIES	6SXM-252V	4.0-8.0	>120:1	2.4	220V/50Hz	0.5-0.8	1.5-2.5	1835*1460*1960	1020
	6SXM-315V	5.0-10.0	>120:1	3.0	220V/50Hz	0.5-0.8	2.0-3.0	2149*1460*1960	1187
	6SXM-378V	6.0-12.0	>120:1	3.6	220V/50Hz	0.5-0.8	2.5-3.5	2463*1460*1960	1332
	6SXM-441V	7.0-14.0	>120:1	4.1	220V/50Hz	0.5-0.8	3.0-4.0	2777*1460*1960	1525
	6SXM-504V	8.0-16.0	>120:1	4.7	220V/50Hz	0.5-0.8	3.5-4.5	3091*1460*1960	1686
	6SXM-630V	10.0-20.0	>120:1	5.8	220V/50Hz	0.5-0.8	4.5-6.5	3719*1460*1960	2047
	6SXM-819V	13.00-26.0	>120:1	7.8	220V/50Hz	0.5-0.8	5.0-7.5	5125*1450*1980	2615

备注 / Note

1、以上色选性能均以含杂低于2%的大米为例；

2、产品若有更新以实际机器为准。

1. The above color sorting performance is based on rice with impurities less than 2% as an example;

2. If the product is updated, please refer to the actual machine.



天眼红外系列

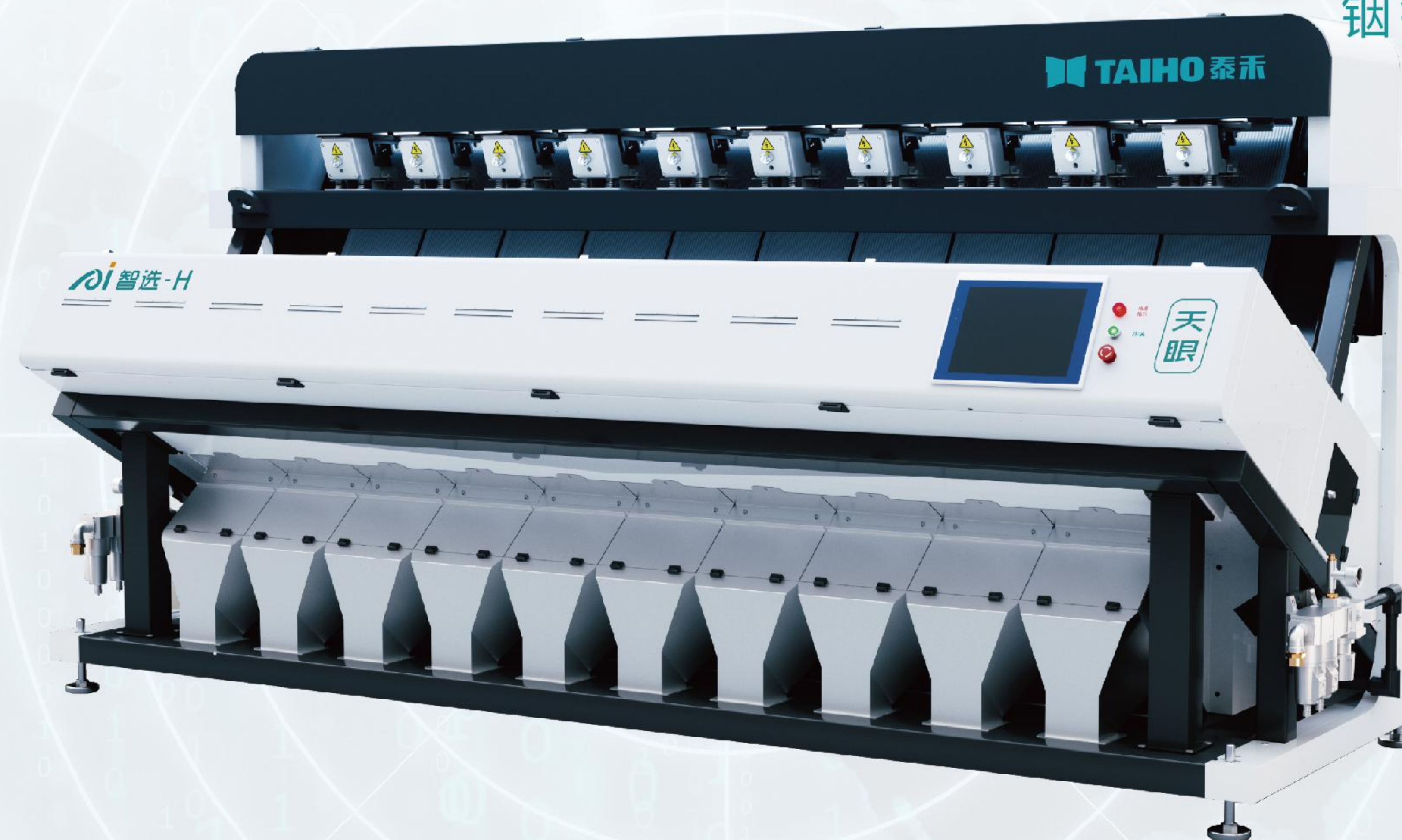
Observation Infrared Series



铟镓砷

InGaAs全息红外, 看清材质看见本质

InGaAs holographic infrared,
throughing appearance capture essence



AI智选天眼红外系列, 独创InGaAs红外智选技术, 看清材质看见本质, 智能匹配AI分选方案, 满足不同分选需求。同步搭载可见镜头+红外镜头, 看得更清, 识别更精, 让塑料、金属、石子、袋绳、昆虫、烟头等恶杂无所遁形。

