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narrating the future

# ABOUT ZHIXU

## 关于我们

温州赛宝工业技术研究院（知叙智能联合实验室），实验大楼位于温州市乐清市现代都市田园综合体内，实验室占地 51 亩，建筑面积 49000 平方米，自主研发制造自动化视觉检测设备、在线视觉检测以及视觉检测软件的高新技术企业。知叙智能研发团队核心技术人员中，具有多位十多年视觉研发经验的行业精尖人员。知叙智能雄厚的研发实力，在机器视觉检测领域获得了多项专利，研发能力达到了行业先进水平。

知叙智能宗旨在帮助客户解决产品品质问题，帮助客户优化生产工艺、降低生产成本、提高生产效率、确保产品拥有完美品质。知叙向多家行业龙头企业提供了行业领先的视觉检测产品和解决方案，现已服务超过 100 个行业，并获得了客户的认可。知叙助力客户实现智能制造、在竞争中取得优势地位，为客户创造价值。

知叙智能视觉检测设备及在线视觉检测产品广泛应用于手机、电子产品、精密五金、注塑产品、工业制造、汽车制造、机械加工、粉末冶金、新能源、元器件、太阳能、电器、服装、日用品、食品、医疗、医药、军工、航空航天等领域。我们正处于工业革命的新时代，面向未来，把握机遇。坚持自主创新、是我们义不容辞的义务和责任。为中国智造树立民族品牌，一往无前。

Wenzhou Saibao Industrial Technology Research Institute (Zhixu Intelligent Joint Laboratory) has an experimental building located within the modern urban rural complex of Yueqing City, Wenzhou. The laboratory covers an area of 51 acres and has a building area of 49000 square meters. It is a high-tech enterprise that independently develops and manufactures automated visual inspection equipment, online visual inspection, and visual inspection software. Among the core technical personnel of the Zhixu Intelligent R&D team, there are several industry experts with over ten years of experience in visual research and development. Zhixu Intelligence has strong research and development capabilities, and has obtained multiple patents in the field of machine vision inspection. Its research and development capabilities have reached an advanced level in the industry.

The purpose of Zhixu Intelligence is to help customers solve production quality problems, optimize production processes, reduce production costs, improve production efficiency, and ensure that products have perfect quality. Zhixu has provided industry-leading visual inspection products and solutions to multiple industry leaders, serving over 100 industries and gaining recognition from customers. Zhixu helps customers achieve intelligent manufacturing, gain a competitive advantage, and create value for them.

Zhixu intelligent visual inspection equipment and online visual inspection products are widely used in fields such as mobile phones, electronic products, precision hardware, injection molded products, industrial manufacturing, automobile manufacturing, mechanical processing, powder metallurgy, new energy, electronic components, solar energy, electrical appliances, clothing, daily necessities, food, medical, pharmaceutical, military, aerospace, etc. We are in a new era of industrial revolution, facing the future and seizing opportunities. It is our duty and responsibility to adhere to independent innovation. Establishing a national brand for intelligent manufacturing in China, moving forward without hesitation.

严控品质，多牌拓市  
Strict QC,  
expand via  
multi-brands

深耕品牌，聚力共赢  
Cultivate brands,  
win-win via teamwork

潜心研创，精进深耕  
Focus on R&D, strive  
for excellence

## 服务于各领域 Serving various fields



电子产品

ELECTRONIC PRODUCTS



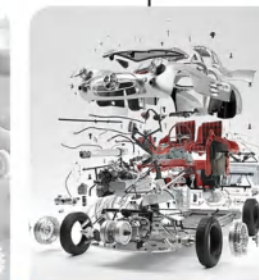
精密五金

PRECISION HARDWARE



注塑产品

INJECTION MOLDED  
PRODUCTS



汽车制造

AUTOMOBILE  
MANUFACTURING



新能源

NEW ENERGY





知叙智能



以可靠品质筑牢生产根基，以智能实力激活车间动能。优质智能设备不止品质出众，更贴合车间实际生产需求，助力车间实现标准化生产、精细化管理，让生产更高效、管理更省心、产能更出众，成为工厂车间提质增产的得力优选。智叙智能科技深耕智能设备领域，始终以“品质为基、智能为核、体验为本”，为每一位用户提供值得信赖的设备选择。

