

参数规格/Specifications

外型尺寸 Dimensions	1600mm(L) × 1688mm(W) × 1560mm(H)
重量 Weight	1750kg
电源 Power Supply	AC380V(50Hz, 三相) 功率4.5kw AC380V(50Hz, three phase), 4.5kw
气源 Air Supply	0.5MPa ~0.7MPa
真空产生 Vacuum Generation	内置真空泵 Built-in vacuum pump
贴头数量 Mounting Head Quantity	10个 10 Head
贴装速度 Mounting Speed	42000CPH (公司最佳条件下) Optimal Speed 42000CPH (best conditions under our company)
贴装精度 Mounting Accuracy	(xy)±0.035mm CPK≥1.0
器件贴装高度 Component Height	≤12mm
器件贴装类型 Component Type	电阻电容 排阻、圆柱形二极管、铝电容、SOT、SOP、QFP、QFN、BGA等。 Resistor capacitor exclusion, cylindrical diode, aluminum capacitor, SOT, SOP, QFP, QFN, BGA, etc.
器件贴装范围 Component Range	英制01005至36mmX36mm,以及超大器件贴装。 Inch size 01005 to 36mm*36mm, and larger components mounting.
PCB厚度 PCB Thickness	0.6mm~3.5mm
PCB尺寸 PCB Size	600mm(长)×400mm(宽) (标配); 1200mm(长)×400mm(宽) (选配)。 600mm(L)×400mm(W) (standard); 1200mm(L)×400mm(W) (optional).
PCB传送 PCB Conveying	3段式轨道自动传送, PCB支撑装置 3-section-rail automatic conveying, PCB support
吸嘴更换 Nozzle Change	自动更换 (37孔吸嘴库) Automatic nozzle change (37-hole nozzle library)
控制系统 Control System	内置工业电脑 (运行Windows 7) 配显示器、键盘、鼠标 Built-in industrial computer (Windows7) equipped with monitor, keyboard and mouse
驱动系统 Drive System	X, Y轴采用松下A6伺服电机驱动 (Y轴采用双电机) X&Y axis driven by Panasonic A6 servo motors (Y axis by double motors)
传动系统 Transmission System	X, Y轴采用THK研磨丝杆和THK静音直线导轨 X&Y axis adopting THK ground ball screw and THK mute linear guide
供料系统 Feeding System	100个NXT 8mm标准飞达安装位 (可安装IC托盘和振动飞达) 100 NXT 8mm standard feeder stacks (also suitable for IC tray and stick feeder)
视觉系统 Vision System	飞拍相机×10个 (适用器件大小: 16mm×16mm) Fly camera×10 (component size applicable: 16mm×16mm) IC相机×1个 (适用器件大小: 36mm×36mm) IC camera×1 (component size applicable: 36mm×36mm), it has the function of image stitching, automatic pin and feature recognition Mark相机×2个 Mark camera×2



中国高端贴片机领导品牌
Chinese Leading Brand of High-end Pick and Place Machine
提供SMT一站式设备与服务
Provide SMT one-stop equipment and services

TS10

十头高精高速泛用贴片机

10-head High-speed High-precision Multi-function Pick and Place Machine



湖南常衡机电有限公司

CHARMHIGH TECHNOLOGY LIMITED

电话 / Telephone: +86 131 0721 9945

邮箱 / E-mail: sales@charmhigh-tech.com

官网 / Web: www.charmhigh-tech.com

WhatsApp/Wechat: +86 135 1067 5756

Official Website: www.charmhigh-tech.com

地址: 中国•湖南•长沙市高新区雷锋街道明湖路392号常衡机电

TS10 十头高速高精多功能贴片机 10-head High-speed High-precision Multi-function Pick and Place Machine

最大速度: 42000CPH(在本公司最佳条件下)

贴装精度: $(xy) \pm 0.035\text{mm}$ CPK ≥ 1.0

贴装范围: 可保障最小英制01005和大尺寸元器件高精度的稳定贴装

选配: 蓝光扫描 透镜贴装 1.2米PCB贴装生产

Optimal Speed: 42000CPH (under the best conditions of our company)

