



北玻官网
NorthGlass Online



北玻微信公众号
NorthGlass“Wechat”



NorthGlass Facebook

上海北玻自动化技术有限公司

上海市松江区小昆山镇光华路328号
电话: 021-57858555 传真: 021-57858551
邮箱: autosales@northglass.com
集团官网: www.northglass.com
自动化官网: automation.northglass.com
多语种官网: www.north-glass.com
北玻股份股票代码: 002613

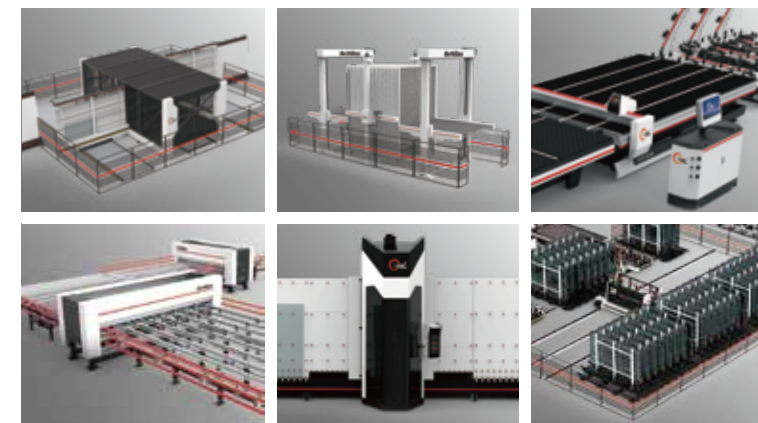
Shanghai North Glass Automation Technology Co., Ltd.

No.328, Guanghua Road, Xiaokunshan Town, Songjiang District, Shanghai
Tel: 021-57858663 Fax: 021-57858551
E-mail: autosales@northglass.com
Official Website: www.northglass.global
Automation BU Website: automation.northglass.global
Multilingual Website: www.north-glass.com
Stock Code: 002613

为了不断提高产品性能, 技术数据和图片并不绑定, 北玻有权对产品进行修改而不另行通知。

In order to improve our product quality continuously, the product pictures are not bound by Technical data.
NorthGlass has the right to make changes without prior notice.

2026.10 印制 第七版
2026.10 Printed, 7th Edition



北玻股份 • 自动化公司
NorthGlass • Automation BU

您可以信赖的自动化设备及方案的提供和解决者
Reliable Supplier of Automation Equipment and Solution



光伏玻璃自动化连线系统
玻璃原片自动化仓储系统
卧式理片系统
立式理片系统

Solar Glass processing automation line
Glass storage system
Lifting buffer system
Vertical sorter system

北玻自动化公司

NORTHGLASS AUTOMATION

北玻自动化公司成立于2015年，是北玻股份旗下最具发展潜力、代表未来趋势的核心事业部。自成立以来，公司累计销售自动化设备超过300多套，产品不仅覆盖中国本土市场，还远销美、英、俄、加、日、澳、韩、印等60多个国家和地区，客户包括圣戈班、皮尔金顿、Vidro、WeWork等国际知名企业。

凭借卓越的产品口碑与完善的售后服务，北玻自动化赢得了用户的广泛认可。通过持续的技术研发与市场深耕，公司销售与服务网络快速平稳拓展，市场影响力不断增强。

产品体系方面，北玻自动化从玻璃智能仓储系统、玻璃切割机、立式磨边清洗生产线等单机设备起步，逐步扩展至玻璃深加工预处理连线、自动分片落架连线、智能理片系统等自动化连线方案，并自主研发了玻璃智能软件系统，充分彰显了强大的技术创新实力。

在玻璃加工4.0时代，北玻自动化持续深化软件研发，推出新一代玻璃智能软件系统，能够为终端用户提供更快速、更专业、更稳定的玻璃加工ERP及生产执行软件，以及涵盖自动化、智能化、数字化、信息化的全套玻璃加工解决方案。

Shanghai North Glass Automation Co.,Ltd (Hereinafter referred to as "NorthGlass Automation") was established on 2015, with a registered capital of RMB 85million, and it is the most potential division of NorthGlass in future. Since establishment, North Glass Automation has already sold more than 300 units machine. In addition to China local market, it has also been exported to more than 50 countries, such as U.S.A, U.K, Russia, Canada, Japan, Australia, Korea, Middle East Asia, India and so on. Customers include well-known enterprises such as Saint Gobain, Vitro, Pilkington, Wework, etc.

The product range of NorthGlass Automation has gradually expanded from stand-alone machine such as glass intelligent storage system, glass cutting machine, vertical seaming machine and vertical washing machine to partial automation system such as glass preprocessing automation line, glass automatic break-out & unloading automation line, intelligent buffer system, and then to the full automation line and intelligent glass factory software system, which demonstrate the strong technical R&D and innovation strength of NorthGlass.

In the era of glass processing 4.0, NorthGlass continued to work on software R&D, and developed the intelligent glass factory software system. The new system can provide users with more professional and stable glass ERP and production planning software, as well as a full set solution of glass processing automation, intelligence, digitization and informatization.