Build a solid production foundation with reliable quality and activate workshop energy with intelligent strength. High quality intelligent devices not only have outstanding quality, but also meet the actual production needs of the workshop, helping the workshop achieve standardized production and refined management, making production more efficient, management more worry free, and production capacity more outstanding, becoming a powerful choice for improving quality and increasing production in factory workshops.

Zhixu Intelligent Technology is deeply rooted in the field of intelligent devices, always adhering to the principles of "quality as the foundation, intelligence as the core, and experience as the foundation", providing every user with trustworthy device choices.

# QUALITY MANAGEMENT

## 品质管理

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Integrating knowledge and action,  
narrating the future



# ZX-WJJGJ-001

五金紧固件视觉智能检测设备  
Visual Intelligent Inspection  
Equipment For Hardware Fasteners

- 超高速检测
- 简易的操作方式
- 人性化系统设计
- 友好的用户界面
- Ultra high speed detection
- Simple operation method
- Humanized system design
- Friendly user interface
- 高度自动化送料
- 高效产品有序排列
- 显著降低人工依赖
- 高透明玻璃盘面的检测
- Highly automated feeding
- Efficient products arranged in an orderly manner
- Significant reduction in manual dependence
- Detection of high transparency glass surface



**ZX-WJJGJ-001**  
五金紧固件视觉智能检测设备  
Visual Intelligent Inspection  
Equipment For Hardware Fasteners



## 机器特点 / Machine characteristics

自动送料系统：将产品倒入振动盘，振动盘产生振动波，让产品有序地排列到入料平送器上实现排料入料功能，大大减少人工上料频率。利用玻璃高透明性，物件可平稳放置于检测盘面或可平躺者皆可检测，检测速度最高可每分钟 2000pcs，精度最高可达 1 $\mu$ 。具有人性化设计机台及操作系统、简易的操作方式和用户界面。

Automatic feeding system: Pour the products into the vibrating plate, which generates vibration waves, allowing the products to be arranged in an orderly manner on the feeding conveyor to achieve the function of discharging and feeding, greatly reducing the frequency of manual feeding. By utilizing the high transparency of glass, objects can be smoothly placed on the detection surface or can be detected by lying flat. The detection speed can reach up to 2000pcs per minute, and the accuracy can reach up to 1  $\mu$ . It has a humanized design machine and operating system, simple operation mode, and user interface.

## 检测项目 / Test Items

尺寸检测：高度、牙外径、牙底径、牙中径、杆长、头径、头厚、倒角直径、台阶尺寸、对边尺寸、对角尺寸、槽径、槽高、角度、尖锐度、同心度、真圆度、焊点尺寸等；

外观检测：有无牙、牙伤、头部槽内堵孔、头部开裂、斜牙、有无焊点、有无耐落、压伤、划痕、变形、有无倒角、漏加工、字符识别（标记检测）、混料。

Size detection: height, tooth outer diameter, tooth base diameter, tooth center diameter, rod length, head diameter, head thickness, chamfer diameter, step size, opposite edge size, diagonal size, groove diameter, groove height, angle, sharpness, concentricity, roundness, weld size, etc;

Appearance inspection: Check for teeth, tooth injuries, blocked holes in the head groove, cracked head, slanted teeth, welding points, drop resistance, pressure damage, scratches, deformation, chamfers, missed processing, character recognition (marking inspection), mixing.

