

HUASHIL[®]
华世力科技

DIFFERENT COUNTRIES
SAME BRAND
不同的国家，相同的品牌

山东华世力自动化科技有限公司
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凝聚全球玻璃机械产业竞争力
*Consolidate the competitiveness of the
global glass machinery industry*

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Note: the pictures shown in this manual are only for reference. Due to different configurations of specific equipment, the actual equipment may be different from the pictures. The company reserves the right to design and improve the products without further notice.



玻璃机械成套方案解决商
Glass Machinery complete set
solution merchant

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COMPANY PROFILE

公司简介

山东华世力科技是国内优秀的玻璃深加工设备研发、制造、销售及技术服务为一体的综合性玻璃深加工专业设备和系统解决方案供应商，是“国家高新技术企业”、“省专精特新企业”。公司始终坚持以科技创新为核心，以市场需求为导向，不断提升产品的技术含量和品质水平，推动产品和服务向高端化、智能化发展。

总公司坐落于交通便利的山东省日照高新区工业园区，拥有现代化的标准厂房和先进的加工设备。年产智能玻璃设备千余台/套，服务国内8000多家玻璃深加工用户，产品销往全球80多个国家和地区。主要研发生产玻璃切割流水线、智能玻璃原片仓储，智能玻璃理

Shandong Huashil Technology is an excellent domestic comprehensive glass deep processing professional equipment and system solution provider integrating R&D, manufacturing, sales and technical services of glass deep processing equipment. It is the "National High-tech Enterprise", "Province of Specialization, the New Enterprise". The company always adheres to technological innovation as the core and market demand as the guide, constantly improves the technical content and quality level of products, and promotes the development of high-end and intelligent products and services.

The company is located in the Industrial Park of Rizhao High-tech Zone, Shandong Province with convenient transportation. It has modern standard workshops and advanced processing equipment. With an annual output of more than 1,000 units/sets of smart glass equipment, it serves more than 8,000 domestic glass deep processing users, and its products are sold to more than 80 countries and regions around the world. It mainly develops and produces glass cutting lines, intelligent glass storage, intelligent

片系统，智能玻璃激光打标机、玻璃上片切割一体机，玻璃双边磨边机连线，大型玻璃深加工非标全厂连线等全套玻璃深加工设备。公司注重产品质量和品牌建设，已通过ISO9001质量管理体系认证，并获得多项国家专利。公司秉承“客户至上，质量第一”的经营理念，致力于为客户提供高品质、高效率的玻璃加工解决方案。

在未来的发展中，华世力科技将继续坚持科技创新，不断提升产品品质和市场竞争力，为全球客户提供更加优质的产品和服务。同时公司也将积极履行社会责任，推动行业可持续发展，为人类创造更加美好的生活空间。

glass slicing systems, intelligent glass laser marking machines, glass loading and cutting machines, glass bilateral edge grinding line, and large-scale glass deep processing non-standard wholefactory connections, the complete set of glass deep processing equipment and so on. The company focuses on product quality and brand building, has passed ISO9001 quality management system certification, and has obtained a number of national patents. The company adheres to the business philosophy of "customer first, quality first" and is committed to providing customers with high-quality and efficient glass processing solutions.

In the future development, Huashil Technology will continue to adhere to technological innovation, continuously improve product quality and market competitiveness, and provide better products and services to global customers. At the same time, the company will also actively fulfill its social responsibilities, promote the sustainable development of the industry, and create a better living space for mankind.



28000+

华世力科技占地28000余平方米
Huashil Technology covers an area of 28000 square meters

8000+

华世力科技服务国内8000余家玻璃深加工用户
Huashil it serves more than 8,000 domestic glass deep processing users



80+

华世力科技销往全球80多个国家和地区
Huashil Technology is sold to over 80 countries and regions worldwide



高新技术企业认证
High tech Enterprise Certification



欧盟安全认证
EU Security Certification



ISO9001认证
Quality Management System



自主知识产权
Intellectual Property Rights



QUALITY BUILDS HONOR HONOR GUIDES FUTURE

品质铸造荣誉，荣誉指引未来

18年来，山东华世力逐渐发展壮大，已成为国际知名玻璃机械生产企业之一。公司具备完善的管理体系，已通过ISO9001质量管理体系认证、欧盟CE认证，拥有70多项自主知识产权的专利技术，目前公司已形成产学研一体，创新驱动的发展新模式。

The company has a comprehensive management system, has passed the ISO9001 quality management system certification, EU CE certification, and has more than 70 patented technologies with independent and independent property rights.



20项+ 国家发明专利
Invention Patent

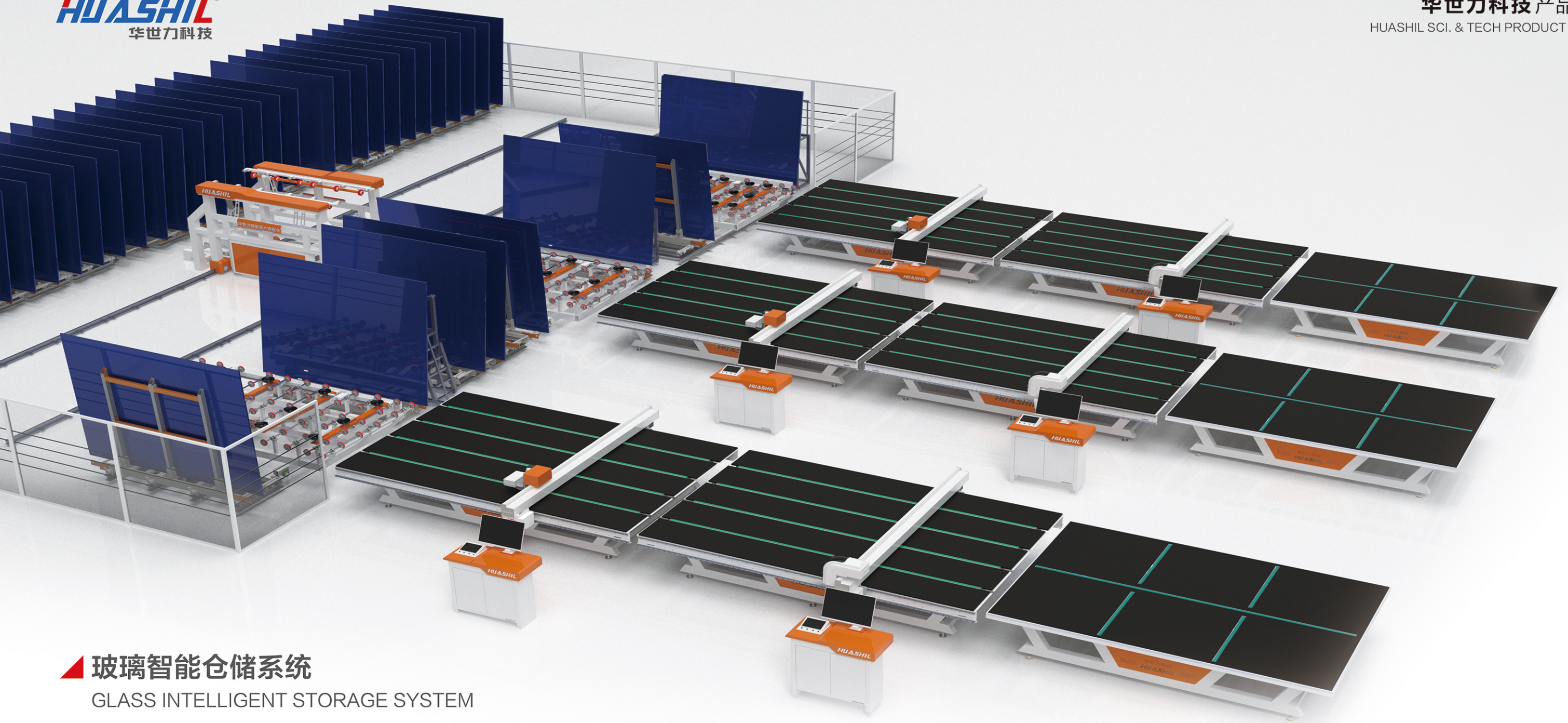
55项+ 实用新型专利
Utility Model

14项+ 外观专利
Appearance patent

46项+ 软件著作权
Software copyright

7项+ 国家级荣誉
National level honor





玻璃智能仓储系统 GLASS INTELLIGENT STORAGE SYSTEM

产品特点 PRODUCT FEATURES

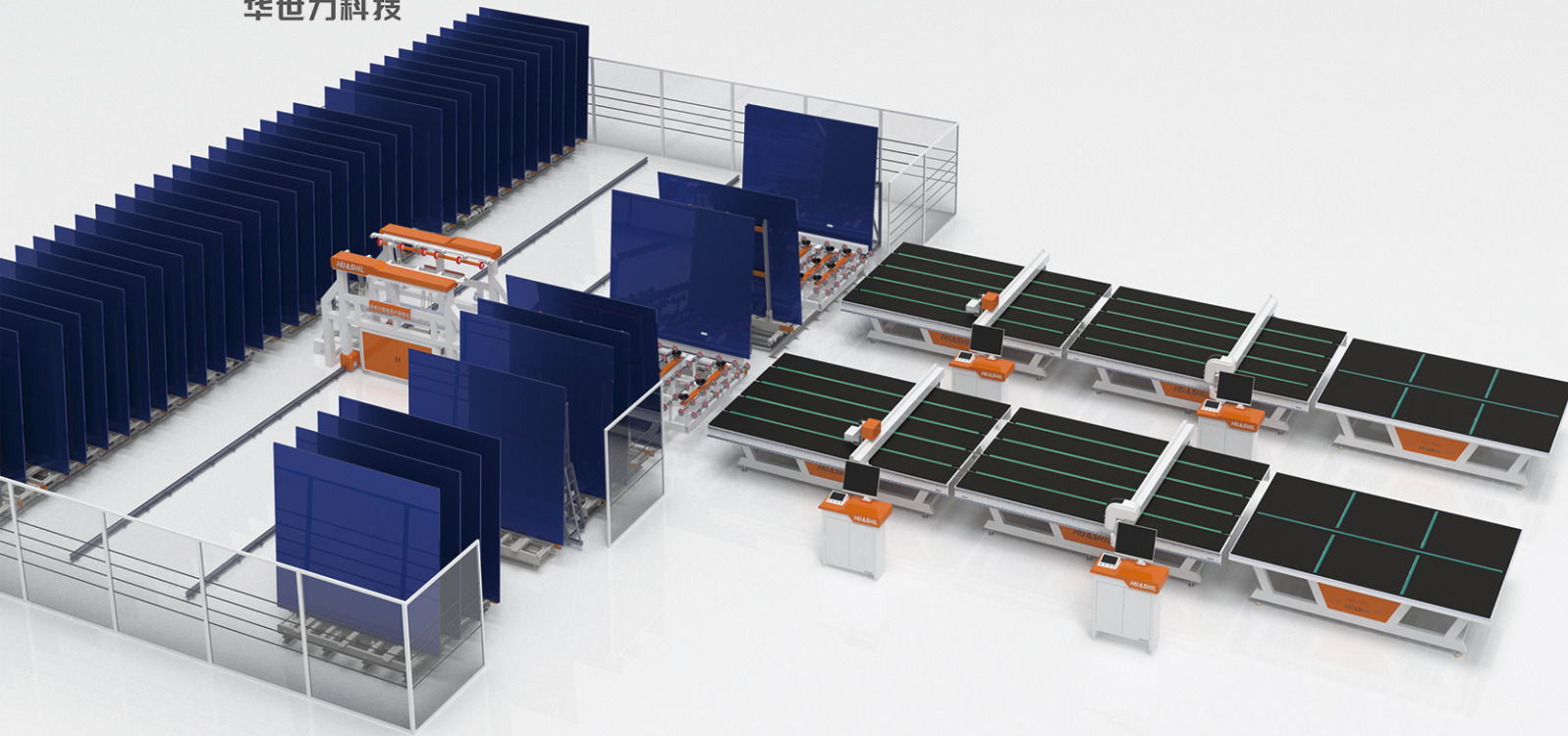
智能化玻璃原片仓储系统是针对玻璃深加工厂的原片仓库进行集约化、多元化、自动化的智能管理系统。可与ERP数据联通进行库存实时交换，根据优化结果可自动的调取玻璃架，将玻璃架送到上片台工位上。具有独立的库存管理及补料功能，在工作中会根据订单情况及现场实际工作状态进行调度，将指令发出控制小车自动执行。