洛阳北玻高端装备产业有限公司（园区占地510亩、建筑面积22万m²）

高端装备产业园“万里号”贵宾楼

上海北玻玻璃技术工业有限公司

天津北玻玻璃工业技术有限公司

洛阳北玻三元流风机技术有限公司

北玻技术及产品

□ 钢化炉

6500台北玻钢化炉在世界各地运行

□ 镀膜线

30多条北玻镀膜线销往世界各地

□ 预处理连线及智能化玻璃工厂

300多套连线及切割机、仓储系统广销海内外

□ 高效能电加热窑炉

广泛应用于卫生/建筑/发泡陶瓷、琉璃、轻晶石等领域

□ 三元流风机

10万台北玻风机在高铁、工业炉等各领域可靠运行

□ 玻璃深加工产品

北玻幕墙玻璃镶嵌在全球各地地标建筑上

□ 琉璃玻璃

突破极限，单片最大达15m²，并具备连续生产能力

□ 轻晶石——轻质微晶石单元墙体

年产50万m²轻晶石综合墙体，开启绿色建筑工业化时代

北玻股份

洛阳北方玻璃技术股份有限公司，简称“北玻股份”，由董事长高学明先生于1995年5月18日在洛阳国家高新技术开发区发起创立，是主要从事玻璃深加工设备和玻璃深加工产品的研发、设计、制造、生产、销售的高新技术企业。2011年北玻股份在深圳证券交易所成功上市（股票代码：002613）。北玻股份相继成立了子公司上海北玻玻璃技术工业有限公司、上海北玻真空镀膜技术有限公司、洛阳北玻三元流风机技术有限公司、天津北玻玻璃工业技术有限公司、上海北玻自动化技术有限公司、洛阳北玻高端装备产业园有限公司、洛阳北玻琉璃玻璃有限公司、洛阳北玻高温电窑智能装备有限公司、洛阳北玻高端玻璃工业有限公司、北玻高端(上海)玻璃工业有限公司，并参股投资了洛阳北玻轻晶石新材料有限公司。

公司秉承“创新无止境、拼搏才会赢”的企业文化，凭借强大的技术研发实力和精良的设施装备，自主开发和制造了具有核心竞争力的玻璃钢化设备、镀膜设备、高端深加工玻璃等核心产品，在此基础上进一步拓展了玻璃深加工自动化连线、玻璃切割设备、仓储系统、三元流风机等产业。同时，北玻股份参股投资的北玻轻晶石产业孵化成功，抢先布局装配式绿色建筑新型墙体材料。

北玻股份是行业内实力强劲、规模领先的玻璃深加工设备研发制造企业之一，其主导产品平弯玻璃钢化机组年产量自2002年突破100台以来，连续24年稳居行业世界前列，累计已有超过6500台北玻钢化炉在世界各地运行；其自主研发的镀膜生产线已成为了全球玻璃镀膜行业的主流生产设备之一，带动了中国玻璃镀膜产业的迅猛发展。与此同时，北玻自动化智慧工厂解决方案也正广泛应用于建筑、家电、光伏、卫浴等多个领域，持续赋能产业智能化升级。

另一支柱产业玻璃深加工产品也应用在诸如国家大剧院、“鸟巢”“水立方”“冰丝带”、国家会议中心二期、北京大兴国际机场、国家开发银行总部、北京城市图书馆、上海世博会项目、上海中心、上海大歌剧院、上海图书馆东馆、伦敦莱登大厦、阿布扎比国际机场、美国甲骨文总部、美国谷歌总部、美国2050M街、日本第一高楼 森 JP Tower、香港太古、香港西九龙高铁总站大楼、澳大利亚布里斯班玻璃屋剧院、华为全球旗舰店、深圳OPPO总部、Nike旗舰店、爱马仕/古驰/路易威登等全球标志性建筑上，同时北玻股份也作为苹果公司的两家主要建筑玻璃供应商之一为其在世界各地的旗舰店及位于硅谷的总部提供建筑玻璃。

公司产品遍布全国，并成套出口到美国、英国、德国、法国、日本、印度、巴西、沙特、埃及、土耳其、澳大利亚等超过115个国家和地区，同时拥有一套完善的国内、国际销售服务体系。

北玻股份拥有玻璃钢化、低辐射镀膜等各类国际先进的自备成套实验室。公司先后荣获了行业协会颁发的“建筑玻璃首选品牌”、“中国房地产开发企业500强首选品牌”、“行业影响力品牌TOP榜”等荣誉称号；天津北玻荣获改革开放四十周年“行业突出贡献企业”；北玻商标于2017年7月被认定为全国驰名商标；董事长高学明荣膺“全国建材行业改革开放30年代表人物”荣誉称号。



NorthGlass independently researches and develops equipment

- Cutting Table
- Sorter
- Vertical Seaming and Washing machine
- Vertical Buffer

NorthGlass Technologies and products

Tempering Furnace 6500+ NorthGlass tempering furnaces in operation worldwide.	Coating Line 30+ NorthGlass coating lines sold worldwide.
Triturbo Fan 100,000+ NorthGlass Triturbo Fans power efficient operations in high-speed rail and industrial applications.	Processed Glass Curtain wall glass integrated into landmark buildings worldwide.
Pre-processing Line for Glass Intelligent Processing Factory 300+ glass pre-processing lines, cutting machines and glass storage systems sold worldwide.	Cast Glass Redefining possibilities with 15 m ² monolithic panels & continuous production.
High-Efficiency Electric Kilns Utilized in sanitary ware, architectural ceramics, foamed ceramics, cast glass, Light-Stone and other sectors.	Light-Stone — Lightweight Microcrystal Stone Unit Wall With an annual output of 500,000 Light-Stone units for integrated wall systems, NorthGlass is pioneering the era of industrialized green construction.

About Us

Founded on May 18, 1995, by Chairman Mr.Xueming GAO, Luoyang NorthGlass Technology Co., Ltd. (NorthGlass) is a pioneer in the global glass industry. Headquartered in the Luoyang National High-Tech Industrial Development Zone, we specialize in the R&D, design, manufacturing and sales of glass processing equipment and value-added processed glass products. In 2011, NorthGlass was successfully listed on the Shenzhen Stock Exchange (Stock Code: 002613), further strengthening its global presence.

Our Family

Our growth strategy includes the establishment of several subsidiaries, each specializing in different facets of the glass industry. These include:

- Shanghai North Glass technology industrial Co., LTD.
- Shanghai North Glass Vacuum Coating Technology Co., LTD.
- Luoyang North Glass Triturbo Fan Technology Co., LTD.
- Tianjin North Glass Technology Industrial Co., LTD.
- Shanghai North Glass Automation Technology Co., LTD.
- Luoyang North Glass High-end Equipment Co., LTD.
- Luoyang North Glass Cast Glass Co.,LTD.
- Luoyang North Glass High-temperature Electric Kiln Co., Ltd.
- Luoyang North Glass Top Glass Industrial Co., Ltd.
- North Glass (Shanghai) Top Glass Industrial Co., Ltd.