## 检测系统 / Detection system

品牌 brand	知叙智能 Zhixu Intelligence
检测软件 Detection software	影像检测软件 Image detection software
设备类型 Device Type	AI 智能玻璃盘影像筛选机 AI intelligent glass disk image screening machine
适用范围 Scope of application	适用于检测各类紧固件、电子元器件、密封产品、磁性材料、钮扣、塑胶硅胶、五金产品、手机配件、声学部件等 Suitable for testing various fasteners, electronic components, sealing products, magnetic materials, buttons, plastic silicone, hardware products, mobile phone accessories, acoustic components, etc
相机个数 Number of cameras	可添加 2-10 相机（根据需求来定） 2-10 cameras can be added (depending on requirements)
操作系统 Operating system	工业电脑 industrial computer
检测速度 Detection speed	最高可达 2000pcs（根据物体来定） Up to 2000pcs (depending on the object)
检测精度 Detection accuracy	最高可达 1 $\mu$ Up to 1 $\mu$ m
电源电压 Power supply voltage	220V, 50HZ
气压 Atmospheric pressure	86-106kpa
设备重量 Equipment weight	400kg
设备尺寸 Device dimensions	1900mm(H)×1000mm(W)×1000mm(L)
工作温度 Operating Temperature	10°C -55°C之间 Between 10 °C and 55 °C

# ZX-DZYQJ-001

电子元器件视觉智能检测设备  
Visual Intelligent Detection Equipment  
For Electronic Components

- 超高速检测
- 简易的操作方式
- 人性化系统设计
- 友好的用户界面
- Ultra high speed detection
- Simple operation method
- Humanized system design
- Friendly user interface
- 高度自动化送料
- 高效产品有序排列
- 显著降低人工依赖
- 高透明玻璃盘面的检测
- Highly automated feeding
- Efficient products arranged in an orderly manner
- Significant reduction in manual dependence
- Detection of high transparency glass surface



## ZX-DZYQJ-001 电子元器件视觉智能检测设备 Visual Intelligent Detection Equipment For Electronic Components



### 机器特点 / Machine characteristics

自动送料系统：将产品倒入振动盘，振动盘产生振动波，让产品有序地排列到入料平送器上实现排料入料功能，大大减少人工上料频率。利用玻璃高透明性，物件可平稳放置于检测盘面或可平躺者皆可检测，检测速度最高可每分钟 2000pcs，精度最高可达 1 $\mu$ 。具有人性化设计机台及操作系统、简易的操作方式和用户界面。

Automatic feeding system: Pour the products into the vibrating plate, which generates vibration waves, allowing the products to be arranged in an orderly manner on the feeding conveyor to achieve the function of discharging and feeding, greatly reducing the frequency of manual feeding. By utilizing the high transparency of glass, objects can be smoothly placed on the detection surface or can be detected by lying flat. The detection speed can reach up to 2000pcs per minute, and the accuracy can reach up to 1  $\mu$ . It has a humanized design machine and operating system, simple operation mode, and user interface.

### 检测项目 / Test Items

尺寸检测：高度、长度、直径、内 / 外径、对边、同心度、真圆度、焊点尺寸等；

外观检测：划痕、脏污、毛刺、裂纹、氧化、崩缺、有无焊点、有无耐落、漏加工、字符识别、混料、污渍等。

Size inspection: height, length, diameter, inner/outer diameter, opposite sides, concentricity, roundness, solder joint size, etc;

Appearance inspection: scratches, dirt, burrs, cracks, oxidation, chipping, presence of solder joints, resistance to falling, missed processing, character recognition, mixing, stains, etc.

### 检测系统 / Detection system

品牌 brand	知叙智能 Zhixu Intelligence
检测软件 Detection software	影像检测软件 Image detection software
设备类型 Device Type	AI 智能玻璃盘影像筛选机 AI intelligent glass disk image screening machine
适用范围 Scope of application	适用于检测各类紧固件、电子元器件、密封产品、磁性材料、钮扣、塑胶硅胶、五金产品、手机配件、声学部件等 Suitable for testing various fasteners, electronic components, sealing products, magnetic materials, buttons, plastic silicone, hardware products, mobile phone accessories, acoustic components, etc
相机个数 Number of cameras	可添加 2-10 相机 (根据需求来定) 2-10 cameras can be added (depending on requirements)
操作系统 Operating system	工业电脑 industrial computer
检测速度 Detection speed	最高可达 2000pcs (根据物体来定) Up to 2000pcs (depending on the object)
检测精度 Detection accuracy	最高可达 1 $\mu$ Up to 1 $\mu$ m
电源电压 Power supply voltage	220V, 50HZ
气压 Atmospheric pressure	86-106kpa
设备重量 Equipment weight	400kg
设备尺寸 Device dimensions	1900mm(H)×1000mm(W)×1000mm(L)
工作温度 Operating Temperature	10°C -55°C之间 Between 10 °C and 55 °C

