专业专注整线自动纠偏

PROFESSIONAL FOCUS ON

WHOLE LINE ALIGNMENT

枫源集团 FENG YUAN GROUP | Pioneer

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枫源集团宣传视频

始创 SINCE 2013 Professional Brand

自动化控制技术

AUTOMATION CONTROL TECHNOLOGY

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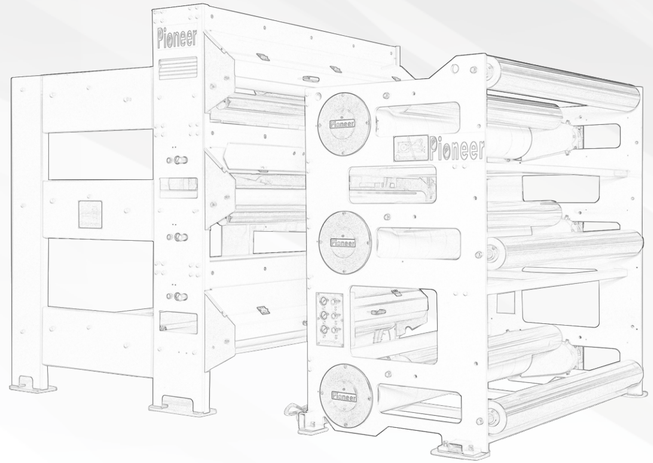


公司简介 COMPANY PROFILE

佛山市南海派尼尔自动化设备有限公司成立于 2013 年，座落于工业高度发达的广东省佛山市南海区和顺和桂工业园内。专业专注于整线自动纠偏和张力控制、单瓦自动纠偏、帆布带自动纠偏、纵切机、平衡辊等瓦楞设备的自动化控制技术。

公司自创办以来，一直本着质量求发展，信誉为保障的宗旨，始终坚持品质至上、用户至上、服务至上的经营理念。在公司技术人员多年不懈努力及广大客户使用经验指导下，通过不断技术创新，不断满足客户需求。我们始终用至精、至诚、更优、更新的企业精神，时刻把客户的利益放在心上，为客户提供高品质的产品和满意周到的服务！携手前进，诚与广大新老客户共创辉煌！

Foshan Nanhai Pioneer Automation Equipment Co., Ltd. was established in 2013 and is located in Heshun Hegui Industrial Park, Nanhai District, Foshan City, Guangdong Province, which has a highly developed industry. It specializes in the automatic control technology of corrugated equipment such as the whole line automatic alignment and tension control, single tile automatic , canvas belt automatic alignment, slitting machine, balance roller and other corrugated equipment.

Since its establishment, the company has been adhering to the tenet of seeking development with quality and guaranteeing reputation, and has always adhered to the business philosophy of quality first, customer first, and service first. Under the guidance of the company's technical staff for many years of unremitting efforts and extensive customer experience, through continuous technological innovation, we continue to meet customer needs. We always use the enterprise spirit of utmost precision, sincerity, better and newer, always keep the interests of customers in mind, and provide customers with high-quality products and satisfactory and thoughtful service! Go forward hand in hand, sincerely create brilliance with the vast number of new and old customers!

10 年专业专注行业经验　**100+** 位企业人才　**5000+** 平方标准生产厂房

精准 Precise

智能 Intelligent

稳定 Stability

耐用 Durable

整线纠偏 WHOLE LINE ALIGNMENT

天桥自动纠偏系统 + 天桥张力控制系统

▶ 标准配置：

1. 天桥自动纠偏系统（德国技术）+ 天桥张力控制系统（台系 PLC）
2. 无接触全幅宽红外光栅电眼（德国欧司朗 LED 检测电眼）
3. 德国德恩科直流马达、德国 B+F 接近开关
4. 高精度气动制动器、德国 Fosto 电控比例阀
5. 专用太阳轮及太阳轮底板（表面镀碳化钨）

▶ 性能：

1. 提高车速，纸板边缘无破损减少断纸和粉尘
2. 加装拉纸马达，减少劳动强度并辅助低克重纸的接头过刹车
3. 节省能源消耗和低噪音
4. 提高纸板品质
5. 材料张力精确控制：< 2% of F max
6. 材料边缘及材料中心测量精度 ±1mm；宽度测量 ±2mm