Additionally, our strategic investment in Luoyang NorthGlass Light-Stone New Material Co., Ltd. underscores our commitment to diversification and innovation across the glass industry value chain.

Our Products

At NorthGlass, we adhere to the philosophy that "Innovation has no bounds, and success is rooted in perseverance". We have consistently developed industry-leading products that set new benchmarks for the sector. Our product portfolio covers glass tempering furnaces, coating lines and high-end deep-processed glass, setting new industry standards across automation, new materials and other key sectors. Our dedication to technological advancement also includes the development of automated glass processing lines, glass cutting equipment, glass storage systems and our innovative Triturbo Fan technology. Additionally, our strategic investment in nurturing the Light-Stone industry marks our foray into the modular green building materials market, demonstrating our leadership in environmental sustainability and technological innovation.

NorthGlass has cemented its leading position in the global glass industry through relentless innovation and superior manufacturing of advanced glass processing equipment. Our flat and curved glass tempering furnaces have maintained a leading market position for 24 consecutive years, with more than 6,500 units in operation worldwide.Our in-house developed coating lines have also become a mainstream solution for glass coating manufacturers worldwide. At the same time, NorthGlass Automation's intelligent factory solutions are being widely applied in various fields such as architecture, home appliances, solar energy, and shower glass, continuously empowering the intelligent upgrade of industries.

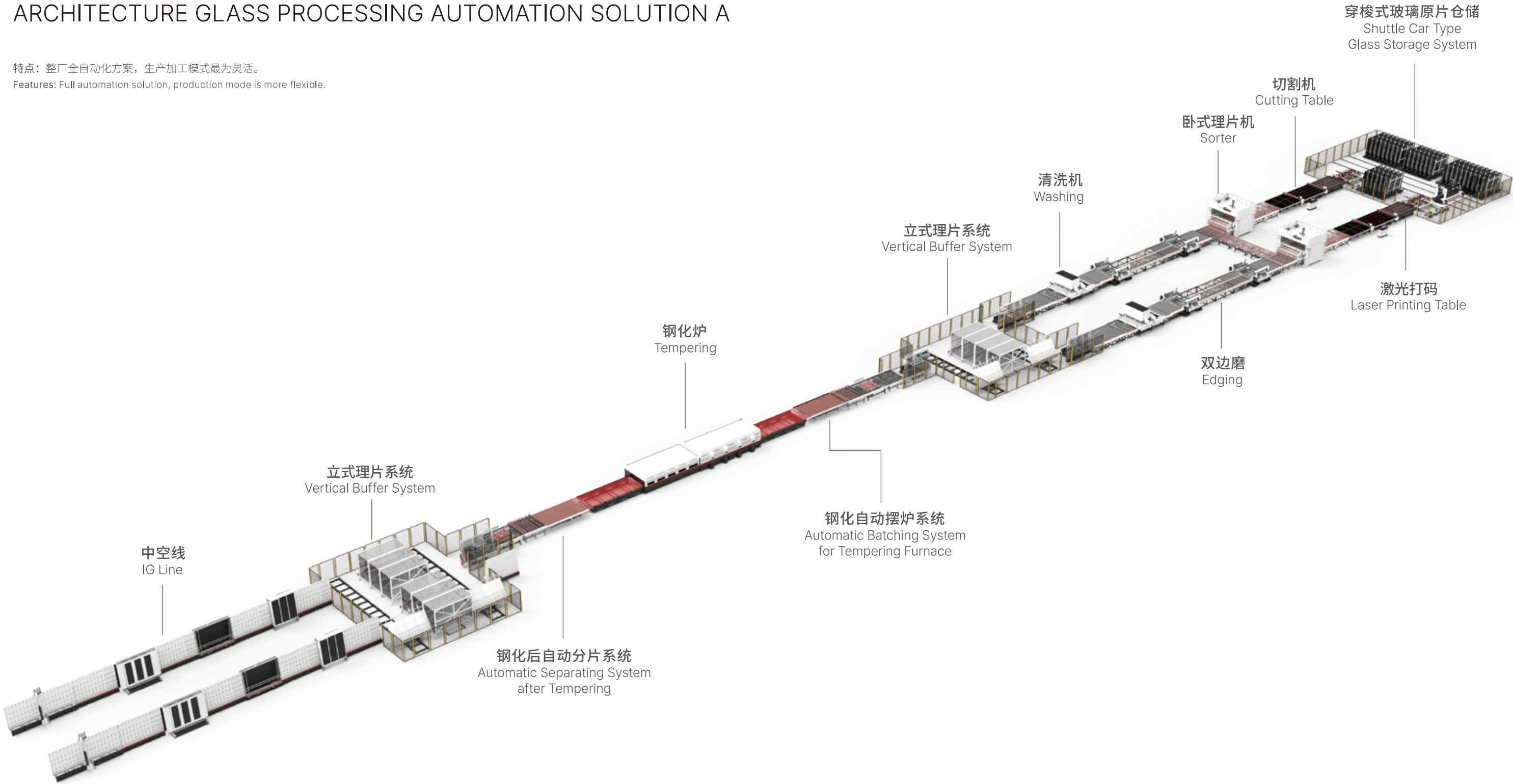
Our high-performance processed glass products form another core business pillar, adorning iconic architectural landmarks worldwide – including Google Bay View (USA), 2050 M Street (Washington, D.C., USA), Oracle Headquarters (Austin, USA), Azabudai Hills Mori JP Tower (Japan), the Leadenhall Building (UK), Abu Dhabi International Airport, New Performing Arts Venue (Brisbane, Australia). These landmarks also include China's national Olympic venues such as the Bird's Nest, the Water Cube and the Ice Ribbon, the National Centre for the Performing Arts (China), National Convention Center (China), Beijing Daxing International Airport (China), "Sun Valley" & "Shiliupu Pier" of EXPO 2010 Shanghai (China), Beijing Library (China), Shanghai Tower (China), Nike Shanghai 001 (China), XRL Topside West Kowloon (Hong Kong, China), Two Taikoo Place (Hong Kong, China), Huawei Global Flagship Store (China), OPPO Headquarters (China), as well as flagship stores of Hermès, Louis Vuitton, GUCCI among many other notable buildings. Furthermore, NorthGlass is proud to be one of the two primary architectural glass suppliers for a world-renowned technology company, providing glass for its global flagship stores and Silicon Valley headquarters. This underscores our global footprint and the trust placed in our products by prestigious clients.