AI sort Infrared series, the original InGaAs infrared smart selection technology, can clearly see the material and see the essence, and intelligently match the AI sorting scheme to meet different sorting needs. Simultaneously equipped with visible lens + infrared lens, you can see more clearly and identify more accurately, so that plastics, metals, stones, bag ropes, insects, cigarette butts and other evils are invisible.

产品系列 product series	型号 model	处理量 throughput (t/h)	带出比 carry over ratio	整机功率 power (kw)	电源电压 supply voltage (v)	气源压力 air pressure (mpa)	气源消耗 air consumption (m ³ /min)	规格尺寸 size (mm)	机器重量 weight (kg)
天眼红外系列 OBSERVATION INFRARED SERIES	6SXM-504VJH	8.0-16.0	>120:1	4.7	220V/50Hz	0.5-0.8	3.5-4.5	3091*1460*1960	1686
	6SXM-630VJH	10.0-20.0	>120:1	5.8	220V/50Hz	0.5-0.8	4.5-6.5	3719*1460*1960	2047
	6SXM-819VJH	13.0-26.0	>120:1	7.8	220V/50Hz	0.5-0.8	5.0-7.5	5125*1450*1980	2615
	6SXM-504VFH	8.0-16.0	>120:1	4.7	220V/50Hz	0.5-0.8	3.5-4.5	3091*1460*1960	1686
	6SXM-630VFH	10.0-20.0	>120:1	5.8	220V/50Hz	0.5-0.8	4.5-6.5	3719*1460*1960	2047
	6SXM-819VFH	13.0-26.0	>120:1	7.8	220V/50Hz	0.5-0.8	5.0-7.5	5125*1450*1980	2615

备注 / Note 1、以上色选性能均以含杂低于2%的大米为例； 2、产品若有更新以实际机器为准。
1. The above sorting performance is measured on rice with less than 2% impurity.
2. Products may have upgrade and vary without prior notice.