# ZX-GJMFJ-001

## 硅胶密封件视觉智能检测设备 Silicone Seal Visual Intelligent Detection Equipment

- 超高速检测
- 简易的操作方式
- 人性化系统设计
- 友好的用户界面
- Ultra high speed detection
- Simple operation method
- Humanized system design
- Friendly user interface
- 高度自动化送料
- 高效产品有序排列
- 显著降低人工依赖
- 高透明玻璃盘面的检测
- Highly automated feeding
- Efficient products arranged in an orderly manner
- Significant reduction in manual dependence
- Detection of high transparency glass surface



## ZX-GJMFJ-001

### 硅胶密封件视觉智能检测设备

Silicone Seal Visual Intelligent Detection Equipment



#### 机器特点 / Machine characteristics

自动送料系统: 将产品倒入振动盘, 振动盘产生振动波, 让产品有序地排列到入料平送器上实现排料入料功能, 大大减少人工上料频率。利用玻璃高透明性, 物件可平稳放置于检测盘面或可平躺者皆可检测, 检测速度最高可每分钟 2000pcs, 精度最高可达 1 $\mu$ 。具有人性化设计机台及操作系统、简易的操作方式和用户界面。

Automatic feeding system: Pour the products into the vibrating plate, which generates vibration waves, allowing the products to be arranged in an orderly manner on the feeding conveyor to achieve the function of discharging and feeding, greatly reducing the frequency of manual feeding.

By utilizing the high transparency of glass, objects can be smoothly placed on the detection surface or can be detected by lying flat. The detection speed can reach up to 2000pcs per minute, and the accuracy can reach up to 1  $\mu$ . It has a humanized design machine and operating system, simple operation mode, and user interface.

#### 检测项目 / Test Items

尺寸检测: 内 / 外径、截面直径、厚度、同心度 / 圆度、长度、对边、对角等;

外观检测: 表面划痕、压伤、变形、污渍、气泡、裂纹、杂质、缺胶、毛边 / 披风、表面粗糙、混料、硫化不均等。

Dimensional inspection: inner/outer diameter, cross-sectional diameter, thickness, concentricity/roundness, length, opposite edges, diagonals, etc;

Appearance inspection: surface scratches, dents, deformations, stains, bubbles, cracks, impurities, missing glue, burrs/cloaks, rough surface, mixing, uneven vulcanization.

#### 检测系统 / Detection system

品牌 brand	知叙智能 Zhixu Intelligence
检测软件 Detection software	影像检测软件 Image detection software
设备类型 Device Type	AI 智能玻璃盘影像筛选机 AI intelligent glass disk image screening machine
适用范围 Scope of application	适用于检测各类紧固件、电子元器件、密封产品、磁性材料、钮扣、塑胶硅胶、五金产品、手机配件、声学部件等 Suitable for testing various fasteners, electronic components, sealing products, magnetic materials, buttons, plastic silicone, hardware products, mobile phone accessories, acoustic components, etc
相机个数 Number of cameras	可添加 2-10 相机 (根据需求来定) 2-10 cameras can be added (depending on requirements)
操作系统 Operating system	工业电脑 industrial computer
检测速度 Detection speed	最高可达 2000pcs (根据物体来定) Up to 2000pcs (depending on the object)
检测精度 Detection accuracy	最高可达 1 $\mu$ Up to 1 $\mu$ m
电源电压 Power supply voltage	220V, 50HZ
气压 Atmospheric pressure	86-106kpa
设备重量 Equipment weight	400kg
设备尺寸 Device dimensions	1900mm(H)×1000mm(W)×1000mm(L)
工作温度 Operating Temperature	10 $^{\circ}$ C -55 $^{\circ}$ C之间 Between 10 $^{\circ}$ C and 55 $^{\circ}$ C