Backed by a comprehensive domestic and international sales and service network, NorthGlass products are available nationwide and exported to more than 115 countries and regions, including the USA, UK, Germany, France, Japan, India, Brazil, Saudi Arabia, Egypt and Turkey.

建筑玻璃加工自动化连线方案 A

ARCHITECTURE GLASS PROCESSING AUTOMATION SOLUTION A

特点：整厂全自动化方案，生产加工模式最为灵活。
Features: Full automation solution, production mode is more flexible.



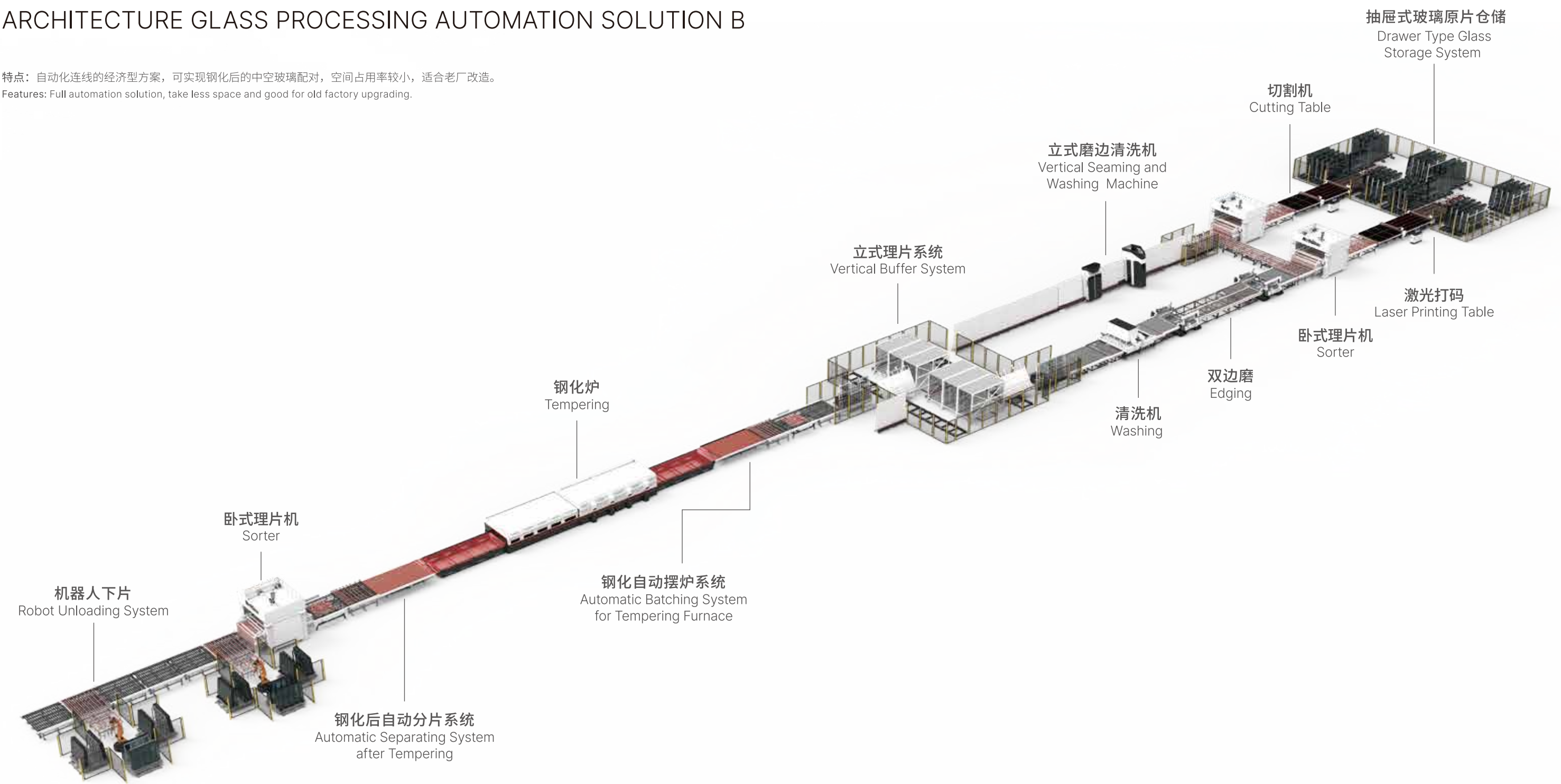
产能约1000m²/班次，人工4~6人每班次（不含中空班组人数）
Productivity is around 1000m² and labor is around 4 to 6 workers per shift (IG team is not included)

以上数据均以最终实际配置为准
Above data based on final actual configuration

建筑玻璃加工自动化连线方案 B

ARCHITECTURE GLASS PROCESSING AUTOMATION SOLUTION B

特点：自动化连线的经济型方案，可实现钢化后的中空玻璃配对，空间占用率较小，适合老厂改造。
Features: Full automation solution, take less space and good for old factory upgrading.