Mounting Accuracy: $(xy) \pm 0.035\text{mm}$ CPK ≥ 1.0

Components Mounting Range: Inch size 01005-36mmX36mm and larger components

Optional: blue light scanning, lens mounting, 1.2m long PCB mounting production

Y轴双驱伺服控制系统

The Y-axis Adopts Twin Servo Control System

Y轴双松下伺服、研磨丝杆、静音导轨

The Y-axis adopts twin Panasonic A6 servo motor, ground screw,silent linear guide

支持CPK

Support CPK Detection

制程能力指标, 保障高质量SMT生产

Process capability indicators to ensure high-quality SMT production

自动识别引脚与特征, 大尺寸元器件识别 (轻松实现拾取、识别与精准贴装)

Large-size Component Identification (easy to pick up, identify and accurately mount)

自动识别引脚与特征, 超过IC相机识别区域时, 支持分割识别, 完成形成完整的器件影像。

Automatic pin and feature recognition, when the IC camera recognition area is exceeded, segmentation recognition is supported and a complete device image is automatically formed

ANC (吸嘴自动更换)

ANC (Auto Nozzle Changer)

吸嘴自动分配、吸嘴自动更换。当泛用机使用时, 可以减少贴装轮次, 提高生产效率。

Automatic nozzle allocation and nozzle replacement. When used as a general-purpose machine, it can reduce the number of mounting rounds and improve production efficiency

自动热补偿校正系统

Automatic Thermal Compensation Correction System

定期监控精度, 并自动修正补偿, 确保设备贴装的稳定性

Regularly monitor accuracy and automatically correct compensation to ensure the stability of equipment mounting

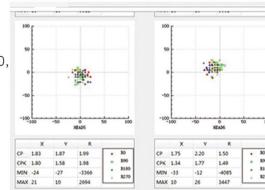
1.高端配置, 对标进口, 使制程能力有保障 (High-end configuration, comparable to imported products, ensures process capability)

支持CPK测试

Support CPK Detection

贴装精度: $(xy) \pm 0.035\text{mm}$ CPK ≥ 1.0 , 使得您的SMT生产稳定可靠, 提高良率, 减少返修。

Mounting accuracy: $(xy) \pm 0.035\text{mm}$ CPK ≥ 1.0 ensures continuous and stable process capability.



Y轴双驱伺服控制系统

The Y-axis Adopts Twin Servo Control System

Y轴采用双松下A6伺服电机、THK研磨丝杆、静音直线导轨, 满足长期高速贴装

要求。

The Y-axis adopts twin Panasonic A6 servo motor, ground screw, silent linear guide, meet long-term high-speed mounting requirements.



ANC(吸嘴自动更换)

ANC(Auto Nozzle Changer)

37位吸嘴库, 可预置不同型号吸嘴, 软件控制, 根据器件贴装需求, 自动分配及更换吸嘴, 减少贴装轮次, 提高生产效率。

The 37-hole nozzle library can preset different types of nozzles. Software control automatically allocates and replaces nozzles according to component mounting requirements, reducing mounting rounds and improving production efficiency.



高清IC视觉系统 (视觉图像算法)

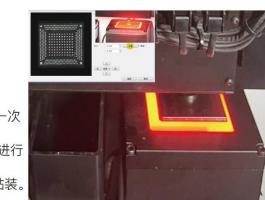
HD IC Vision System

(Visual image algorithms)

1. 支持36mmx36mm以内大器件全局一次性成像与高清识别。

2. 支持超大器件识别与贴装: 将元器件进行分割识别, 精准合并为单个器件影像,

然后再进行整个器件显示, 实现精准贴装。



机架结构

Frame Structure

采用进口机架基座架构: 研磨工业级平台, Y轴一体铸造, 使设备在高速工作状态下运行稳定可靠。

The imported machine base structure is adopted: grinding industrial-grade platform, Y-axis integral casting, so that the equipment can run stably and reliably under high-speed working conditions.



真空传感装置

Vacuum Detection Function

每个吸嘴具备独立检测功能, 提高设备的稳定性, 产品的可靠性。

Each nozzle has an independent detection function to improve the stability of the equipment and the reliability of the product.