The intelligent glass raw warehousing system is an intelligent management system which is intensive, diversified and automatic for the raw warehousing of glass deep processing plant. It can carry out real-time inventory exchange with ERP data interchange, According to the optimization results, it can automatically transfer the glass frame and send the glass frame to the station of the upper board, it has independent functions of inventory management and material replenishment. In the work, it will schedule according to the order situation and the actual working state of the site, and the command will be sent out to the control car to execute automatically.

技术参数 TECHNICAL PARAMETER

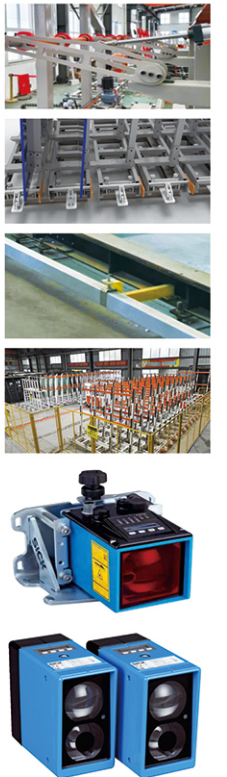
最小玻璃尺寸 Smallest size	2440 × 1830mm	仓储车行走速度 Walking speed	15-25m/min
最大玻璃尺寸 Biggest size	6100 × 3300mm	仓储车拉玻璃架装载速度 Pull glass frame speed	10-15m/min
大玻璃架尺寸 Size of large glass frame	6950 × 2900 × 600mm	安装总功率 Total power	10.5KW
小玻璃架尺寸 Small glass frame size	3500 × 2500 × 600mm		

其它规格可定制生产 Other specifications can be customized



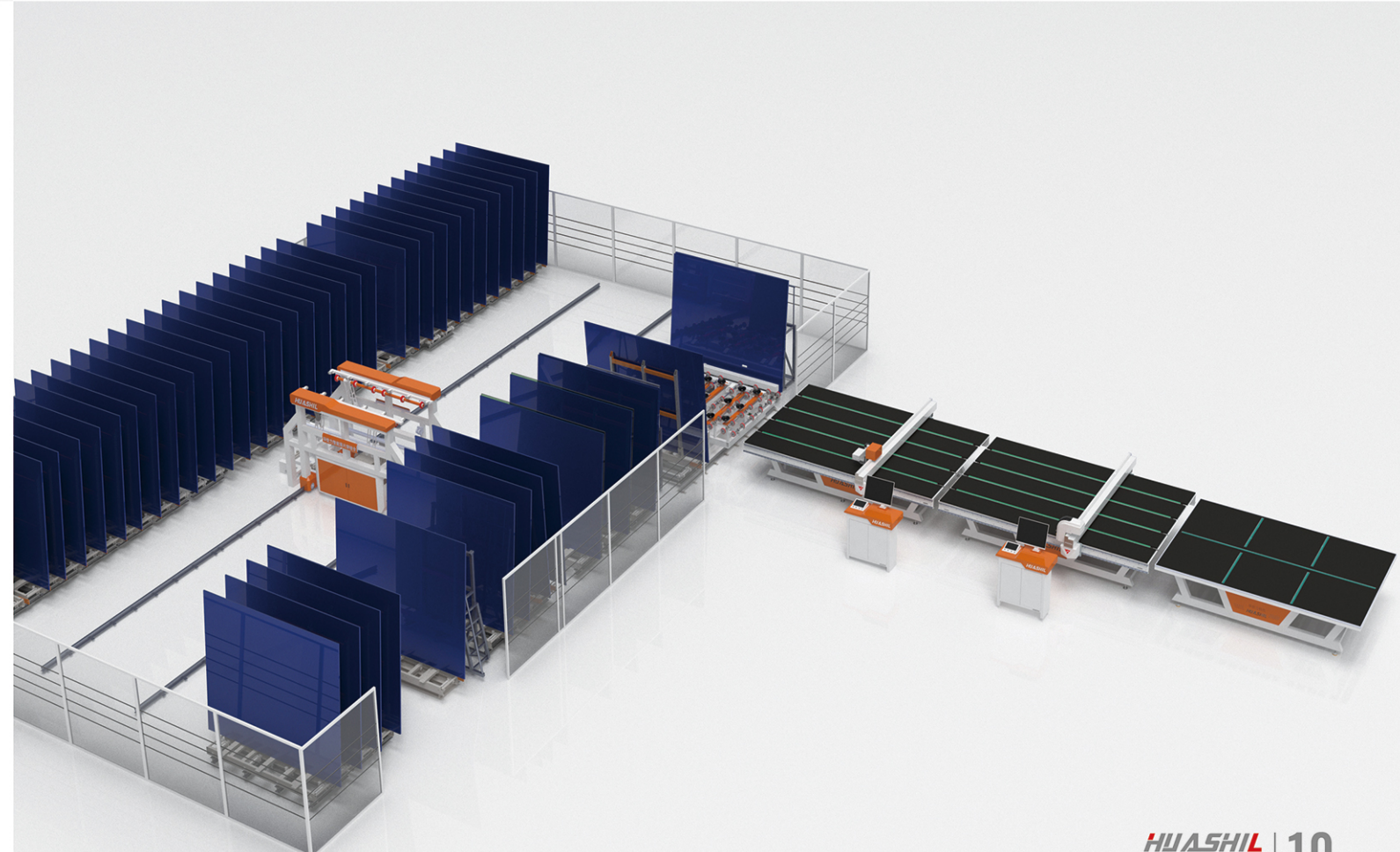
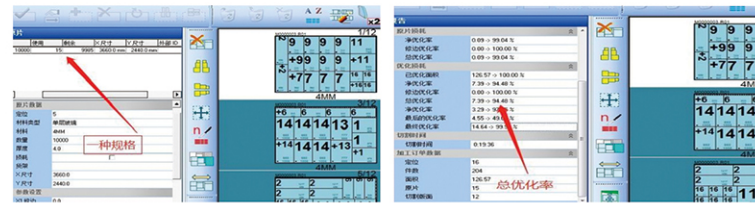
原片仓储安全保护 SAFETY PROTECTION