# ZX-CXCL-001

## 磁性材料视觉智能检测设备 Magnetic Material Visual Intelligent Detection Equipment

- 超高速检测
- 简易的操作方式
- 人性化系统设计
- 友好的用户界面
- Ultra high speed detection
- Simple operation method
- Humanized system design
- Friendly user interface
- 高度自动化送料
- 高效产品有序排列
- 显著降低人工依赖
- 高透明玻璃盘面的检测
- Highly automated feeding
- Efficient products arranged in an orderly manner
- Significant reduction in manual dependence
- Detection of high transparency glass surface



## ZX-CXCL-001

### 磁性材料视觉智能检测设备

Magnetic Material Visual Intelligent Detection Equipment



#### 机器特点 / Machine characteristics

自动送料系统: 将产品倒入振动盘, 振动盘产生振动波, 让产品有序地排列到入料平送器上实现排料入料功能, 大大减少人工上料频率。利用玻璃高透明性, 物件可平稳放置于检测盘面或可平躺者皆可检测, 检测速度最高可每分钟 2000pcs, 精度最高可达 1 $\mu$ 。具有人性化设计机台及操作系统、简易的操作方式和用户界面。

Automatic feeding system: Pour the products into the vibrating plate, which generates vibration waves, allowing the products to be arranged in an orderly manner on the feeding conveyor to achieve the function of discharging and feeding, greatly reducing the frequency of manual feeding.

By utilizing the high transparency of glass, objects can be smoothly placed on the detection surface or can be detected by lying flat. The detection speed can reach up to 2000pcs per minute, and the accuracy can reach up to 1  $\mu$ . It has a humanized design machine and operating system, simple operation mode, and user interface.

#### 检测项目 / Test Items

尺寸检测: 长度、宽度、高度(厚度)、直径(内外径)、倒角、对角、对边、同心度/圆度、平行度、垂直度、轮廓度等;  
外观检测: 缺口、崩边、划伤、压伤、掉漆、麻点、裂纹、鼓包、镀层不良、脏污、氧化等。

Dimensional inspection: length, width, height (thickness), diameter (inner and outer diameters), chamfer, diagonal, opposite edge, concentricity/roundness, parallelism, perpendicularity, contour, etc;

Appearance inspection: notches, broken edges, scratches, pressure marks, paint peeling, pockmarks, cracks, bulges, poor coating, dirt, oxidation, etc.

#### 检测系统 / Detection system

品牌 brand	知叙智能 Zhixu Intelligence
检测软件 Detection software	影像检测软件 Image detection software
设备类型 Device Type	AI 智能玻璃盘影像筛选机 AI intelligent glass disk image screening machine
适用范围 Scope of application	适用于检测各类紧固件、电子元器件、密封产品、磁性材料、钮扣、塑胶硅胶、五金产品、手机配件、声学部件等 Suitable for testing various fasteners, electronic components, sealing products, magnetic materials, buttons, plastic silicone, hardware products, mobile phone accessories, acoustic components, etc
相机个数 Number of cameras	可添加 2-10 相机(根据需求来定) 2-10 cameras can be added (depending on requirements)
操作系统 Operating system	工业电脑 industrial computer
检测速度 Detection speed	最高可达 2000pcs(根据物体来定) Up to 2000pcs (depending on the object)
检测精度 Detection accuracy	最高可达 1 $\mu$ Up to 1 $\mu$ m
电源电压 Power supply voltage	220V ,50HZ
气压 Atmospheric pressure	86-106kpa
设备重量 Equipment weight	400kg
设备尺寸 Device dimensions	1900mm(H) $\times$ 1000mm(W) $\times$ 1000mm(L)
工作温度 Operating Temperature	10 $^{\circ}$ C -55 $^{\circ}$ C之间 Between 10 $^{\circ}$ C and 55 $^{\circ}$ C

