

落盘分拣机

SPLIT TRAY SORTER

中小件分拣高效解决方案
破解扁平件轻飘件分拣难题

Product Overview

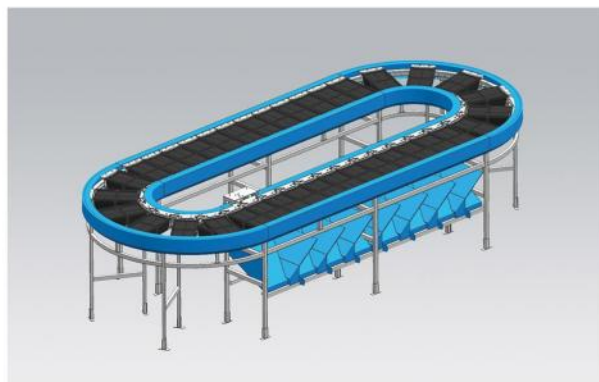
产品概述 >>>>>

落盘分拣机

Split Tray Sorter

落盘分拣机 (RKSORT-STTS), 也称为落袋分拣机, 是锐尔凯为帮助客户实现中小件特别是扁平件的高效分拣而打造的一款专业型分拣解决方案。

Split Tray Sorter (RKSORT-STTS) , also known as bag sorting machine, is a professional sorting solution created by Realkey to help customers achieve efficient sorting of small and medium-sized items, especially flat items.



落盘分拣机一般采用椭圆形水平环状布局、单排或双排托盘的布置。被分拣的物品放置在托盘内沿着轨道在环线上行走, 到达指定位置后, 托盘的两半就会像活动门板一样打开, 产品随即垂直落入下方的滑槽上或物料箱内, 实现分拣动作。

The Split Tray Sorter generally adopts an elliptical horizontal circular layout and a single or double row tray layout. The sorted items are placed inside the tray and walk along the track on the loop. After reaching the designated position, the two halves of the tray will open like movable door panels, and the products will immediately fall vertically into the lower chute or material box to achieve sorting action.

由于可以采用双排托盘同时放件, 落盘分拣机的分拣速度极快, 是一种效率极高的分拣设备, 每小时最高可通过 21600 个托盘。落盘分拣机非常适合服饰软包、快递信函、印刷品及其它扁平状非易碎物品的分拣, 即使是不规则的形状也可以很容易地进行分拣处理。

Due to the ability to use double row trays to simultaneously place items, the sorting speed of the drop tray sorting machine is extremely fast, making it an extremely efficient sorting equipment that can pass up to 21600 trays per hour. The Split Tray Sorter is very suitable for sorting clothing soft bags, express letters, printed materials, and other flat non fragile items. Even irregular shapes can be easily sorted.

Equipment Characteristics

设备特点

>>>> • 适用性强 Strong applicability

落盘分拣机采用托盘承载物品，可正常分拣轻飘件、圆形件等不太适合于交叉带分拣机分拣的物品，分拣适应性极强。落盘分拣机可以对不同的包装物品进行分拣，包括盒子、塑料袋、纸箱、手提袋、软质包装等。

The Split Tray Sorter uses trays to carry items, which can normally sort items such as light floating items and circular items that are not suitable for cross belt sorting machines, and has strong sorting adaptability. The Split Tray Sorter can sort different packaging items, including boxes, plastic bags, cardboard boxes, handbags, soft packaging, etc.

>>>> • 低速高效分拣 Low speed and efficient sorting

双排落盘分拣机的分拣小车采用独特的“一车双盘”结构，分拣效率是同样配置交叉带分拣机的两倍。在环线速度仅 1.2m/s 时的分拣效率可达 17280p/h。如果采用双端供件配置，最大理论分拣效率可高达 34560p/h。

The sorting car of the double row Split Tray Sorter adopts a unique "one car, two trays" structure, and the sorting efficiency is twice that of the same configuration of the cross belt sorting machine. The sorting efficiency can reach 17280p/h at a loop speed of only 1.2m/s. If a dual end feeding configuration is adopted, the maximum theoretical sorting efficiency can reach 34560p/h.

>>>> • 高分拣精度 High sorting accuracy

配置先进算法的智能相机允许在任何方向上进行读码，读取率高达 99%，高科技传感器和 PLC 能高速检测产品并判断路径去向，简单灵巧的落盘操纵机构可确保快速准确地实现产品分离，降低出错风险。

The intelligent camera equipped with advanced algorithms allows for code reading in any direction, with a reading rate of up to 99%. High tech sensors and PLCs can detect products at high speed and determine the direction of the path. The simple and flexible drop plate control mechanism ensures fast and accurate product separation, reducing the risk of errors.