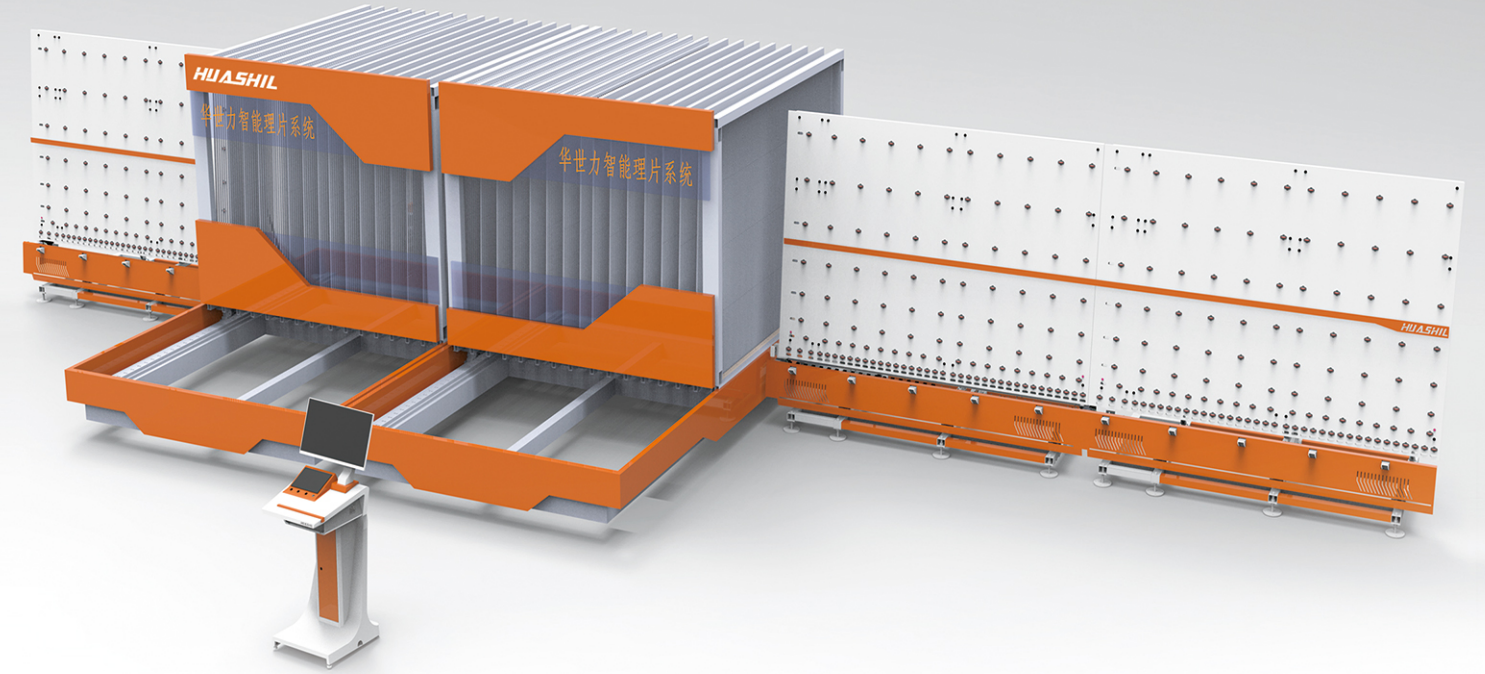
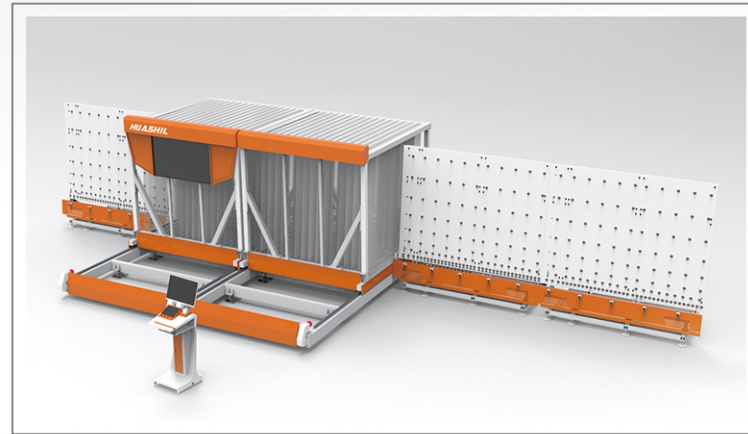
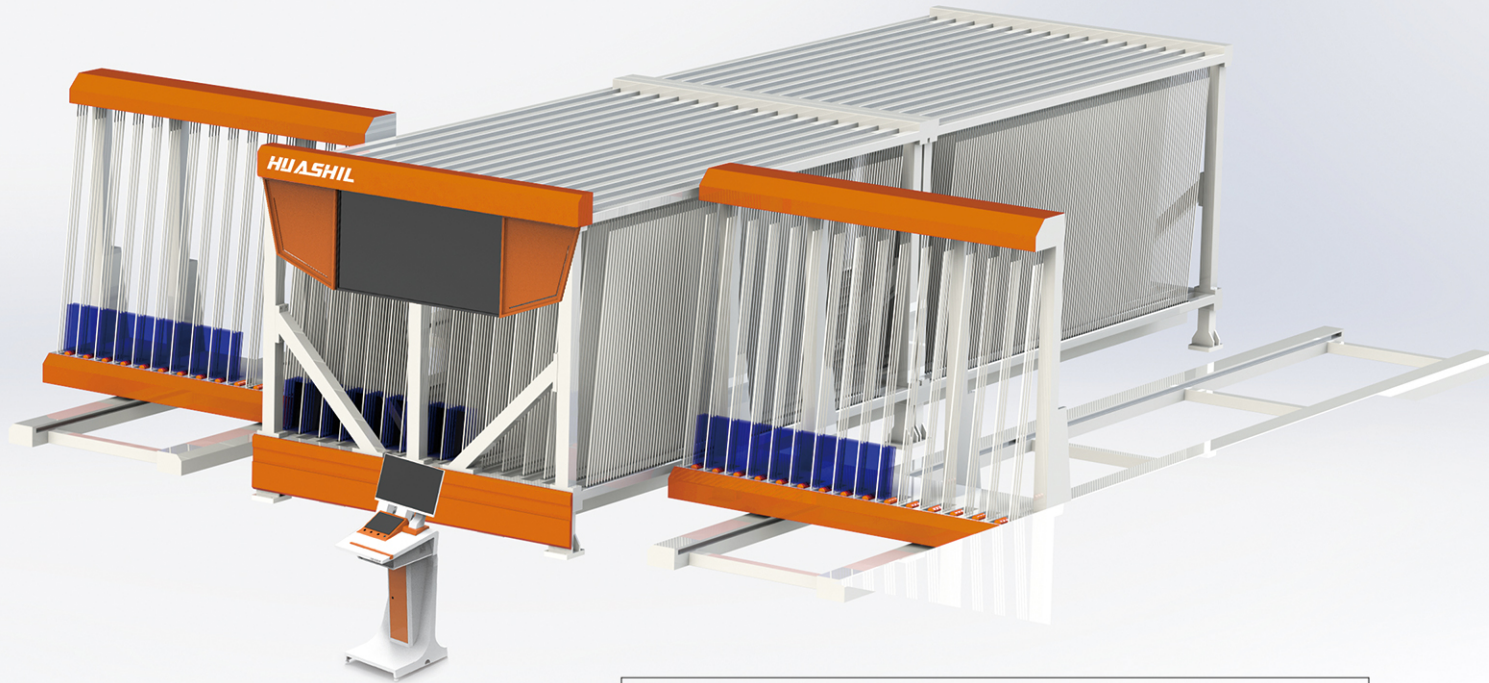
- 大车行走方式：伺服+激光测距进行数据对比，底层采用全套台达控制系统，采取闭环控制，任何中断操作后不需回零；
 - 玻璃牵引防倾斜：玻璃架夹持机构及玻璃压紧机构压住玻璃；
 - 原片库玻璃架防移动措施：光幕+机构锁止机构+机械限位保护，上片位玻璃架防移动措施：锁止机构；
 - 穿梭车Y轴电源线防老化及断裂：动力电源采用滑触线方式；
 - 使用激光通信：避免信号干扰、信号线断裂、老化等问题，且拖链里信号线断裂后不易更换；
 - 上片位和补片位均有靠架保护保证上片台吸片时及补片时的稳定性；
 - 当人工误挡住激光的光路，软件会强制停止机器，防止机器运行过程中，出现安全事故。
- The servo+laser ranging data compares the data. The bottom layer adopts a full set of Delta control systems, which adopts closed-loop control;
 - The glass frame holding mechanism and the glass tightness mechanism hold the glass;
 - Light curtain+institutional locking mechanism+mechanical limit protection, loading position glass frame defense movement measures: locking mechanism;
 - Power power supply adopts a sliding line;
 - Avoid problems such as signal interference, signal cable breaks, aging, etc., and it is not easy to replace after the signal cable in the dragging chain;
 - Both the upper and supplementary pieces have the stability of the sheet to protect the tablet and the time to fill the tablet;
 - When the light path of laser is blocked by mistake, the software will force the machine to stop the machine and prevent safety accidents during the operation of the machine.



原片仓储设备优势 EQUIPMENT ADVANTAGE

- 提高优化率：有了原片仓储设备以后，意味着原片库里同一厚度玻璃可以同时参与优化，极大的提高了玻璃切割优化率。当同一订单用6种原片规格参与优化时，优化率为97.9%，相比同一规格优化率高了3.4%。以某订单为例，当只选用一种原片规格3660*2440时，结化结果为94.48%；（原片种类越多，优化率越高）
 - 提高玻璃使用率：当一架玻璃根据优化切割只剩下几片时，吊装不安全，只能在不考虑优化的情况下直接切割。当玻璃架只剩几片玻璃时，往往加工厂会把剩余的几片压在新玻璃之后，过段时间，想用玻璃架里面规格时，常很难调出来。而智能仓储的余料管理系统可以很好地对切割余料进行管理，保证每一张原片的有效管理与使用；
 - 信息化管理：让原片使用全部数据化，可视化。比如破片时全部数据记录，让管理趋向数据化，可视化；
 - 安全：玻璃吊装仅在补片位进行，不会在车间进行跨区域，长距离作业，降低出现安全事故的可能性；
 - 原片库区跨区域：当车间存放原片和切割机上片台不在同一车间时，需用叉车等进行作业，使用不方便，且成本很高，使用原片仓储能解决此问题；
 - 提高切割机切割使用时间：当上片台需更换玻璃时，需要切割机停线，或两条以上切割线同时需要更换上片台玻璃原片时，其中一条切割线需要停机，待行车用完后才能再去吊装另一条切割线上片台玻璃；
 - 连线接口管理：使用原片仓储后能有效将原片仓储、上片台、切割机数据信息化、可视化、为后期连线打下坚实的基础；
 - 余料管理：一块大板切割一块成品后剩下玻璃；
 - 余片管理：玻璃架上玻璃还剩几片。
- Improve the optimization rate ● improve the use of glass ● informatization management ● security ● the original library area across the region ● improve the cutting time of the cutting machine ● connecting interface management ● waste management ● and film management.





玻璃智能理片系统 INTELLIGENT GLASS ARRANGEMENT SYSTEM

产品特点 PRODUCT FEATURES

该系统能实时监测运动参数，能够实现精确的位置控制功能，可靠性高，满足精确定位的要求。把散乱的玻璃输入巷道，快速精准检测、系统智能比对优化按理架模式规则出片；取代人工配片和贴标撕标环节，提高生产效率；支持工单扫描，读取ERP数据进行比对；单架理片时，当上片玻璃为下片玻璃时直通，不用存储于网格内，允许连续入片。

The system can monitor the motion parameters in real time, can realize the precise position control function, high reliability, to meet the requirements of precise positioning. Input the scattered glass into the roadway, quickly and accurately detect, and optimize the system intelligent comparison according to the rules of the frame mode. Replace manual matching and labeling and tearing, improve production efficiency; Support work order scanning, read ERP data for comparison; In single frame processing, when the upper glass is the lower glass, it is straight through, and does not need to be stored in the grid allowing continuous entry into the sheet.