# ZX-SLJ-001

## 塑料件视觉智能检测设备 Visual Intelligent Inspection Equipment For Plastic Parts

- 超高速检测
- 简易的操作方式
- 人性化系统设计
- 友好的用户界面
- Ultra high speed detection
- Simple operation method
- Humanized system design
- Friendly user interface
- 高度自动化送料
- 高效产品有序排列
- 显著降低人工依赖
- 高透明玻璃盘面的检测
- Highly automated feeding
- Efficient products arranged in an orderly manner
- Significant reduction in manual dependence
- Detection of high transparency glass surface



## ZX-SLJ-001

### 塑料件视觉智能检测设备

Visual Intelligent Inspection Equipment For Plastic Parts



#### 机器特点 / Machine characteristics

自动送料系统: 将产品倒入振动盘, 振动盘产生振动波, 让产品有序地排列到入料平送器上实现排料入料功能, 大大减少人工上料频率。利用玻璃高透明性, 物件可平稳放置于检测盘面或可平躺者皆可检测, 检测速度最高可每分钟 2000pcs, 精度最高可达 1 $\mu$ 。具有人性化设计机台及操作系统、简易的操作方式和用户界面。

Automatic feeding system: Pour the products into the vibrating plate, which generates vibration waves, allowing the products to be arranged in an orderly manner on the feeding conveyor to achieve the function of discharging and feeding, greatly reducing the frequency of manual feeding.

By utilizing the high transparency of glass, objects can be smoothly placed on the detection surface or can be detected by lying flat. The detection speed can reach up to 2000pcs per minute, and the accuracy can reach up to 1  $\mu$ . It has a humanized design machine and operating system, simple operation mode, and user interface.

#### 检测项目 / Test Items

尺寸检测: 高度、长、宽、内径、外径、线径、台阶尺寸、角度、同心度、孔径、轮廓、度真圆度等;