▶ 可选增加配置：

1. 选配单瓦自动纠偏——立式 / 卧式
2. 选配帆布带自动纠偏——非接触式电子式电眼
3. 选配纵切机普通纸板自动修边和预印自动修边
4. 可选配横向张力补偿辊
5. 可选配意大利气动刹车器

▶ 验收标准：

根据实际设备，按上述性能范围内进行纠偏。

Overpass automatic alignment system + overpass tension control system

▶ Standard configuration:

1. Overpass automatic alignment system (German technology) + overpass tension system (Taiwan PLC)
2. Non-contact full-width infrared grating electric eye (German Osram LED detection electric eye)
3. German Denke DC motor, German B+F proximity switch
4. High-precision pneumatic brake, German Fosto electronically controlled proportional valve
5. Dedicated sun gear and sun gear bottom plate (the surface is plated with tungsten carbide)

▶ Performance:

1. Increase the speed, without damage to the edge of the cardboard, reduce paper breakage and dust
2. Install a paper pulling motor to reduce labor intensity and assist the joints of low-weight paper to over-brake
3. Save energy consumption and low noise
4. Improve the quality of cardboard
5. Precise control of material tension: <2% of F max
6. The measurement accuracy of material edge and material center is ±1mm; width measurement is ±2mm

▶ Optional additional configuration:

1. Optional single-watt automatic correction-vertical/horizontal
2. Optional canvas belt automatic correction-non-contact electronic electric eye
3. Optional slitting machine for ordinary cardboard automatic trimming and pre-printed automatic trimming
4. Optional transverse tension compensation roller
5. Optional Italian pneumatic brake

▶ Acceptance Criteria:

According to the actual equipment, correct the deviation within the above-mentioned performance range.

SINGLE-FACED ALIGNMENT
单瓦自动纠偏

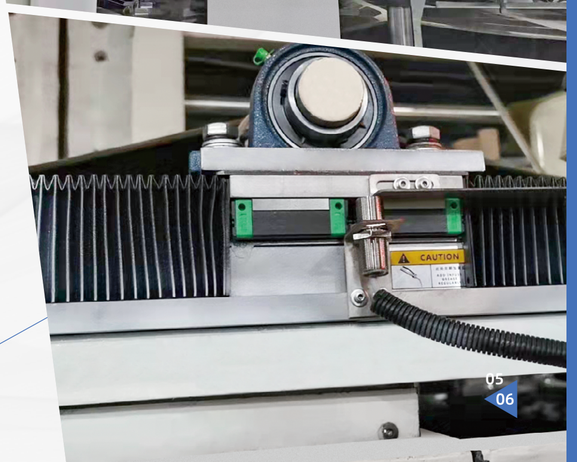
- 通过安装在单面机芯纸部位的主电眼（光栅电眼）检测瓦纸的位置。
- 通过安装在底纸预热缸上方的纠偏框架导正底纸，使底纸与瓦纸的中心或边缘对齐，对齐之后进入单面机。
- 单面机纠偏能确保瓦纸及底纸在进入单面机的贴合程序中能达到精准的中心或边缘对齐贴合。
- 采用德国欧司朗 LED 原装进口的检测电眼，检测精度可以达到 ±1mm。