>>>> • 高度柔性 Highly flexible

传动系统消除了链条传动和轮式转弯，分布式小型电机驱动可以根据地形部署在环形分拣系统的任意节点，分拣机的长度几乎不受限制，无论您需要多少个目的地路径都可以实现。

在相同的分拣效率之下，落盘分拣机的低速率行走，适合人工供件模式，无需多级供件系统投入。

The transmission system eliminates chain transmission and wheel turning, and the distributed small motor drive can be deployed at any node of the circular sorting system according to the terrain. The length of the sorting machine is almost unlimited, and it can be achieved no matter how many destination paths you need.

Under the same sorting efficiency, the low-speed operation of the Split Tray Sorter is suitable for manual feeding mode, without the need for multi-level feeding system input.

》》》》 • 占地面积小 Small footprint

独特的产品设计，上件无需额外配置多级供包台系统，下件可直接分拣至袋子或箱子，无需配备专用滑槽。整机结构设计紧凑，能够充分利用场地，可以包围着厂房立柱布置，综合占地面积非常小。

Unique product design, without the need for an additional multi-level packaging system for the upper part, the lower part can be directly sorted to bags or boxes without the need for a dedicated chute. The overall structural design of the machine is compact and can fully utilize the site. It can be arranged around the factory pillars, and the comprehensive land area is very small.

》》》》 • 低能耗、结构简单、低维护 Low energy consumption, simple structure, and low maintenance

分布式小功率电机驱动，节能省电。分拣小车卸载和复位机构采用纯机械结构设计，整套设备除主驱动外无额外能耗。相对的低速运行保障分拣机的磨损小、寿命长、维护成本低。

Distributed low-power motor drive, energy-saving and energy-saving. The unloading and resetting mechanism of the sorting car adopts a pure mechanical structure design, and the entire equipment has no additional energy consumption except for the main drive. The relatively low-speed operation ensures that the sorting machine has low wear, long service life, and low maintenance costs.

》》》》 • 模组化设计 Modular design

整机采用标准化、模块化设计，支持快速装拆、扩展、搬迁。

The entire machine adopts standardized and modular design, supporting rapid assembly and disassembly, expansion, and relocation.

设备型号 Equipment model	STS-500DP
分拣物品 Sorting items	小型包裹、信封、服装、鞋帽、药品等
重量范围 Weight range	$0.01\text{kg} \leq M \leq 15\text{kg}$
尺寸范围 Size range	MAX:400*400*600mm MIN:50*50*2mm
分拣能力 Sorting capacity	11520-21600p/h
分拣准确率 Sorting accuracy	99.9%
供件选项 Induction options	手动 / 自动供件 单侧 / 双侧供件 单端 / 双端供件
分拣落件 Sorting dropped items	直落式 / 缓存式可选
环线速度 Loop speed	0.8-1.5m/s, 按效率需求配置
节距 Conveying speed	500mm
整机尺寸 Dimensions	椭圆宽: 4.6m 椭圆长: 根据方案确认
主机能耗 Host energy consumption	1.5KW/36 小车
分拣触发 Sorting trigger	气动控制
运行噪音 Operating noise	< 72 dB(A)

Product Application

产品应用 >>>>

1

落盘分拣机可广泛应用于需要对中小型物品实现高速自动化分拣的场景，包括鞋服、书刊、电商、邮政包裹、日用品、医药、珠宝等的自动分拣。

The Split Tray Sorter can be widely used in scenarios that require high-speed automated sorting of small and medium-sized items, including automatic sorting of shoes and clothing, books and magazines, e-commerce, postal parcels, daily necessities, medicine, jewelry, etc.



2

对于某些很小或很轻的轻抛件，以及形状不规则的异形件，交叉带分拣机等其它类型分拣机不易处理的件，落盘分拣机可轻松实现自动分拣。

For some small or light thrown items, as well as irregularly shaped items, Cross Belt Sorter and other types of sorting machines that are difficult to handle, the Split Tray Sorter can easily achieve automatic sorting.

3

落盘分拣机最适合于处理大量直接面向消费者业务的分销中心，可以批量拣选并用于分拣离散订单的小型产品，如电商商品、零售服装、全渠道、第三方物流、店铺补货、退货处理，等等。

The Split Tray Sorter is most suitable for handling a large number of distribution centers that directly face consumer businesses. It can be used for batch picking and sorting of small products with discrete orders, such as e-commerce products, retail clothing, omni channel, third-party logistics, store replenishment, return processing, and so on.



4

落盘分拣机不适用于不能承受任何冲击的易碎物品。这种特殊物品的分拣可选用锐尔凯 RKSORT-NBS 系列分拣机进行分拣。

The Split Tray Sorter is not suitable for fragile items that cannot withstand any impact. The sorting of this special item can be carried out using the Realkey RKSORT-NBS series sorting machine.