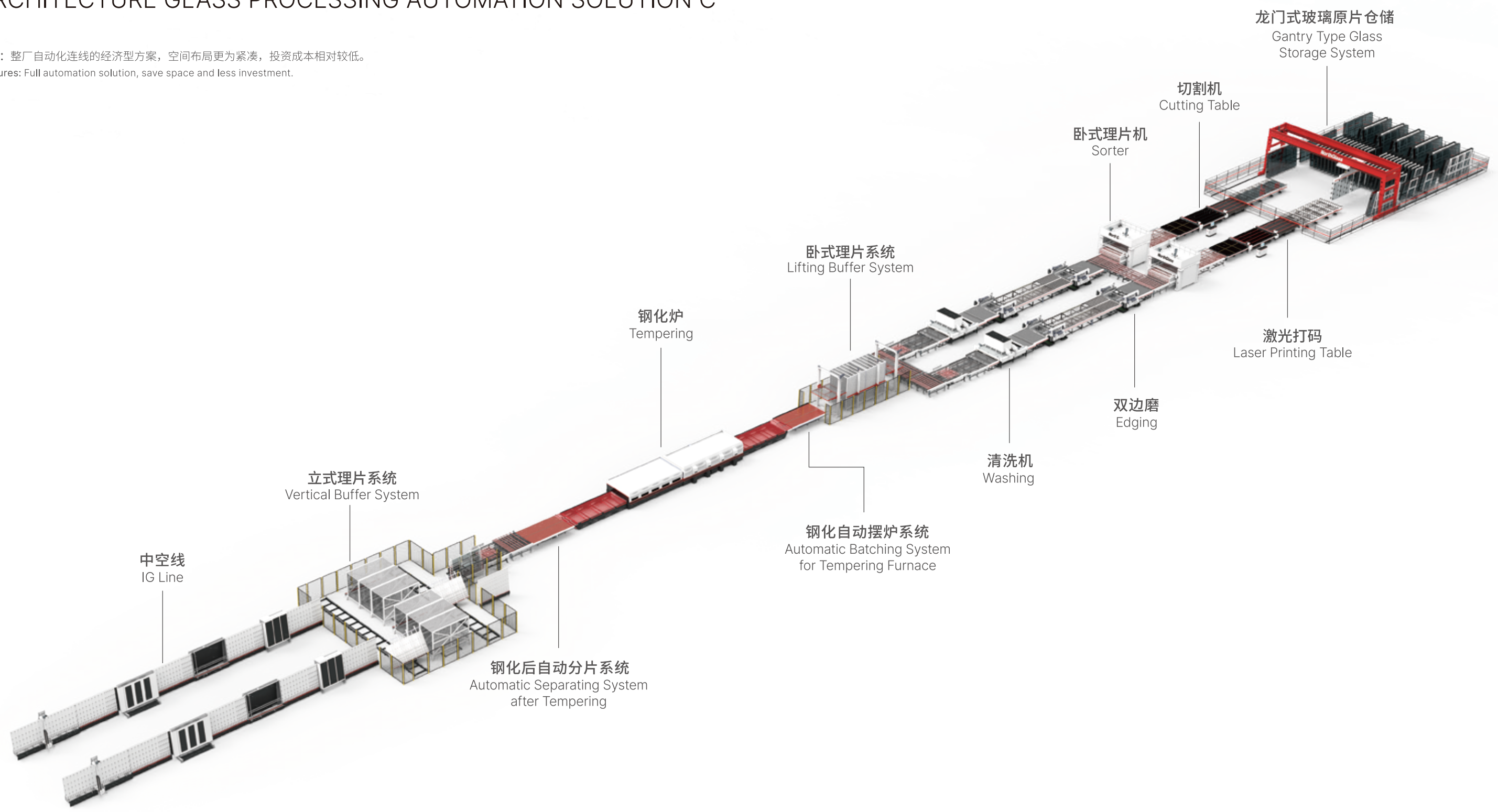
产能约1000m²/班次, 人工4~6人每班次 (不含中空班组人数)
Productivity is around 1000m² and labor is around 4 to 6 workers per shift (IG team is not included)

以上数据均以最终实际配置为准
Above data based on final actual configuration

建筑玻璃加工自动化连线方案 C

ARCHITECTURE GLASS PROCESSING AUTOMATION SOLUTION C

特点：整厂自动化连线的经济型方案，空间布局更为紧凑，投资成本相对较低。
Features: Full automation solution, save space and less investment.