适用范围 SCOPE OF APPLICATION

适用于中空前在线使用，把两架需要配对的不同玻璃送进理架系统，按工单要求顺序配对好出片；
适用于中空前离线使用，把单架需要配对的不同玻璃送进理架系统，按工单顺序出片；
适用于磨边前或彩轴前离线使用，按小批量整单及大小顺序出片，以散化整，减少磨边开合次数，提升磨边效率约1~3倍；
适用于散单玻璃出库前离线使用，按照客户、大小顺序出片，提高出库效率，减少玻璃的磨损和出错率。

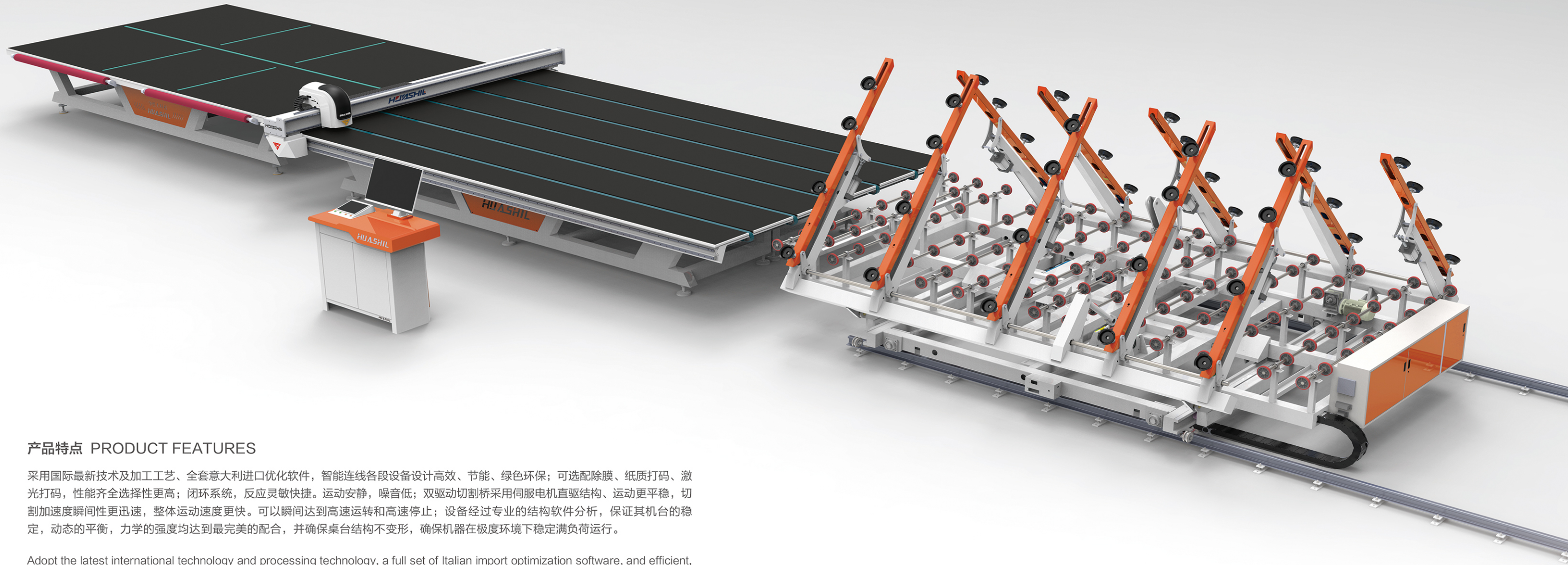
Suitable for online use before hollowing. Send two racks of different glasses that need to be paired into the rack system and pair them according to the order required by the work order;
It is suitable for offline use in China. The different glass that needs to be matched on a single frame is sent to the frame arrangement system and the pieces are sent out in sequence according to the work order;
It is suitable for offline use before edging or before color shafts. The pieces can be finished in order of small batch and size, so that the edging can be finished in bulk, The Times of edging opening and closing can be reduced, and the efficiency of edging can be improved by about 1-3 times;
It is suitable for offline use before the single glass out of the warehouse, and the film is released according to the customer and size order to improve the efficiency of the warehouse and reduce the wear and error rate of glass.

技术参数 TECHNICAL PARAMETER

加工玻璃厚度 Glass thickness	3-12mm	移动理片笼移动速度 Motng aedoa	10m/min
最小玻璃尺寸 Minimum glass size	400 × 400mm	理片笼巷道数 Number of lanes of li pianlong	80
最大玻璃尺寸 Maximum glass size	2500 × 2000mm	连线中空玻璃配对数 Glass pair number	30pair
玻璃输送速度 Glass conveying speed	45m/min	单架理片数 Number of single frame	60pieces

其它规格可定制生产 Other specifications can be customized

全自动玻璃切割流水线 FULLY AUTOMATIC GLASS CUTTING LINE



产品特点 PRODUCT FEATURES

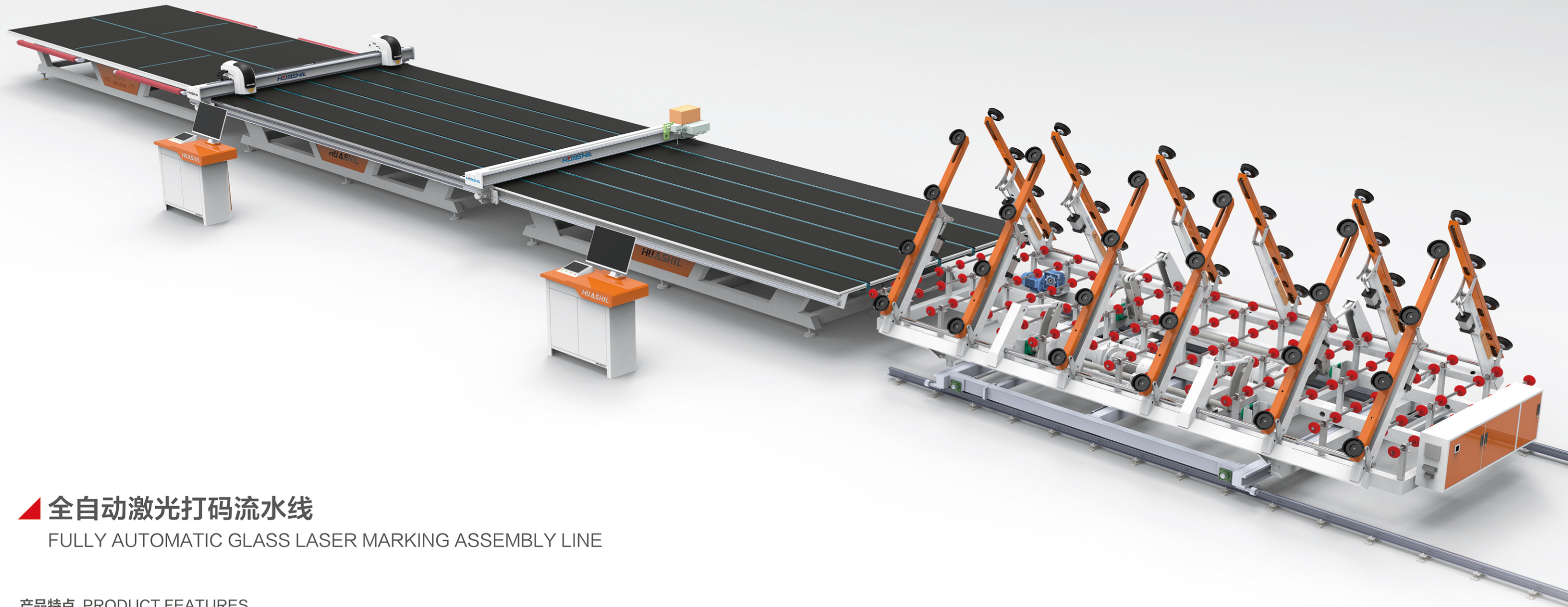
采用国际最新技术及加工工艺、全套意大利进口优化软件，智能连线各段设备设计高效、节能、绿色环保；可选配除膜、纸质打码、激光打码，性能齐全选择性更高；闭环系统，反应灵敏快捷。运动安静，噪音低；双驱动切割桥采用伺服电机直驱结构、运动更平稳，切割加速度瞬间性更迅速，整体运动速度更快。可以瞬间达到高速运转和高速停止；设备经过专业的结构软件分析，保证其机台的稳定，动态的平衡，力学的强度均达到最完美的配合，并确保桌台结构不变形，确保机器在极度环境下稳定满负荷运行。

Adopt the latest international technology and processing technology, a full set of Italian import optimization software, and efficient, energy-saving, and green environmental protection in each section of intelligent connection; optional can be used for removal, paper coding, laser coding, and the performance is complete. The closed-loop system is sensitive and fast. The exercise is quiet and the noise is low; the double-drive cutting bridge uses a servo motor direct-drive structure, more stable motion, the cutting acceleration is more rapid, and the overall exercise speed is faster. It can achieve high-speed operation and stop at high speed in an instant; the equipment is analyzed by professional structural software to ensure the stability, dynamic balance, and the intensity of mechanics to achieve the most perfect cooperation, and ensure that the structure of the desk and platforms does not deform, ensuring that the machine is extreme in extreme extremes Stable full load running in the environment.

技术参数 TECHNICAL PARAMETER

最大玻璃尺寸 Biggest size	5100 × 3300mm	直线精度 Straight line accuracy	≤ ±0.25mm/m
玻璃厚度 Glass thickness	3-19mm	玻璃切割速度 Glass cutting speed	0-200m/min

其它规格可定制生产 Other specifications can be customized



全自动激光打码流水线 FULLY AUTOMATIC GLASS LASER MARKING ASSEMBLY LINE

产品特点 PRODUCT FEATURES

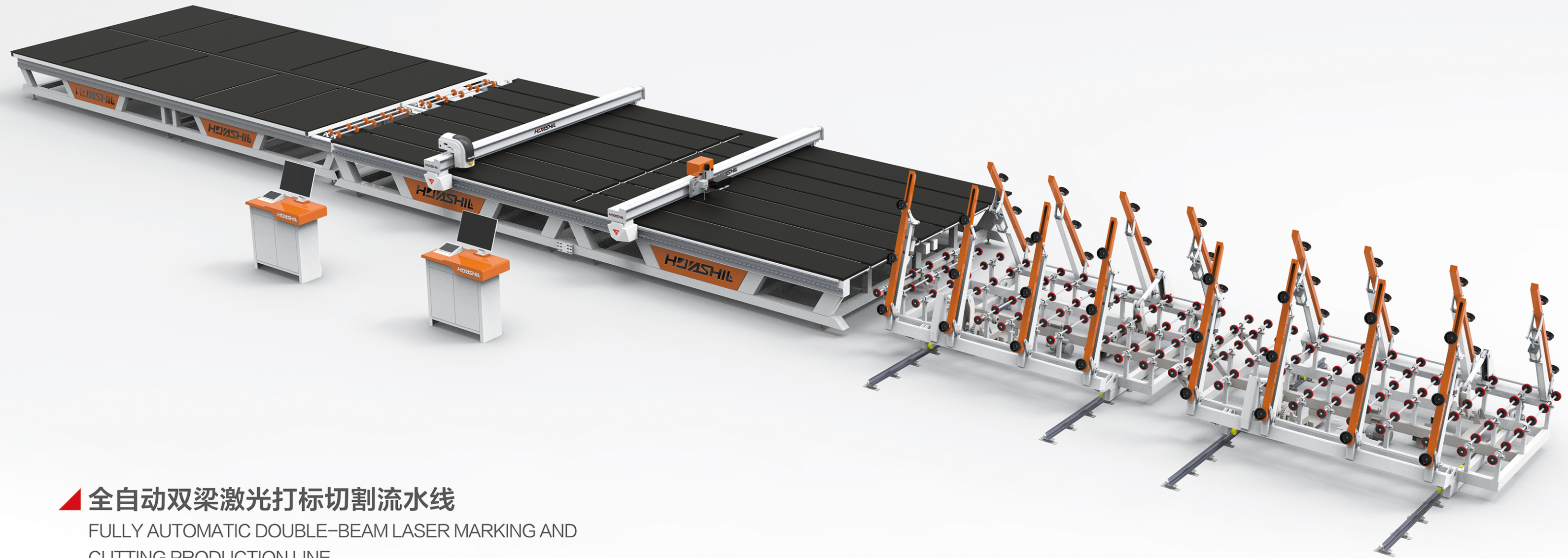
采用专业软件并使用高精度齿条，直线导轨、伺服电机及气动原件，达到长期使用精度稳定。专业玻璃切割数控系统，工控机操作稳定可靠；除此之外，切割桥采用双驱系统，对角线精度 $\leq 0.5\text{mm}$ ，设备作业加速度高，切割刀头的控制专利技术帮助大幅缩短抬刀及下刀时间。