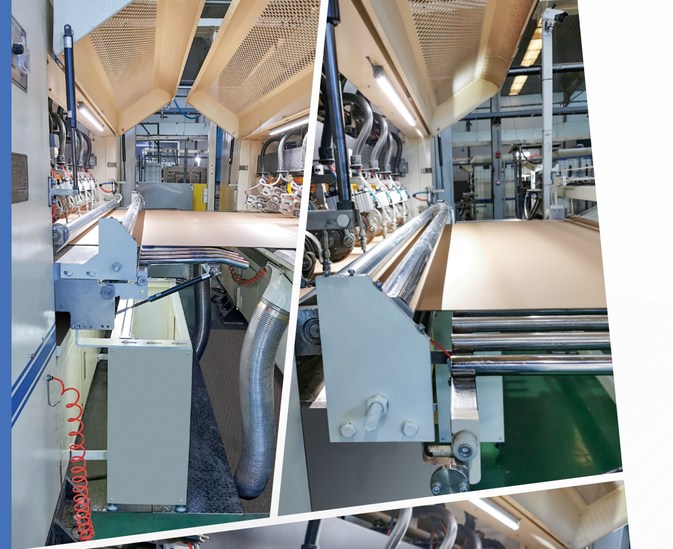
- The position of the tile paper is detected by the main electric eye (grating electric eye) installed in the core paper part of the single-sided movement.
- The bottom paper is guided by the correction frame installed above the bottom paper preheating cylinder, so that the bottom paper is aligned with the center or edge of the tile paper, and then enters the single-sided machine.
- The single-faced alignment can ensure that the corrugated paper and the bottom paper can achieve accurate center or edge alignment
- during the laminating process of the single-sided machine.
  Adopting the original imported detection electric eye of Germany OSRAM LED, the detection accuracy can reach +/-1mm.

DOUBLE FACER BELT ALIGNMENT
棉织带纠偏

- 帆布带自动导正器检测部分 - 非接触式数字式红外电眼，避免因机械式检测结构挡板刮坏帆布带边缘和长时间挡板磨损。
- 帆布带自动导正器驱动部分 - 采用的是高精度闭环控制自带增量式编码器的直流马达和电感式模拟量输出传感器，可以避免 S 型导正模式影响帆布带的使用寿命。
- 数位控制板 - 数字化控制系统，质量稳定、控制精准、操作方便。
- 帆布带自动导正器可以有效保证大带在生产过程中居中运行，减少大带跑偏破损延长大带使用寿命。
- 帆布带自动导正器可以减少大带左右摆动防止大带边缘挂烂。
- 帆布带自动导正器能让纸板生产出来进入纵切机前减少左右移动，有利于纵切机修边稳定减少损耗。

- The detection part of the canvas belt automatic guider-non-contact digital infrared electric eye, to avoid scratching the canvas belt edge and long-term baffle wear due to the mechanical detection structure baffle.
- The driving part of the canvas belt automatic guider-adopts a high-precision closed-loop control DC motor with an incremental encoder and an inductive analog output sensor, which can prevent the S-type guide mode from affecting the service life of the canvas belt.
- Digital control board-digital control system, stable quality, precise control and convenient operation.
- The canvas belt automatic guide can effectively ensure that the large belt runs in the middle during the production process, reduce the deviation and damage of the large belt, and extend the service life of the large belt.
- The canvas belt automatic guide can reduce the left and right swing of the big belt to prevent the edge of the big belt from hanging.
- The canvas belt automatic guide can reduce the left and right movement before the cardboard is produced and enter the slitting machine, which is conducive to the stable trimming of the slitting machine and the reduction of loss.





SLITTER GUIDE
纵切自动纠偏

Positioning device of crimping and trimming machine:
压线修边机的定位装置：

- 纵切机预印自动导正系统，会探测纸板的位置。
- 精度为 ±1mm，意思是，如果修边机的修边刀能够修到 4~8mm 的纸边，那么枫源系统可以使操作边的修边稳定保持 4~8mm，不会变大，也不会变小。
- 使用纵切机自动修边，可以使你的第一张纸板得到有效的修边，也能使你的最后一张纸板得到有效的修边。避免人为操作所发生的调整不及时、不到位而造成的浪费。
- 天桥自动纠偏与纵切机自动纠偏配合使用，减小产品修边，节省成本，提高效率。

- The slitting machine is pre-printed with an automatic guiding system that will detect the position of the cardboard.
- The accuracy is ±1mm, which means that if the trimming knife of the trimming machine can trim the paper edge of 4~8mm, then our system can keep the trimming of the operating edge stable at 4~8mm without becoming larger or Will become smaller.
- Using the slitting machine to automatically trim the edges, you can effectively trim the edges of your first cardboard and your last cardboard. Avoid waste caused by untimely and inadequate adjustments caused by manual operation.
- The flyover automatic correction is used in conjunction with the automatic correction of the slitting machine to reduce your trimming, save costs and improve efficiency.