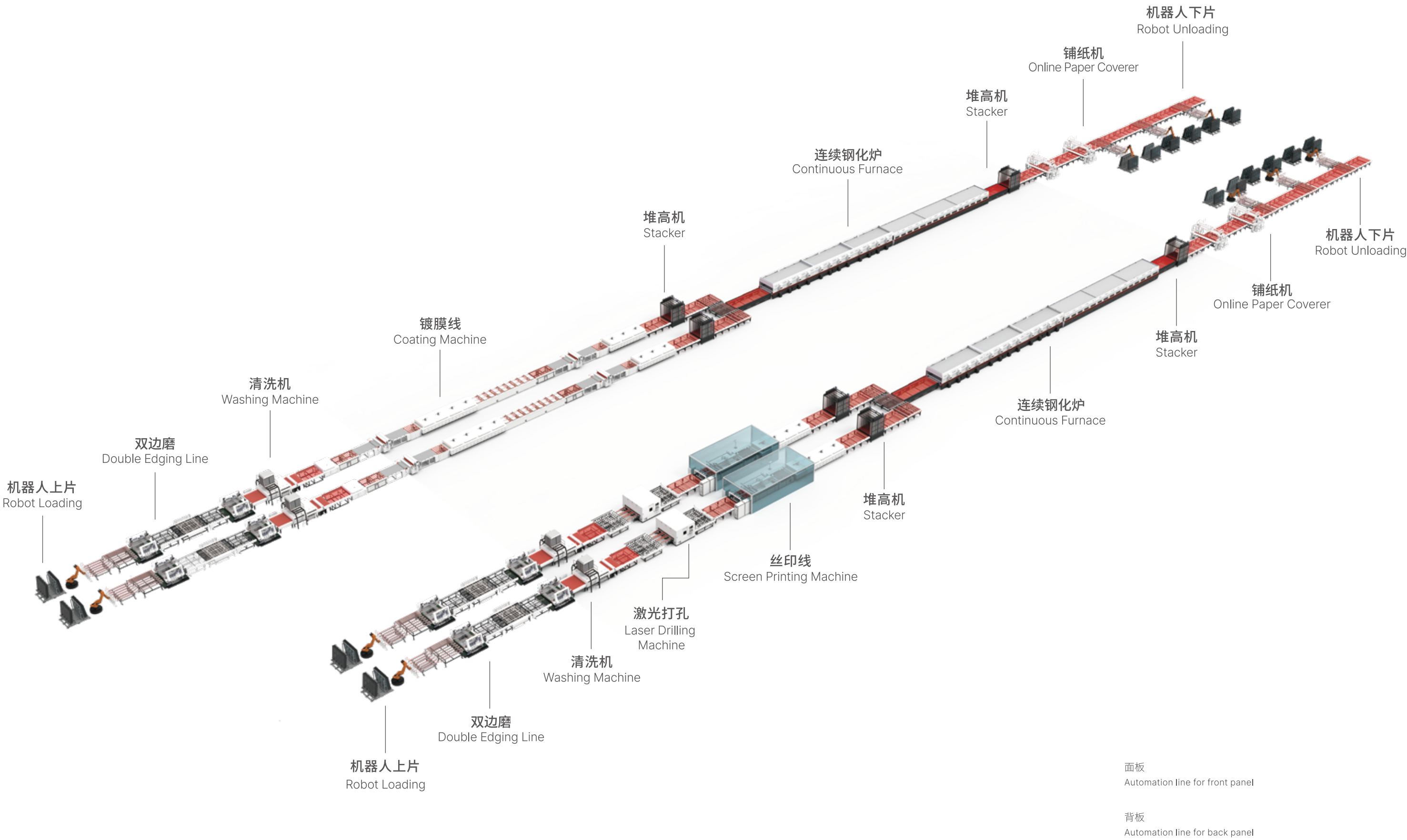


产能约1000m²/班次, 人工4~6人每班次 (不含中空班组人数)
Productivity is around 1000m² and labor is around 4 to 6 workers per shift (IG team is not included)

以上数据均以最终实际配置为准
Above data based on final actual configuration

光伏玻璃加工自动化连线

SOLAR GLASS PROCESSING AUTOMATION SOLUTION



穿梭车式玻璃原片仓储系统

SHUTTLE CAR TYPE GLASS STORAGE SYSTEM

功能特点：由玻璃料架、穿梭车、轨道、吊装位、上片位和控制系统组成。适合大批量生产模式，可配合多台切割机联动作业。

Characteristic: Composed of shuttle, racks, rails, loading stations, entry station and control software. It is fit for big quantity production and can be integrated with maximum 5 units cutting table.

基础技术参数：	Basic parameters:
最大玻璃尺寸：4200×2800mm / 6000×3300mm (2×3660×2440mm，双片)	Maximum glass size : 4200×2800mm / 6000×3300mm (2×3660×2440mm, split size)
最小玻璃尺寸：2100×1830mm / 2440×1830mm	Minimum glass size : 2100×1830mm / 2440×1830mm
玻璃厚度范围：3-19mm	Glass thickness range : 3-19mm
穿梭车移动速度：最大40m/min	Moving speed : max40m/min
玻璃料架深度：350mm /450mm	Rack Depth : 350mm /450mm
料架最大承重：5t / 12t	Maximum Loading Weight: 5000kgs / 12000kgs



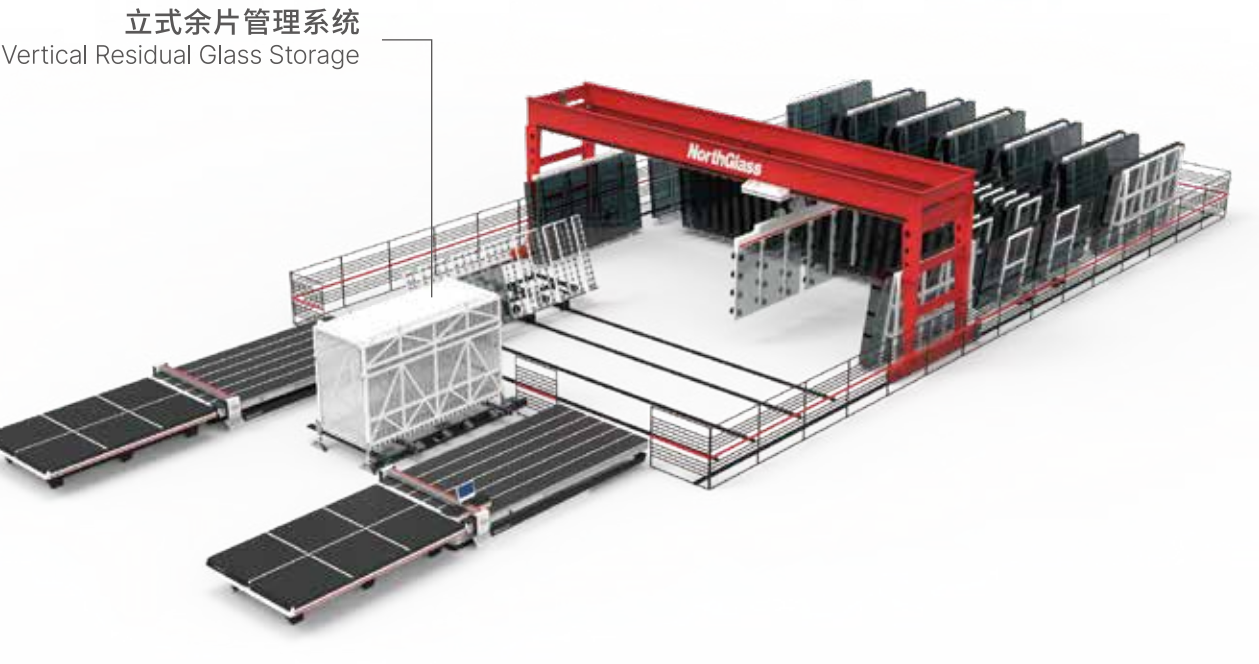
龙门式玻璃原片仓储系统

GANTRY TYPE GLASS STORAGE SYSTEM

功能特点：由玻璃料架、龙门架、导轨、吊具吸盘和控制系统组成。兼具批量生产且原片切割的玻璃种类需要经常切换的生产模式，最多可对接 2 台切割机。

Characteristic: Composed of racks, gantry system, rails, suction system and control software. It is not only fit for quantity production, but also fit for the glass type for cutting need to be changed oftenly according to order.