Professional software and high-precision racks are used, and linear guide rails, servo motors and pneumatic originals are used to achieve stable accuracy of long-term use. Professional glass cutting CNC system, the operation of the industrial control machine is stable and reliable; in addition, the cutting bridge adopts a double-wheel drive system, the diagonal accuracy is $\leq 0.5\text{mm}$, the equipment operation is high, and the patented control technology for the cutting head significantly reduces the time required for raising and downing the knife.

技术参数 TECHNICAL PARAMETER

加工玻璃厚度 Machining glass thickness	3-19mm	小车最大速度 Maximum speed	200m/min
切割最大加速度 Maximum cutting	8.0m/s ² (龙门双驱)	打标速度 Label speed	4.5s (15×15mm)
切割最大速度 Maximum cutting	200m/min		

其它规格可定制生产 Other specifications can be customized



全自动双梁激光打标切割流水线

FULLY AUTOMATIC DOUBLE-BEAM LASER MARKING AND CUTTING PRODUCTION LINE

产品特点 PRODUCT FEATURES

对操作人员无特殊要求，操作简单，便于管理；上片分段操作，能应对不同玻璃尺寸的加工；安全高效、全自动上片台有效地保证了操作安全及防止玻璃出现破损，全自动输送装置降低了操作人员工作量；切割精度高，稳定性好，能满足各种生产需求，有效地保障后工序的加工品质及降低加工难度；高智商切割机优化软件，能大幅提高玻璃利用率，降低生产成本，强大的图库能保障设备能进行各种形状的玻璃切割，满足各种订单的切割要求；切割机的自动注油和压力自动调解功能，有效保证切割机玻璃稳定性及切割效果。

No special requirements for operators , simple operation , easy to manage; The loading operation is segmented, which can cope with the processing of different glass sizes; Safe and efficient , automatic loading table effectively ensures the safety of operation and prevent glass damage , automatic conveying device reduces the workload of operators; High cutting precision , good stability, can meet a variety of production needs, effectively ensure the processing quality of the post – process and reduce the difficulty of processing; High IQ cutting machine optimization software, can greatly improve the utilization rate of glass , reduce production costs, powerful picture library can ensure that the equipment can carry out various shapes of glass cutting, to meet the cutting requirements of various orders; Automatic oil filling and pressure adjustment function of the cutting machine, effectively ensure the stability of the cutting machine glass and cutting effect.

玻璃原片仓储切割流水线

GLASS SHEET STORAGE CUTTING LINE

产品特点 PRODUCT FEATURES

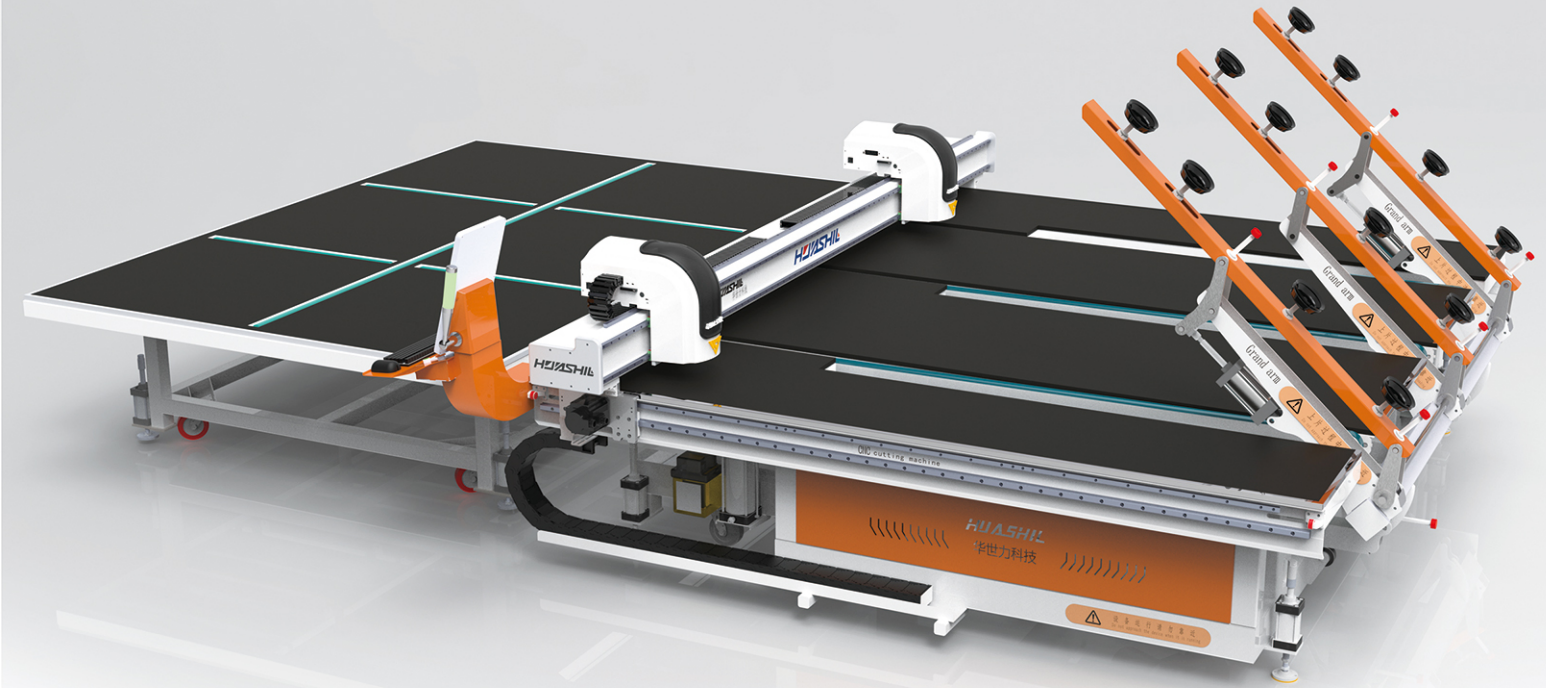
玻璃原片仓储切割流水线集成玻璃上片切割一体机与原片仓储的功能，具备显著优势。其一、高度自动化，从原片存储、智能调取玻璃、到精准切割一气呵成，大幅减少人工干预，提高生产效率；其二、采用先进数控技术，实现高速度高精度切割，满足多样化需求；其三、可灵活规划存储空间，实现原片有序管理。

Glass sheet storage cutting line integrates the functions of glass loading and cutting machine and glass sheet storage, and has significant advantages. First, it is highly automated, from glass sheet storage, intelligent glass retrieval, to precise cutting, which greatly reduces manual intervention and improves production efficiency; Second, it adopts advanced CNC technology to achieve high-speed and high-precision cutting to meet diverse needs; Third, it can flexibly plan storage space to achieve orderly management of glass sheet.

技术参数 TECHNICAL PARAMETER

型号 Model	玻璃原片参数 Original parameters	加工厚度 Processing thickness	玻璃架数量 Glass Shelves Quantity	上片速度 Loading speed	切割速度 Cutting speed	切割精度 Cutting accuracy
HSL-YTJ2721	2700 × 2100mm	2-15mm	根据需求制定 Custom	15-30s	0-200m/min	≤ ± 0.25mm/m
HSL-YTJ3826	3600 × 2440mm	2-19mm	根据需求制定 Custom	15-30s	0-200m/min	≤ ± 0.25mm/m
HSL-YTJ3829	3660 × 2800mm	2-19mm	根据需求制定 Custom	15-30s	0-200m/min	≤ ± 0.25mm/m

其它规格可定制生产 Other specifications can be customized



多功能全自动玻璃切割一体机

MULTIFUNCTIONAL FULLY AUTOMATIC GLASS CUTTING INTEGRATED MACHINE

产品特点 PRODUCT FEATURES

多功能全自动玻璃切割一体机具有自动上片、自动排版及切割功能于一体全自动玻璃切割系统。

The multi-functional fully automatic glass cutting all-in-one has automatic tablet, automatic typesetting and cutting function in the whole automatic glass cutting system.