TENSION BALANCE ROLLER/DANCER ROLL
张力平衡辊 / 平衡摆杆

Importance of balance roller
平衡辊的重要性

在纸张进入关键的加工设备（单面机或糊胶机）之前和在经过影响纸幅张力的设备（如预热机或预处理滚筒）之后，确保张力一致的最有效方法就是测量实际的纸幅张力。所测量的实际张力应该和预先设定好的数字比较，然后根据实际需要进行调节。而平衡辊就是为了实现这一自动张力调节的功能，保证纸张张力均匀，避免因张力不均所造成纸板成型后翘曲。

Before the paper enters the critical processing equipment (single-side machine or gluer) and after passing through equipment that affects the tension of the paper web (such as a preheater or pretreatment drum), the most effective way to ensure consistent tension is to measure the actual paper Width tension. The actual tension measured should be compared with the preset number, and then adjusted according to actual needs. The balance roller is to achieve this automatic tension adjustment function to ensure uniform tension of the paper and avoid warping of the cardboard after forming due to uneven tension.

Features
产品特点

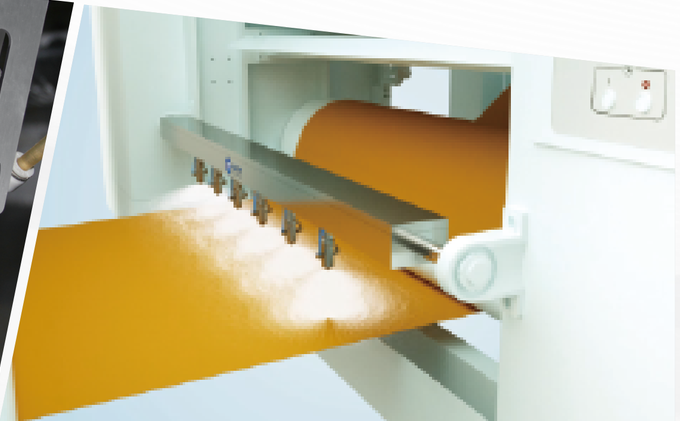
- 平衡辊以中心为基准可以以走纸受力方向微动 15mm 自动调整原纸受力均衡。
- 使用高精密研磨蜗轮蜗杆结构，运动精准灵活保证执行稳定。
- 可加装张力传感器实现自动检测张力做执行坑机气动元件的自我调整如压力轮压力、糊轮压力。

- The balance roller can automatically adjust the force balance of the base paper by moving 15mm in the direction of the paper feeding force based on the center.
- Using high-precision grinding worm gear structure, the movement is precise and flexible to ensure stable execution.
- A tension sensor can be installed to automatically detect the tension and perform self-adjustment of the pneumatic components of the pit machine, such as the pressure of the pressure wheel and the pressure of the paste wheel.

MOISTURE SPRAY
喷雾加温器

- 根据不同生产幅宽，开启不同数量的喷头。
- 喷头与纸板的角度能自由调节。
- 流量和压力均可以精确控制。
- 与水接触的零配件均采用不锈钢制造，防锈美观。

- Open different numbers of nozzles according to different production widths.
- The angle of nozzle and cardboard can be adjusted freely.
- Both flow and pressure can be accurately controlled.
- The parts and accessories in contact with water are made of stainless steel, which is anti-rust and beautiful.



CORE ACCESSORIES
核心配件

Chuck
▶ 夹头

Full width electric eye-FE45-1800-LED-Germany OS
▶ 全幅宽电眼 -FE45-1800-LED- 德国欧司

Paper trolley
▶ 推纸小车

Renova Brakes
▶ Renova 刹车器

Digital infrared electric eye
▶ 数字式红外电眼

Drive AG2591-Denke Germany
▶ 驱动器 AG2591- 德国德恩科

Digital Control Panel-Digital Control System
▶ 数位控制板 - 数字化控制系统