基础技术参数：	Basic parameters:
最大玻璃尺寸：6000×3300mm (2×3660×2440mm， 双片)	Maximum glass size : 6000×3300mm (2×3660×2440mm, split size)
最小玻璃尺寸：2100×1830mm	Minimum glass size : 2100×1830mm / 2440×1830mm
玻璃厚度范围：3-19mm	Glass thickness range : 3-19mm
龙门移动速度：70m/min	Crane speed : 70m/min
玻璃料架深度：150mm / 250mm / 350mm	Rack Depth : 150mm / 250mm / 350mm



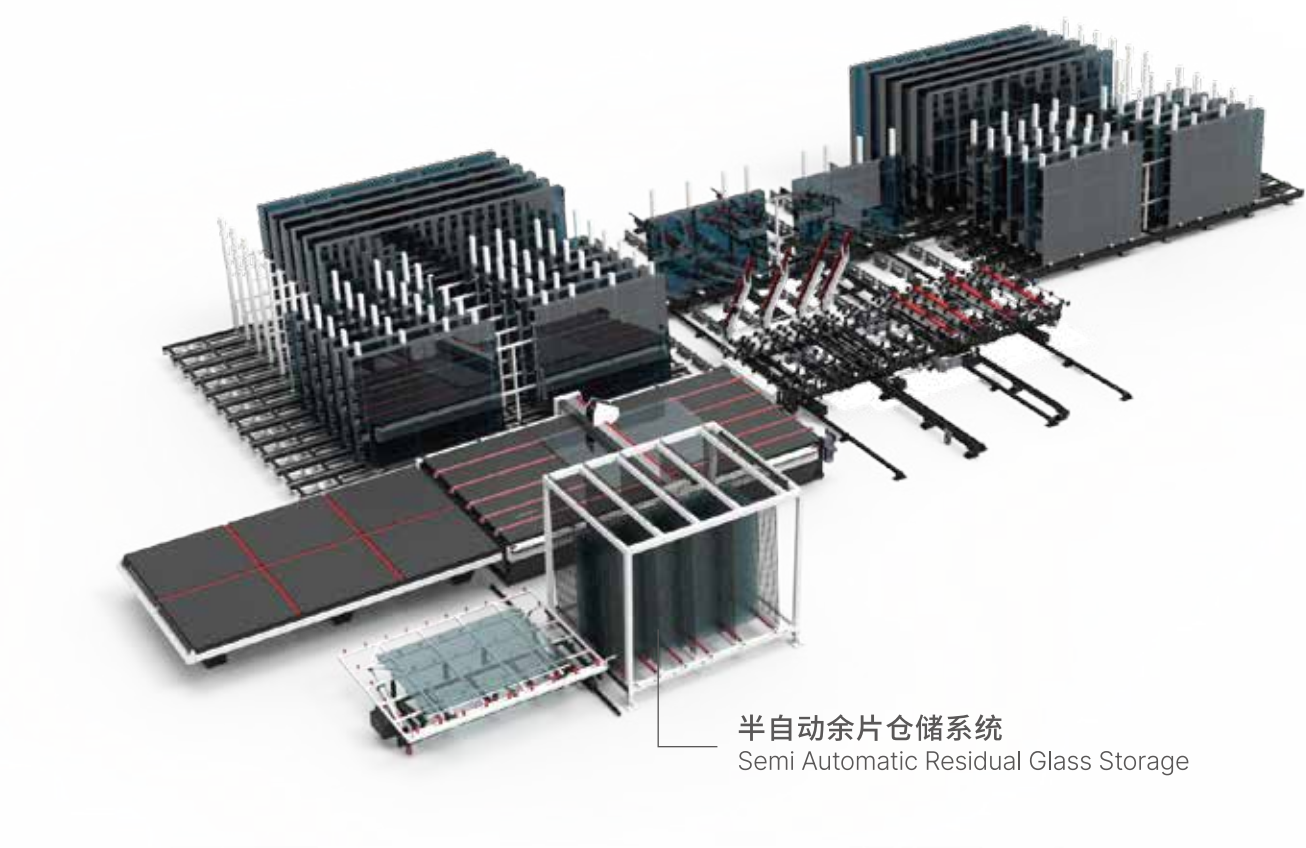
抽屉式原片仓储系统

DRAWER TYPE GLASS STORAGE SYSTEM

功能特点：由玻璃料架、独立地轮、轨道、高速上片机以及控制系统组成。适合原片切割的玻璃种类需要经常切换的生产模式。

Characteristic: Composed of racks, chasis, driving motors, high speed loader and control software. It is fit for the glass type for cutting need to be changed oftenly.

基础技术参数：	Basic parameters:
最大玻璃尺寸：4200×2800mm	Maximum glass size : 4200×2800mm
6000×3300mm (2×3660×2440mm, 双片)	6000×3300mm(2×3660×2440mm, split size)
最小玻璃尺寸：2100×1830mm / 2440×1830mm	Minimum glass size : 2100×1830mm / 2440×1830mm
玻璃厚度范围：3-19mm	Glass thickness range : 3-19mm
高速上片机移动速度：40/min	High speed loader moving speed :40m/min
料架移动速度：3-15m/min	Moving speed : 3-15m/min
玻璃料架深度：350mm	Rack Depth : 350mm
料架最大承重：5t / 12t	Maximum weight : 5000Kgs / 12000Kgs