技术参数 TECHNICAL PARAMETER

上片速度 Loading speed	15-50s	加工玻璃厚度 Glass thickness	3-19mm
切割精度 Cutting accuracy	≤ ± 0.25mm/m	加工玻璃尺寸 Machining glass size	3660 × 2440 / 2440 × 2000mm
切割速度 Cutting speed	0-200m/min		

其它规格可定制生产 Other specifications can be customized

Low-E除膜玻璃上片切割一体机

LOW-E FILM REMOVAL GLASS LOADING AND CUTTING MACHINE

产品特点 PRODUCT FEATURES

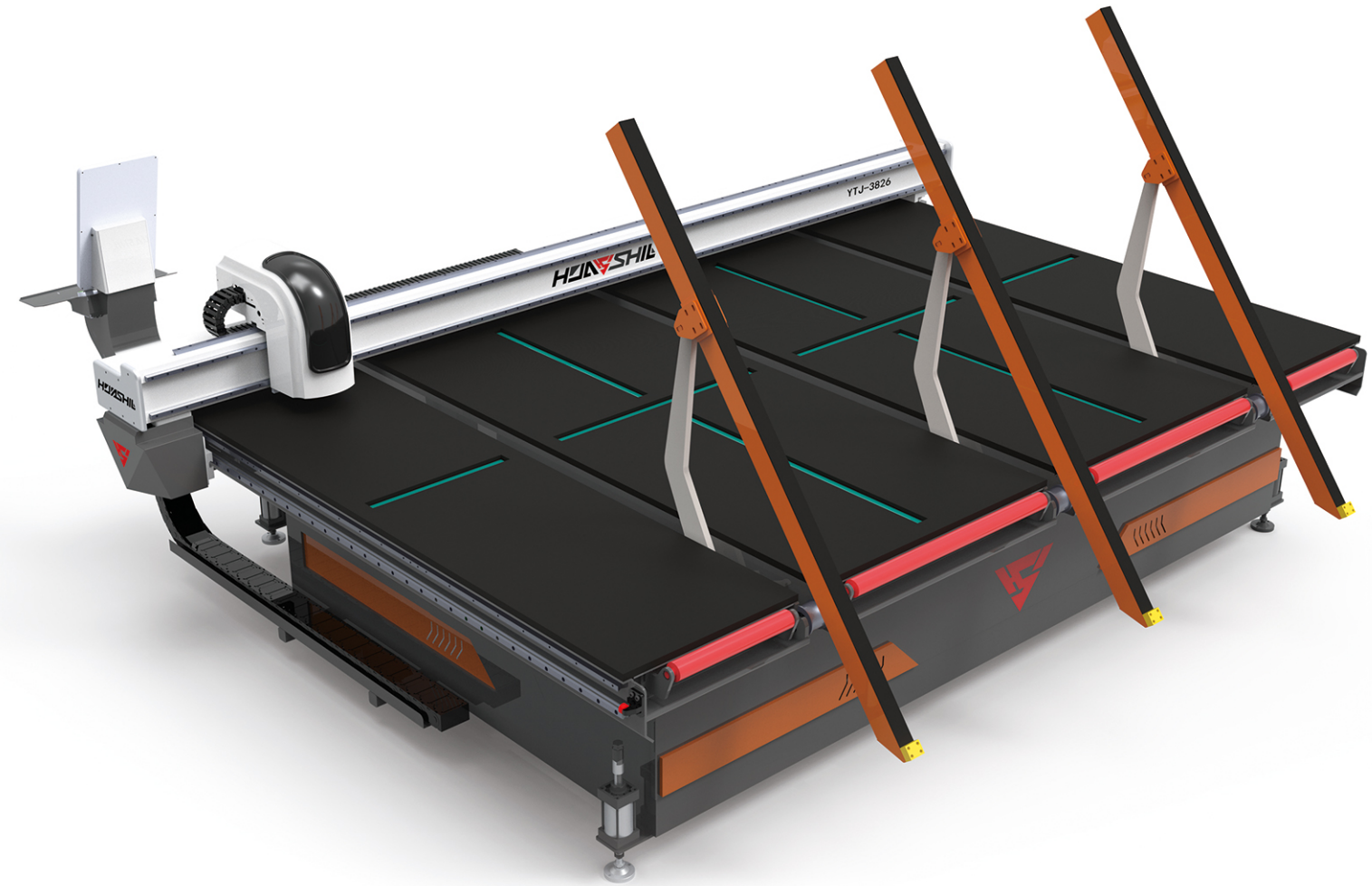
Low-E除膜玻璃上片切割一体机采用双机头结构，集自动上片、Low-E玻璃除膜、自动排版、自动切割和掰片台等功能，具有工作效率高、操作简单等优点。

The Low-E film removal glass loading and cutting machine adopts a double-head structure, integrating functions such as automatic loading, Low-E glass film removal, automatic typesetting, automatic cutting and breaking table. It has the advantages of high work efficiency and simple operation.

技术参数 TECHNICAL PARAMETER

型号 Model	玻璃原片参数 Original parameters	加工厚度 Processing thickness	上片速度 Loading speed	切割速度 Cutting speed	切割精度 Cutting accuracy
HSL-YTJ2721	2700 × 2100mm	2-15mm	15-30s	0-200m/min	≤ ± 0.25mm/m
HSL-YTJ3826	3600 × 2440mm	2-19mm	15-30s	0-200m/min	≤ ± 0.25mm/m
HSL-YTJ3829	3660 × 2800mm	2-19mm	15-30s	0-200m/min	≤ ± 0.25mm/m

其它规格可定制生产 Other specifications can be customized



全自动高速玻璃切割机

FULL AUTOMATIC HIGH-SPEED GLASS CUTTING MACHINE

产品特点 PRODUCT FEATURES

采用Eos-Nc软件并使用进口高精度齿条、滑轨、伺服电机及气动原件，达到长期使用精度稳定；引进玻璃切割专用数控系统，工控机操作稳定可靠，选装自动打标系统；自带图库或玻璃优化软件，可直接参数编程，或远程文件传输，可使用U盘进行文件导入导出，也可AUTOCAD文件直接导入。

Adopt EOS-NC software and use imported high-precision graphics, sliding rails, servo motors and pneumatic originals to achieve long-term accuracy and stable accuracy; introduce glass cutting special CNC systems, industrial control machine operations are stable and reliable, select automatic marking system; self-containing self-containing; Gallery or glass optimization software can directly program programming, or remote file transmission. The U disk can be used to import and export, or the AutoCAD file can be directly imported.

技术参数 TECHNICAL PARAMETER

最大切割尺寸 Maximum cut size	2500 × 2000mm	加工玻璃厚度 Glass thickness	3-19mm
切割精度 Cutting accuracy	≤ ±0.25mm/m	设备功率 Equipment power	5-8KW
切割速度 Cutting speed	0-200m/min	外形尺寸 Dimensions	6100 × 3300 × 900mm

其它规格可定制生产 Other specifications can be customized

玻璃倾斜杆上片切割一体机

GLASS TILT LOADING AND CUTTING ALL IN ONE MACHINE

产品特点 PRODUCT FEATURES

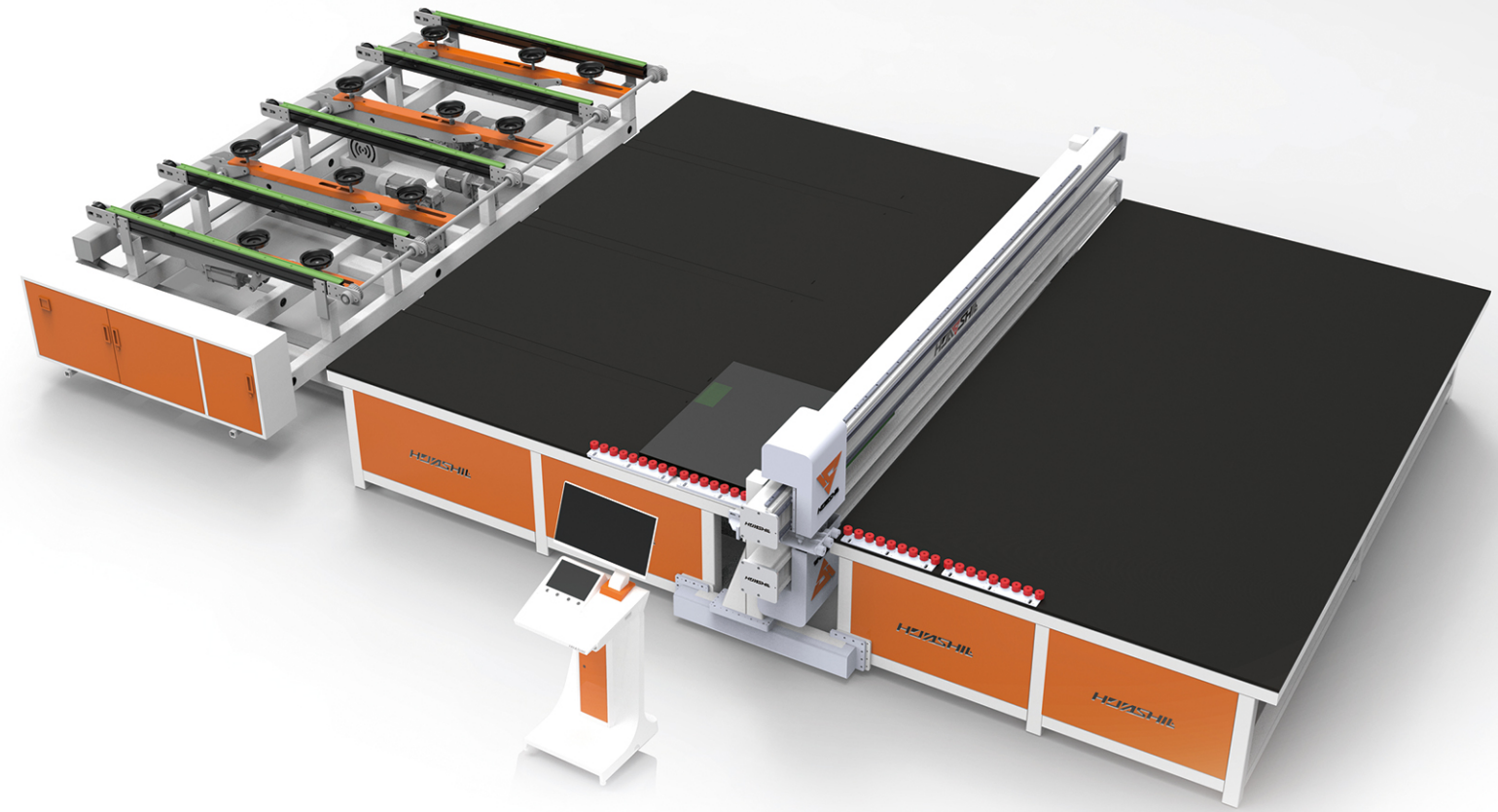
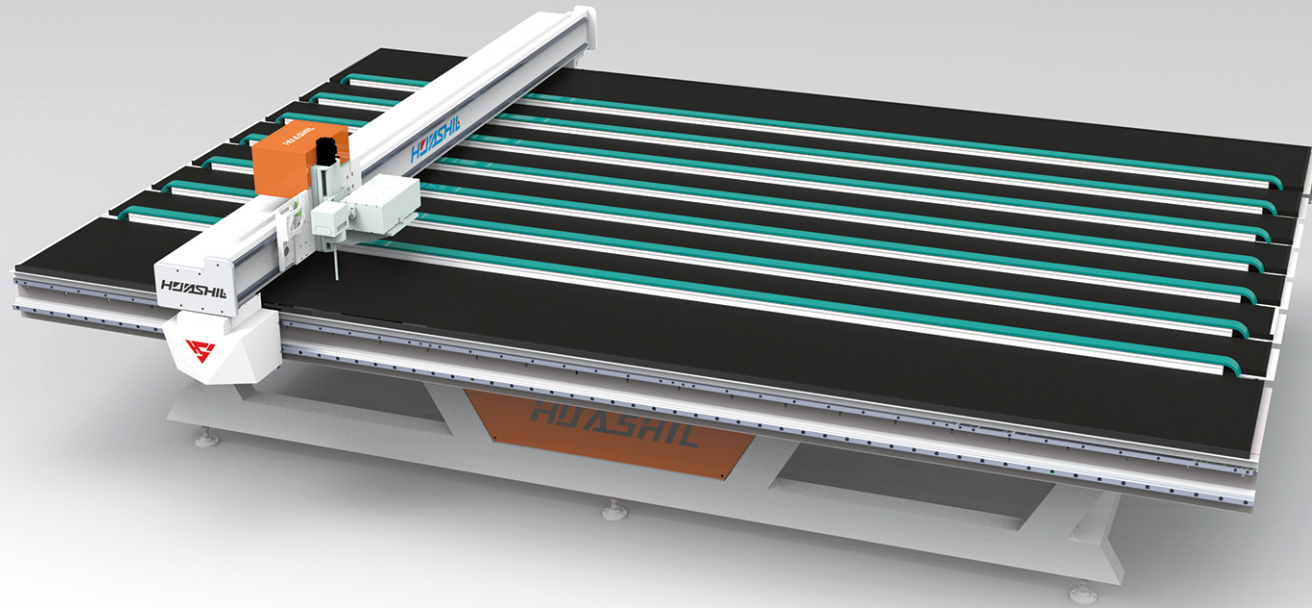
本产品具有倾斜杆上片、自动排版、自动切割、掰片顶杆等功能，占地小，操作简单，可以配合上片吊臂使用。