Product Advantages

产品优势 >>>>

• V形托盘设计 >>>>

V-shaped tray design



独特的 V 形托盘设计可盛载容易滚落的物品，无论是轻飘件还是异形件，只要它适合放在托盘里，我们的落盘分拣机就可以对其进行分拣。

The unique V-shaped tray design can hold items that are easy to roll off, whether they are light or irregular items, as long as they are suitable for placement in the tray, our Split Tray Sorter can sort them.

• 重型托盘选项 >>>>

Heavy tray options

我们的重型托盘是专为严苛的邮政、快递环境而设计的，能够承受重负荷使用，单托盘可容纳高达 15 公斤。

Our heavy-duty pallets are designed specifically for harsh postal and express environments, capable of withstanding heavy loads and can hold up to 15 kilograms per pallet.

• 合并托盘技术 >>>>

Merge tray technology

我们的专利双排托盘设计，允许同一排的两组托盘分别将两个物品分拣到两个不同的目的地，同时也可以将两个托盘合并，承载一个较大的物件进行分拣。

Our patented double row tray design allows two sets of trays in the same row to sort two items separately to two different destinations, while also merging the two trays to carry a larger item for sorting.



• 平放堆叠技术 >>>>

Flat stacking technology

对于折叠服装、书本、文件和其它扁平的标准物品，产品直接掉入箱子或袋子中，通常不需要人工再进行额外的堆叠劳动。

For foldable clothing, books, documents, and other flat standard items, products can be dropped directly into boxes or bags, usually without the need for additional manual stacking labor.

• 安全设计 >>>>

Safety design

我们采用的安全托盘设计，能够在分拣速度较低且托盘之间几乎没有间隙的情况下实现高分拣量。没有锋利的边缘，托盘之间的间距很小。精心的安全防护设计消除了操作者的担忧。

The safety tray design we adopt can achieve high sorting volume when the sorting speed is low and there is almost no gap between the trays. There are no sharp edges, and the spacing between pallets is very small. The meticulous safety protection design eliminates the operator's concerns.

• 可靠性 >>>>

Reliability

锐尔凯在物流输送和自动分拣领域拥有 17 年的经验，在帮助客户制定分拣解决方案方面具有独特的优势，产品以扎实耐用而著称。我们是您可以信赖的合作伙伴。

Realkey has 17 years of experience in logistics conveying and automatic sorting, and has a unique advantage in helping customers develop sorting solutions. Its products are known for their solid and durable nature. We are your trusted partner.

About Realkey

关于锐尔凯 >>>>>

青岛锐尔凯机械有限公司专业从事自动化输送与分拣设备的研发与制造。

Qingdao Realkey Machinery Co., Ltd. specializes in the research and manufacturing of automated conveying and sorting equipment.

公司成立于 2007 年，坐落于青岛市莱西姜山镇昌平路 111 号，占地面积超过 20000 平方米，厂房面积 12000 平方米。公司通过了 ISO9001 质量管理体系认证、ISO14001 环境管理体系认证、知识产权管理体系认证，获得国家“高新技术企业”、青岛市“专精特新”企业、青岛市“科技型中小企业”、“青岛市小型快递包裹智能分拣技术创新中心”等称号。公司已成功申报并获得自主研发的发明与实用新型专利 20 余项。

Realkey was established in 2007 and located at 111 Changping Road, Jiangshan Town, Laixi, Qingdao. It covers an area of over 20000 square meters and has a factory area of 12000 square meters. The company has passed ISO9001 quality management system certification, ISO14001 environmental management system certification, and intellectual property management system certification, and has been awarded titles such as National "High tech Enterprise", Qingdao "Specialized, Refined, Unique and New" Enterprise, Qingdao "Science and Technology oriented Small and Medium sized Enterprise", and "Jidao Small Express Parcel Intelligent Sorting Technology Innovation Center". The company has successfully applied for and obtained more than 20 independently developed invention and utility model patents.

锐尔凯秉持优质、高效、服务、创新的企业精神，致力于高品质、低成本、短交期的实现，为物流企业与制造业工厂提供优质、高效、稳定的物流系统解决方案。

Realkey upholds the corporate spirit of quality, efficiency, service, and innovation, committed to achieving high quality, low cost, and short delivery time, providing high-quality, efficient, and stable logistics system solutions for logistics enterprises and manufacturing factories.

17 年

17 年研发生产经验

12000 平方

拥有 12000 m² 生产车间

50 名

50 名研发人员

200+

200 多个自动分拣项目案例



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