Zervi
Series

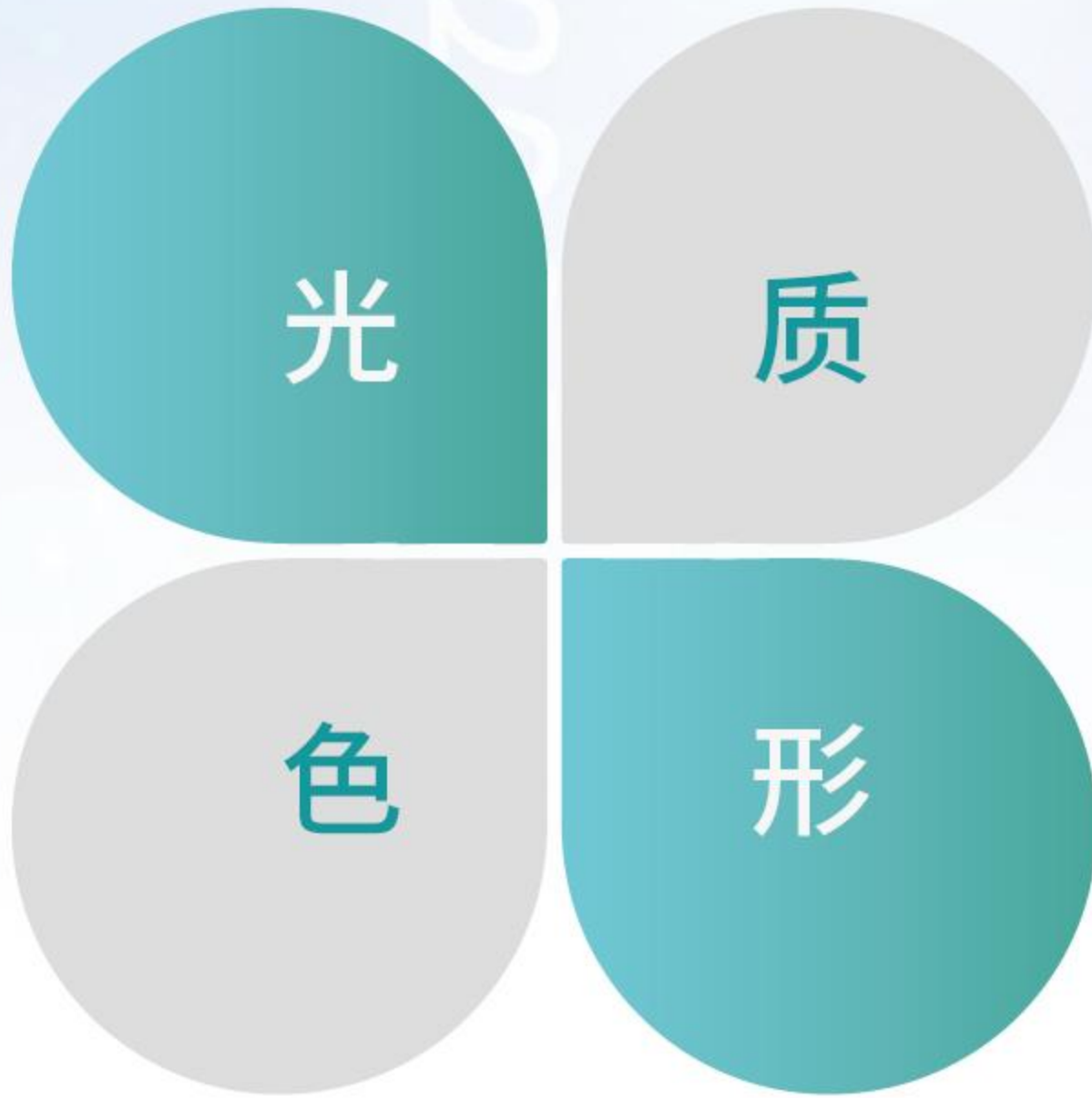
智睿系列

形色双选“镜”在掌握,呈现本色格外出色

Shape and color sorting under control,
outstandingly present naturally

全新智睿系列,升级搭配2.6亿像素+环曲自修复镜头,呈现物料真实本色。应用行业领先科技及工艺,卓越的分选科技,形选+色选技术,量子级识别,轻松实现经济、高效、高产。可选配多谱共焦功能,精选大米中的玻璃、干燥剂、透明塑料粒子。

The new Zervi series is upgraded with 260 million pixels + ring-shaped self-healing lens, showing the true nature of the material. Applying industry-leading technology and craftsmanship, excellent sorting technology, shape selection + color sorting technology, and quantum-level identification, it is easy to achieve economical, efficient and high-yield. Optional multi-spectral confocal function, select glass, desiccant and transparent plastic particles in rice.



产品系列 product series	型号 model	处理量 throughput (t/h)	带出比 carry over ratio	整机功率 power (kw)	电源电压 supply voltage (v)	气源压力 air pressure (mpa)	气源消耗 air consumption (m³/min)	规格尺寸 size (mm)	机器重量 weight (kg)
智睿系列 ZERV SERIES	6SXM-252S	3.0-7.0	>110:1	2.4	220V/50Hz	0.5-0.8	1.5-2.5	1872*1520*2090	1030
	6SXM-315S	4.0-9.0	>110:1	3.0	220V/50Hz	0.5-0.8	2.0-3.0	2186*1520*2090	1160
	6SXM-378S	4.5-11.0	>110:1	3.6	220V/50Hz	0.5-0.8	2.5-3.5	2540*1520*2090	1355
	6SXM-441S	5.0-12.5	>110:1	4.1	220V/50Hz	0.5-0.8	3.0-4.0	3134*1520*2090	1575
	6SXM-504S	6.0-14.0	>110:1	4.7	220V/50Hz	0.5-0.8	3.5-4.5	3448*1520*2090	1740
	6SXM-630S	7.5-18.0	>110:1	5.8	220V/50Hz	0.5-0.8	4.5-6.5	4076*1520*2090	2130
	6SXM-756S	9.0-21.0	>110:1	7.2	220V/50Hz	0.5-0.8	4.8-7.5	2546*2784*1950	2466
	6SXM-1008S	12.0-28.0	>110:1	9.4	220V/50Hz	0.5-0.8	6.5-10.0	3194*2785*1950	2983

备注 / Note



- 1、以上色选性能均以含杂低于2%的大米为例；
2、产品若有更新以实际机器为准。
1. The above color sorting performance is based on rice with impurities less than 2% as an example;
2. If the product is updated, please refer to the actual machine.

AL-KARAM RICH
Engineering

After-sale Services 售后服务

公司坚持“以客户为中心”为指导方针，倡导所有员工随时关注客户的需求，竭力为国内外客户提供解决方案的服务理念。

公司现有90余名售后服务人员，服务下沉至地市级，直接贴近客户，为客户提供及时、快速、周到的服务，实现24小时内上门服务。

对客户实行整机一年免费维护和保养，并及时提供专业培训和技术指导解决客户后顾之忧，充分体现快速响应，及时维护，跟踪协调的服务模式。

The company adheres to the “customer-centered” guideline, advocates all staff to focus on customer demand and strives to provide solutions for domestic and overseas customers.

There are more than 90 after-sales service workers in the company, and the services go to prefecture-level cities and directly approach customers. The service workers provide timely, fast and thoughtful services and achieve 24h door-to-door services.

The whole machine will be maintained free of charge for one year, and professional training and technical guidance will be provided for customers to solve their worries. These fully mirror the service mode of quick response, timely maintenance, tracking and coordination.