This product has the functions of tilt loading, automatic typesetting, automatic cutting, breaking ejector, etc. It occupies a small area, is easy to operate, and can be used in conjunction with the crane arm of the loading.

技术参数 TECHNICAL PARAMETER

型号 Model	HSL-BZD3826	切割速度 Cutting speed	0-200m/min
玻璃原片参数 Glass original parameters	3660 × 2400mm	切割精度 Cutting accuracy	≤ ±0.25mm/m
加工厚度 Processing thickness	2-19mm		

其它规格可定制生产 Other specifications can be customized



全自动激光打标机

FULLY AUTOMATIC LASER MARKING MACHINE

产品特点 PRODUCT FEATURES

可在玻璃上打印标识，作为整个工作流程的唯一标识，可用于跟踪加工进度、报工、在线补片数据、管理等。可以打印客户LOGO、二维码、条形码、3C标等，读码率识别度高，具有产品流程跟踪、防伪等功能。

It can be printed on the glass as the sole logo of the entire workflow, which can be used to track processing progress, reporting workers, online supplementary data, management, etc. You can print customer LOGO, QR code, barcode, 3C standard, etc. The code read rate recognition is high, and it has functions such as product process tracking and anti-counterfeiting.

技术参数 TECHNICAL PARAMETER

玻璃厚度 Glass thickness	3-19mm	打标速度 Marking speed	160m/min
打标加速度 Marking acceleration	6m/s ² (龙门双驱)	打标节拍 Marking	3s/个

其它规格可定制生产 Other specifications can be customized

夹胶玻璃切割机

LAMINATED GLASS CUTTING MACHINE

产品特点 PRODUCT FEATURES

夹胶玻璃切割机采用高精度伺服电机、精密导轨及先进算法优化路径，切割误差极小，能有效降低次品率；配备HMI人机界面，操作简便，全自动化流程降低劳动强度且新手易上手；可处理多种规格玻璃，适配多行业需求；切割速度快，框架经特殊处理坚固稳定，运行噪音小；具备自动定位、切膜、加热等多样功能，还能智能诊断设备状态预警故障，保障生产连续性，部分设备节能设计，符合环保要求。

The laminated glass cutting machine adopts high-precision servo motors, accurate guide rails, and advanced algorithms to optimize the cutting path, resulting in minimal cutting errors and effectively reducing the defective rate. It is equipped with an HMI human-machine interface for simple operation, and the fully automated process reduces labor intensity, making it easy for beginners to use. It can handle various specifications of glass and meet the demands of multiple industries. With fast cutting speed, the machine frame is specially processed to be firm and stable, and the operation noise is low. It has multiple functions, such as automatic positioning, film cutting and heating. It can also intelligently diagnose the equipment status and issue early warnings of faults to ensure the continuity of production. Some equipment is designed to be energy-saving and meets environmental protection requirements.



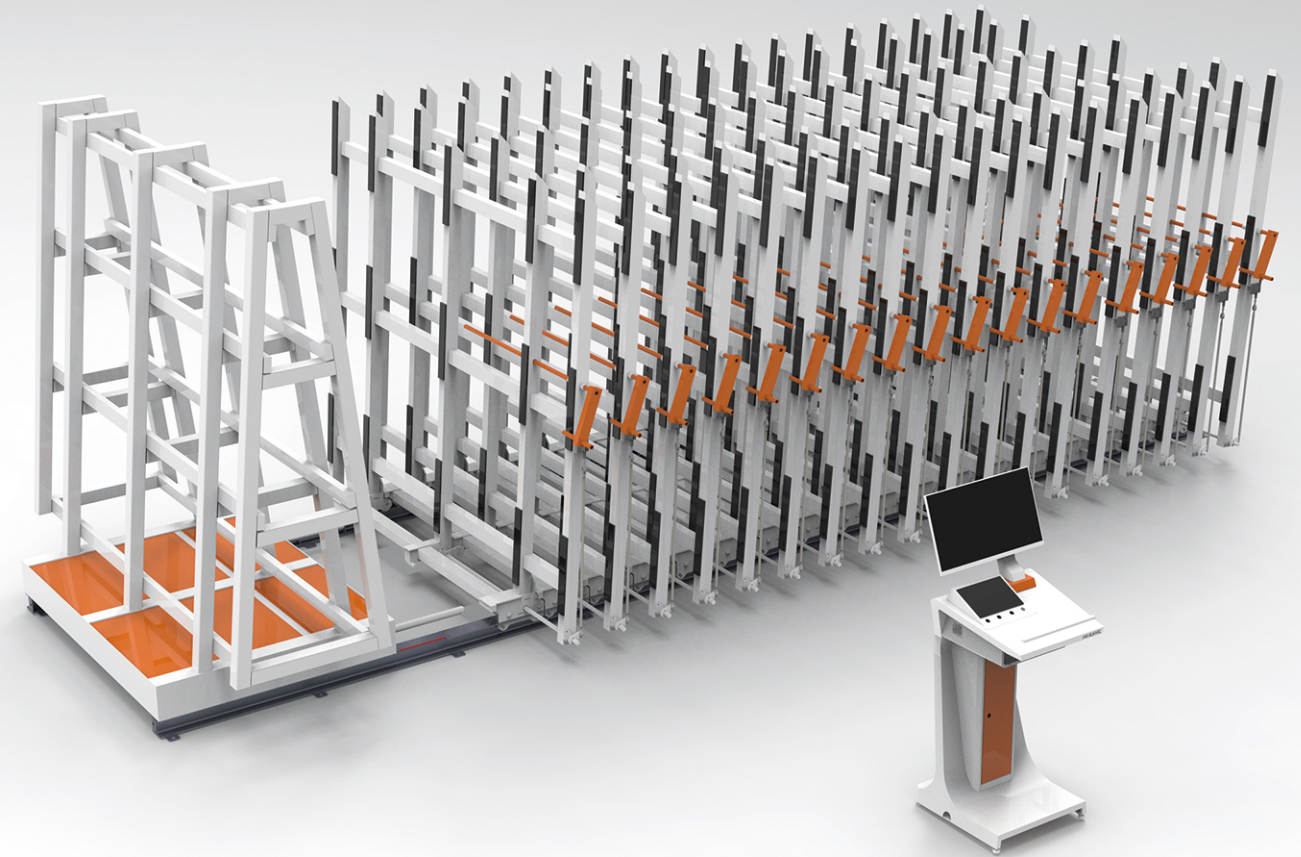
▲ 一体式全自动智能上下片台

INTEGRATED AUTOMATIC INTELLIGENT GLASS LOADER

产品特点 PRODUCT FEATURES

采用优质直线导轨滑座移动，运动平稳顺畅，滑座移动采用齿轮齿条传动，稳定、精确、无晃动；集中式加油系统，保证导轨润滑通畅，维护方便；各连接部位采用可拆卸结构，非一体焊接，保证设备零件的可互换性，降低维护成本；可自动识别玻璃尺寸，无需手动关闭阀门，提高设备的自动化程度和安全性；设备配有安全电源，即使断电或突然停机，翻臂的玻璃也不会滑落，极大的保证了设备和人员的安全。

It adopts high-quality linear guide rail, and the sliding seat moves stably and smoothly. The sliding seat moves with gear rack transmission, which is stable, accurate and free of shaking; Centralized refueling system ensures smooth lubrication of guide rail and convenient maintenance; Each connecting part adopts removable structure to ensure the interchangeability of equipment parts and reduce maintenance cost; It can automatically identify the glass size without manually closing the valve, so as to improve the automation and safety of the equipment; The equipment is equipped with a safe power supply, and the glass of the turnover arm will not fall even if it is powered off or suddenly shut down.