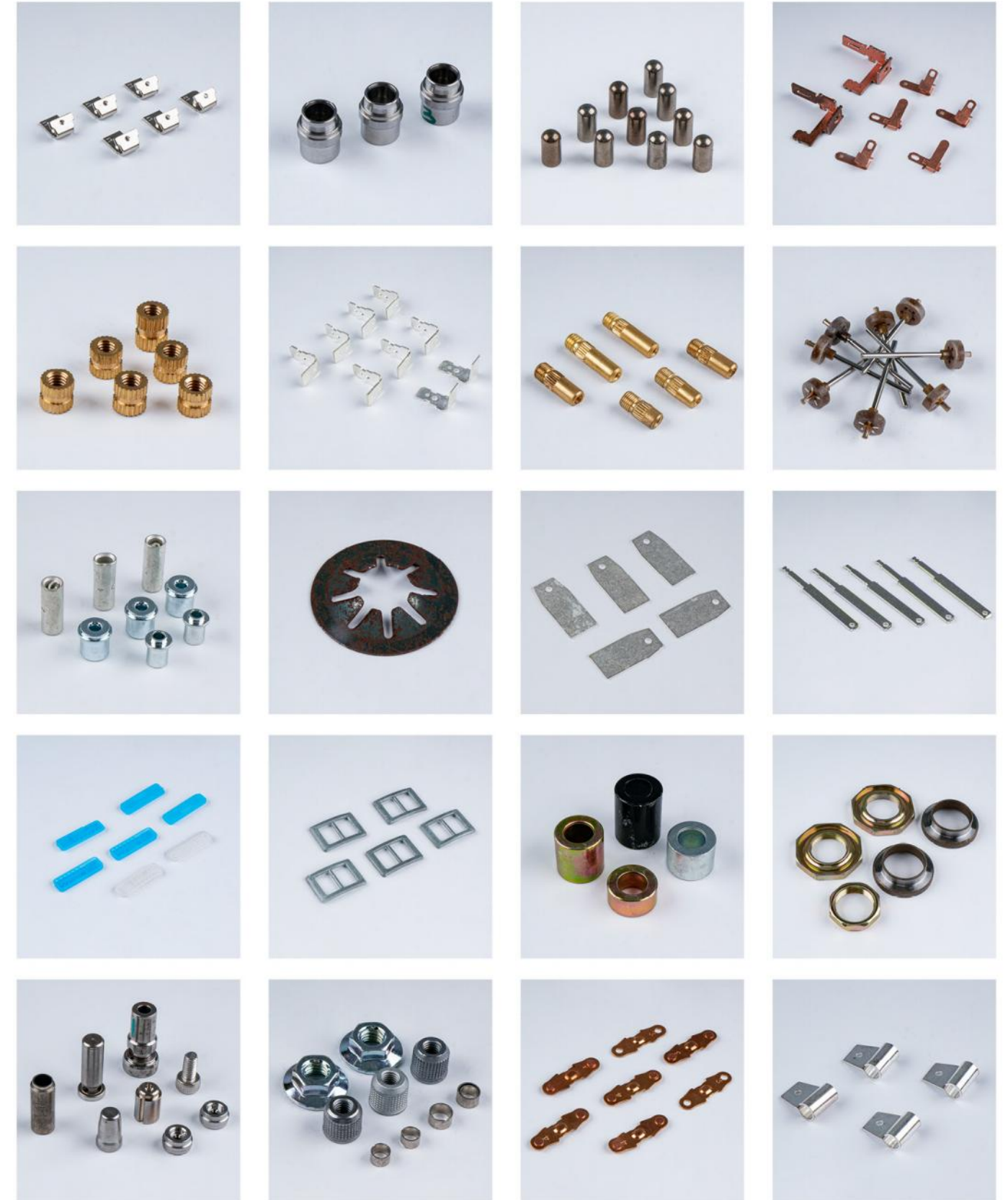
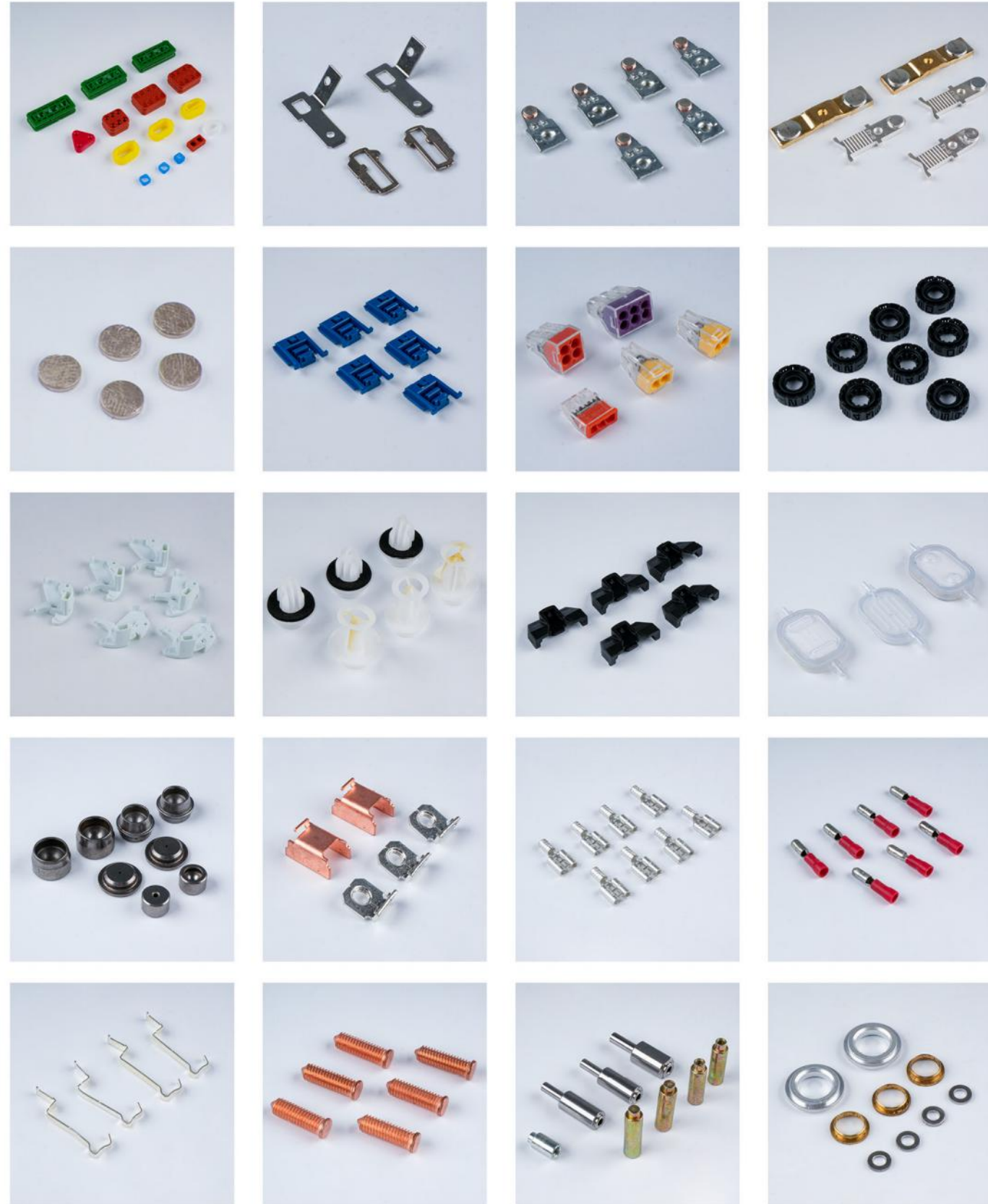
外观检测: 注塑不良、缺胶、多胶、破损、开裂、断裂、披锋毛刺、变形、孔内异物、划伤、飞边、毛边、断胶等。