2.确保设备效率与稳定性 (Ensure Equipment Efficiency and Stability)

高精密泛用贴装头

High-precision Universal Mounting Head

独立的Z轴与R轴电机控制, 配合高速的前置相机与1组精密的IC视觉系统, 实现泛用高速贴装。

Independent Z-axis and R-axis motor control, combined with a high-speed front camera and a set of precision IC vision systems, realize universal high-speed pick and place.



自动识别引脚数量与特征

Automatically identify chip pin count and features

与传统的只能识别芯片本体, 增加芯片引脚识别功能, 通过视觉图像算法, 实现芯片更精准更稳定贴装。

Most traditional machines can only identify the chip body. The machine adds chip pin recognition function and uses visual image algorithm to achieve more accurate and stable chip placement.

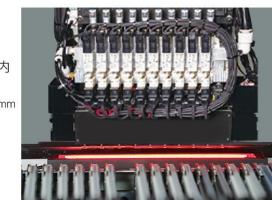


高速飞拍相机

High Speed Fly Camera

可高速同步识别16mmX16mm以内器件, 提高工作效率。

Can simultaneously identify 16mmX16mm components at high speed to improve work efficiency.



双Mark相机

Dual Mark Camera

1. 识别范围更广;

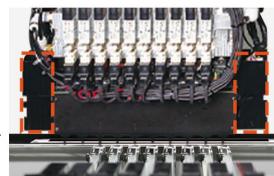
2. 校正PCB角度与坐标采集;

3. 快速示教取料位置;

1. Wider recognition range;

2. Correct PCB angle and coordinate acquisition;

3. Quickly teach the component picking position



自动热补偿校正系统

Automatic Thermal Compensation Correction System

工作中监控并纠正因热能导致的精度偏差, 持续维持贴装的精度与稳定性。

Monitor and correct accuracy deviations caused by thermal energy during work to continuously maintain mounting accuracy and stability.



100组料栈(8mm为基准)

100 feeder stacks (8mm standard)

采用NXT电动飞达供料, 供料精度达到 $\pm 0.03\text{mm}$ 。

Using NXT electric feeder for feeding, the feeding accuracy reaches $\pm 0.03\text{mm}$.



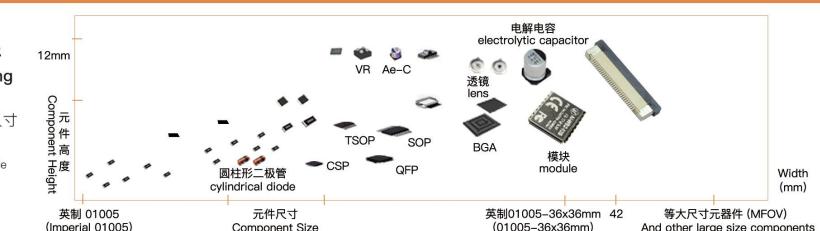
3.贴装能力与基板应对能力 (Mounting Capabilities and Substrate Processing Capabilities)

泛用贴装各种元器件

General Purpose Mounting of Various Components

可实现最小英制01005和大尺寸元器件高精度的稳定贴装。

It can achieve high-precision and stable mounting of the smallest 01005 and large-size components.



4.简化编程 (Simplified programming)

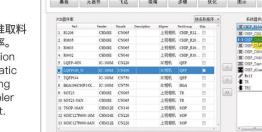
增加自动校准取料位置功能

Added automatic calibration function for picking position



优化系统器件库

Optimize system device library



器件库增加常规类封装元器件对称贴装参数, 在编程中快速找到对应元器件, 常规元器件对应的贴装数据设置完成, 大大简化了编程操作。The device library adds mounting parameters corresponding to conventional packaged components, allowing you to quickly find corresponding components during programming. The mounting data corresponding to conventional components is set, greatly simplifying programming operations.

供料方式 Feeding System

供料方式: 采用电动飞达供料。

飞达上料台: 支持离线事先上料, 节省工作时间。

振动飞达: 通过振动飞达支持管状料的供料。

IC托盘: 支持TRAY盘供料及散料供料。

Feeding method: electric feeder is used for feeding. Feeder feeding table: supports offline feeding in advance, saving working time. Vibration feeder: support the feeding of tubular components feeding. IC tray: support TRAY feeding and bulk components feeding.