▲ 电动仓储玻璃架

ELECTRIC GLASS SHEET STORAGE RACK

产品特点 PRODUCT FEATURES

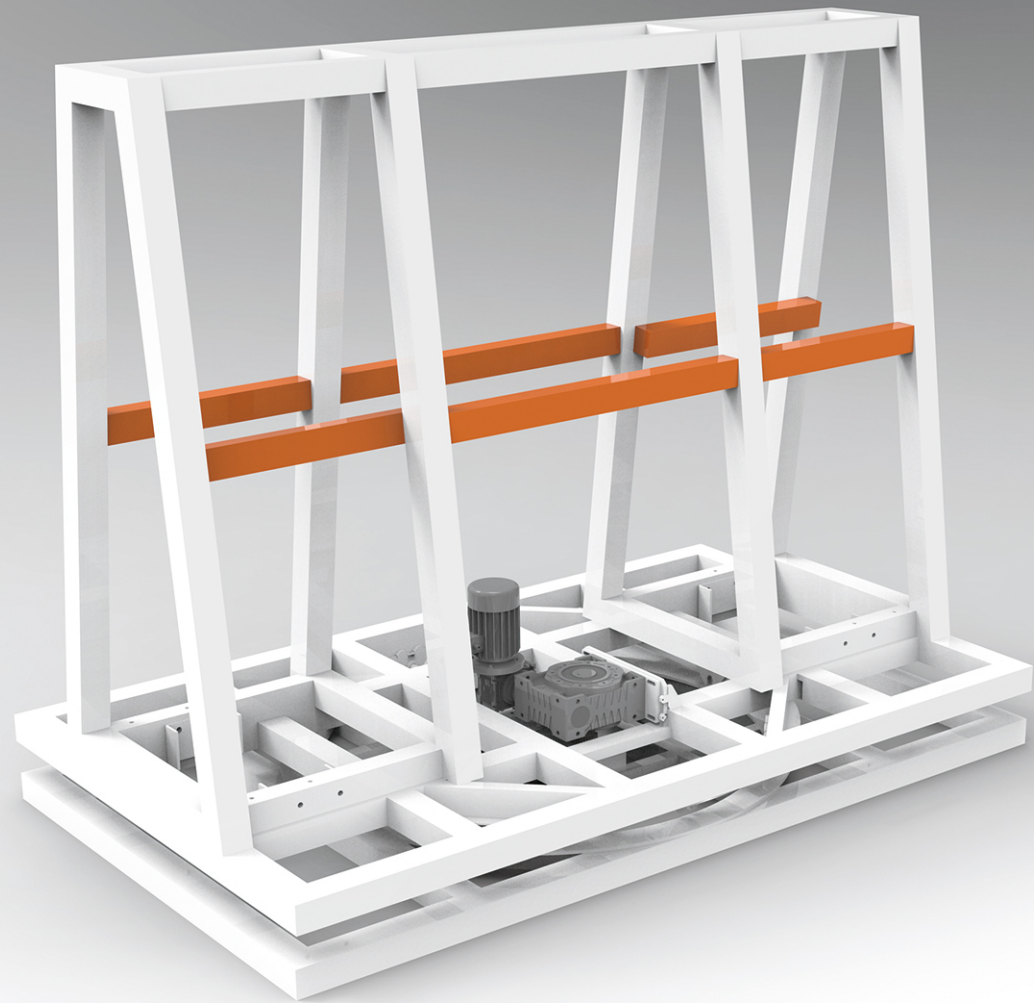
电动仓储玻璃架适用于不同玻璃加工企业玻璃原片的存取，可以把玻璃集中管理，遥控操作。操作简单，取片方便，运行稳定。可以节约用地，可以定制不同尺寸。

Electric glass sheet storage rack is suitable for the storage and retrieval of glass sheets in different glass processing enterprises. It can centrally manage the glass and operate it remotely. It is easy to operate, convenient to retrieval the glass, and stable in operation. It can save land and can be customized in different sizes.

技术参数 TECHNICAL PARAMETER

玻璃原片参数 Glass sheet parameters	玻璃架数量 Glass Shelves Quantity
2440 × 2000mm	根据需求制定 Custom according to the request
3660 × 2800mm	根据需求制定 Custom according to the request

其它规格可定制生产 Other specifications can be customized



▲ 旋转玻璃架 ROTATING GLASS RACK

产品特点 PRODUCT FEATURES

旋转玻璃架是专为玻璃切割设备设计的高效辅助装置。可实现灵活、平稳旋转，精准定位原片玻璃，有效提升玻璃传输与上片效率，减少人工搬运频次与劳动强度。设备结构稳固耐用，承重性能优异，可适配多种规格玻璃，承载重量可达数吨。同时具备智能控制系统，支持与主设备无缝对接，实现联动作业，精准匹配生产节奏。此外，旋转玻璃架占地面积小，安装便捷，可灵活嵌入现有生产线，有效优化车间空间布局，是提升玻璃加工自动化水平与生产流畅性的理想配套设备。

The rotating glass rack is an efficient auxiliary device specially designed for glass cutting equipment. It can achieve flexible and stable rotation, accurately position the glass raw sheets, greatly improve the efficiency of glass transportation and loading, and reduce the frequency of manual handling and labor intensity. The equipment has a stable and durable structure and excellent load-bearing performance, and can be adapted to various specifications of glass, with a load-bearing capacity of several tons. At the same time, it has an intelligent control system that supports seamless integration with the main equipment, enabling linked operation and precise matching of production rhythm. In addition, the rotating glass rack covers a small area and is easy to install. It can be flexibly embedded in the existing production line, effectively optimizing the workshop space layout. It is an ideal supporting equipment to improve the automation level and production fluency of glass processing.

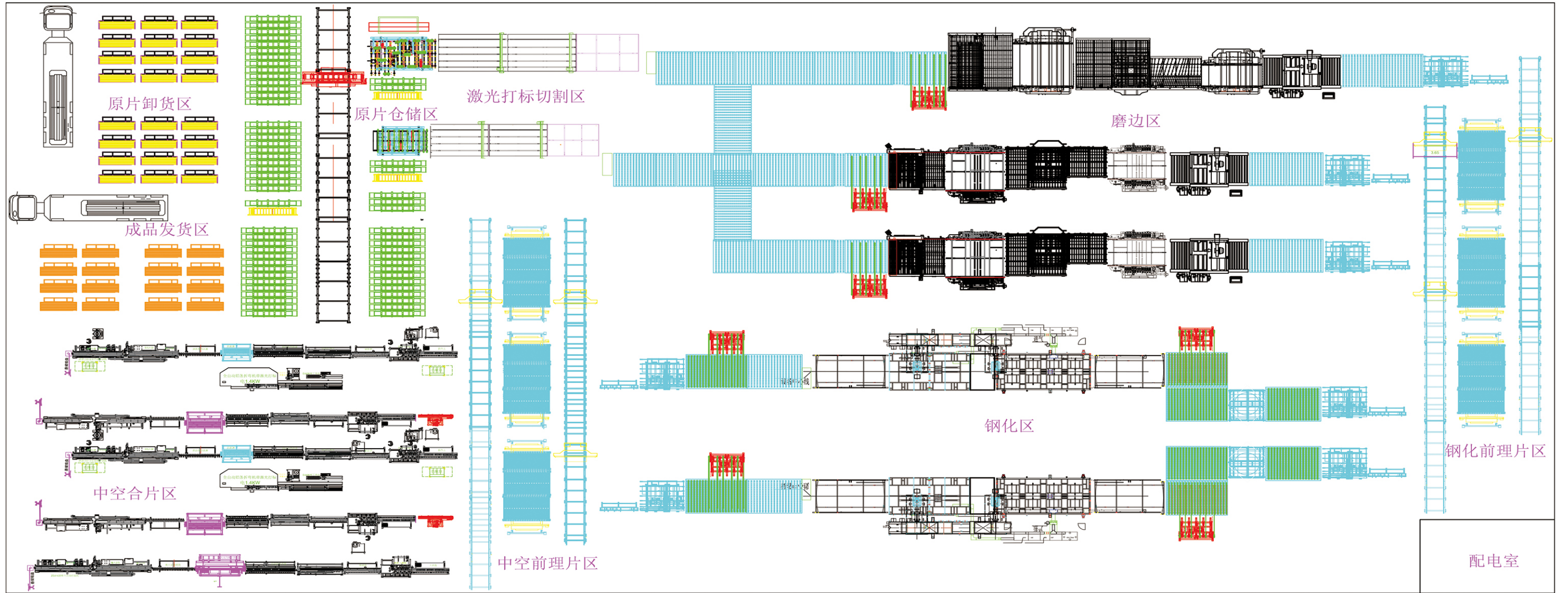


▲ 玻璃机械臂 THE GLASS ROBOT ARM

产品特点 PRODUCT FEATURES

玻璃机械臂专为玻璃加工场景设计，其采用高刚性轻量化结构，搭配高精度伺服驱动系统，负载能力强，可稳定抓取不同规格玻璃，重复定位精准，确保搬运、上下料精准无误。搭载视觉识别与智能算法，机械臂能快速识别玻璃位置与尺寸，兼容多种玻璃形态。模块化设计支持灵活部署，可无缝对接切割、磨边、清洗等设备，实现全流程自动化生产，大幅提升玻璃加工效率与生产安全性。

Electric glass sheet storage rack is suitable for the storage and retrieval of glass sheets in different glass processing enterprises. It can centrally manage the glass and operate it remotely. It is easy to operate, convenient to retrieval the glass, and stable in operation. It can save land and can be customized in different sizes.



产品特点 PRODUCT FEATURES

- 全面采集：全厂设备状态、原辅料消耗能耗等信息，实现成本精细化把控；
- 原片仓储系统：提高玻璃优化率，实现0间断工作；
- 激光打码系统：为每一块玻璃标记独立身份，产线追踪，按片管理，随时查询；
- 视觉检测系统：配合下片分拣系统，实现按流程分架；
- 分流优化：强大的算法可大幅减少磨边机开合时间，提升效率；
- 数字化管理：整线系统与ERP多种数据对接方式，实现产线柔性调度；
- 工艺机制：实现动态调整设备参数，最大化调优，实现订单工艺；
- 产线看板：产线实时状态，主动向ERP上报生产数据；
- MES系统：钢化后，在MES指引下，根据流程卡自动落架并看板指引流转；
- 自动生成数据：自动生成各条线的铝条折弯数据，保证中空线生产的连续性和及时性；
- 路线指引：系统指引AGV按照路线运转玻璃架；
- ERP+MES：深度优化，多产线动态调度，确保最高优化率，实现智能排产，动态补片。

Comprehensive collection, the entire plant's equipment status, the energy consumption of the original auxiliary material consumption; the original film storage system, improve the glass optimization rate, and realize the 0 intermittent work; the laser coding system is the independent identity of each glass; Scroll system, realize the separation of the process; the differential algorithm that is optimized and optimized can greatly reduce the opening and closing time of the marginal machine and improve the efficiency; Parameters, maximize tuning to achieve the order process; under MES guidelines, automatically fall into the rack according to the process card and guide the direction of the board; automatically generate the aluminum bending data of each line to ensure the continuity and timeliness of the airline production; the system; the system; the system; the system; the system; Guide AGV to run the glass frame according to the route; ERP+MES, in-depth optimization, multi-production line dynamic scheduling to ensure the highest optimization rate, realize intelligent discharge production, and dynamic supplements.

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Shandong Huashil Technology serves more than 8,000 domestic glass deep processing users in China, and its products are sold to more than 80 countries and regions around the world. The company has a comprehensive pre-sales, middle-aged, and after-sales service system. All employees of Shandong Huashil Technology are willing to cooperate sincerely with customers at home and abroad, take advantage of the wind and voyage, seek common development, and create the future together!