Size detection: height, length, width, inner diameter, outer diameter, wire diameter, step size, angle, concentricity, aperture, contour, roundness, etc;

Appearance inspection: injection molding defects, missing glue, excess glue, damage, cracking, breakage, burrs, deformation, foreign objects in the hole, scratches, flying edges, burrs, broken glue, etc.

#### 检测系统 / Detection system

品牌 brand	知叙智能 Zhixu Intelligence
检测软件 Detection software	影像检测软件 Image detection software
设备类型 Device Type	AI 智能玻璃盘影像筛选机 AI intelligent glass disk image screening machine
适用范围 Scope of application	适用于检测各类紧固件、电子元器件、密封产品、磁性材料、钮扣、塑胶硅胶、五金产品、手机配件、声学部件等 Suitable for testing various fasteners, electronic components, sealing products, magnetic materials, buttons, plastic silicone, hardware products, mobile phone accessories, acoustic components, etc
相机个数 Number of cameras	可添加 2-10 相机 (根据需求来定) 2-10 cameras can be added (depending on requirements)
操作系统 Operating system	工业电脑 industrial computer
检测速度 Detection speed	最高可达 2000pcs(根据物体来定) Up to 2000pcs (depending on the object)
检测精度 Detection accuracy	最高可达 1 $\mu$ Up to 1 $\mu$ m
电源电压 Power supply voltage	220V ,50HZ
气压 Atmospheric pressure	86-106kpa
设备重量 Equipment weight	400kg
设备尺寸 Device dimensions	1900mm(H) $\times$ 1000mm(W) $\times$ 1000mm(L)
工作温度 Operating Temperature	10 $^{\circ}$ C -55 $^{\circ}$ C之间 Between 10 $^{\circ}$ C and 55 $^{\circ}$ C



合作伙伴

Partner



合作伙伴

Partner