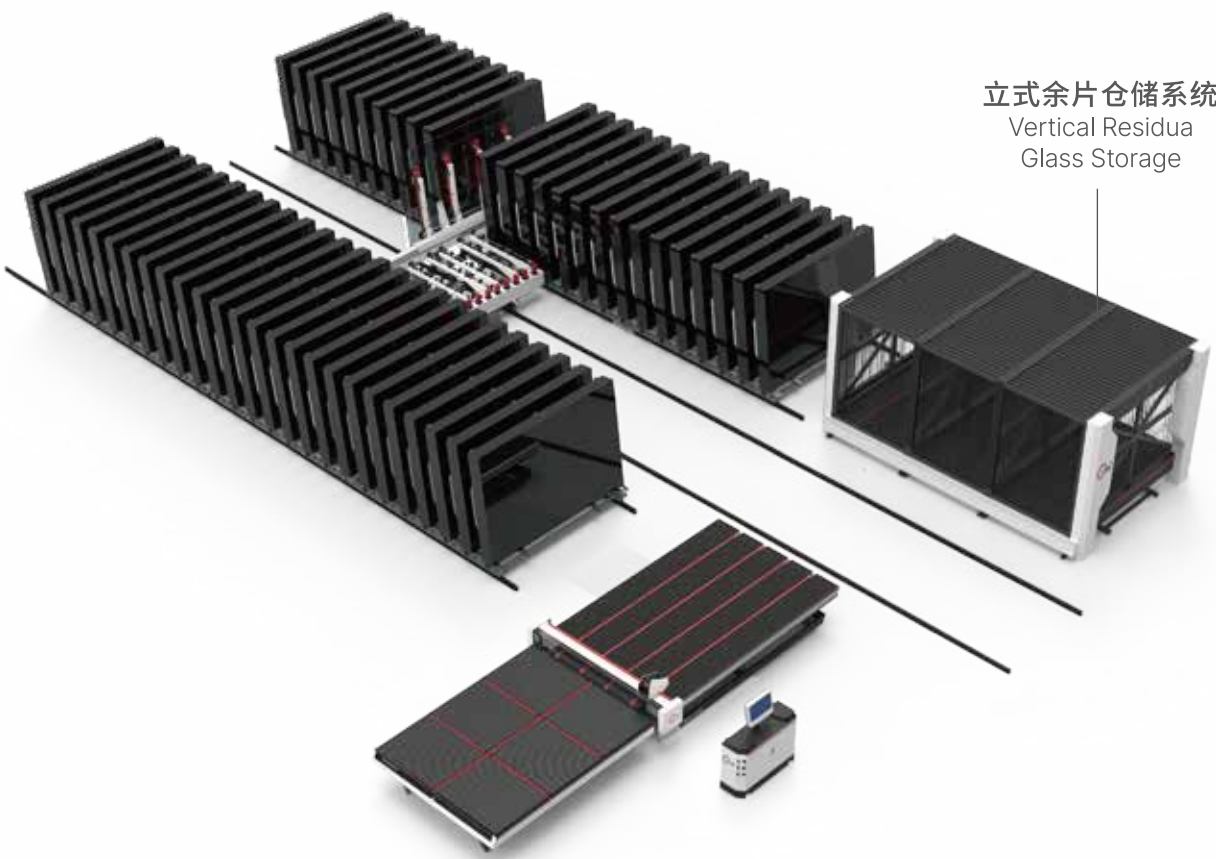
悬臂式仓储系统

CANTILEVER TYPE STORAGE SYSTEM

功能特点：由自动开合式料架仓储，悬臂式上片机，余料仓储笼及控制系统组成。适合原片切割的玻璃种类需要经常切换的生产模式。兼顾抽屉片式原片仓储和风琴式仓储的优势，可大量节约仓储场地。

Characteristic: Composed of automatically opening and closing rack storage, loading machine, residual glass storage and control software. It is fit for the glass type for cutting need to be changed oftenly . Combining the advantages of drawer type glass storage system and accordion style storage system ,it can greatly save storage space.

基础技术参数：	Basic parameters:
最大玻璃尺寸：4200×2800mm / 6000×3300mm	Maximum glass size: 4200×2800mm / 6000×3300mm
最小玻璃尺寸：2100×1830mm / 2440×1830mm	Minimum glass size: 2100×1830mm / 2440×1830mm
玻璃厚度范围：3-19mm	Glass thickness range: 3-19mm
上片机架：移动速度：40m / min	Moving speed: 40m / min
料架深度：150mm / 250mm / 350mm	Rack depth: 150mm / 250mm / 350mm
玻璃架最大载重：5t / 8t	Maximum Weight: 5000kgs / 8000kgs



激光打码机

LASER PRINTING TABLE

功能特点：由横梁、激光打码器、台面机架和控制系统组成。可根据订单需求生成公司 LOGO，二维码，条码或 3C 标识等。既满足了自动化连线生产的需求，又节省了纸质标签的使用。

Characteristic: Composed of beam,laser printer,table and control software. According to order, print the company logo, QR code, bar code or CCC mark and so on. It is not only fit for automation production, but also save the cost of paper sticker.



基础技术参数：
最大玻璃尺寸：4200×2800mm / 6000×3300mm
最小玻璃尺寸：400×350mm / 400×350mm
玻璃厚度范围：3-19mm
工作节拍：3-4s (单片3C标识+二维码)

Basic parameters:
Maximum glass size : 4200×2800mm / 6000×3300mm
Minimum glass size : 400×350mm / 400×350mm
Glass thickness range : 3-19mm
Circle time : 3-4s (ccc +QR code)

常规切割机

CUTTING LINE

功能特点：根据优化结果进行玻璃上片，切裁和分片（可选自动分片方案）。
Characteristic: According to the optimazation result, automatically loading,cutting and break out mannually (auto break out as option).

基础技术参数：
最大玻璃尺寸：4200×2800mm / 6000×3300mm / 18000×3300mm（定制）
最小玻璃尺寸：2100×1830mm / 2440×1830mm
玻璃厚度范围：3-19mm
最大切割速度：180m/min
直线切割精度：+/-0.15mm（2000mm）
对角线切割精度：<0.15mm（2000mm）

Basic parameters:
Maximum glass size : 4200×2800mm / 6000×3300mm / 18000×3300mm (Can be customized)
Minimum glass size : 2100×1830mm / 2440×1830mm
Thickness range : 3-19mm
Maximum cutting speed :180m/min
Line cutting accuracy : +/-0.15mm (2000mm)
Diagonal cutting accuracy : <0.15mm (2000mm)



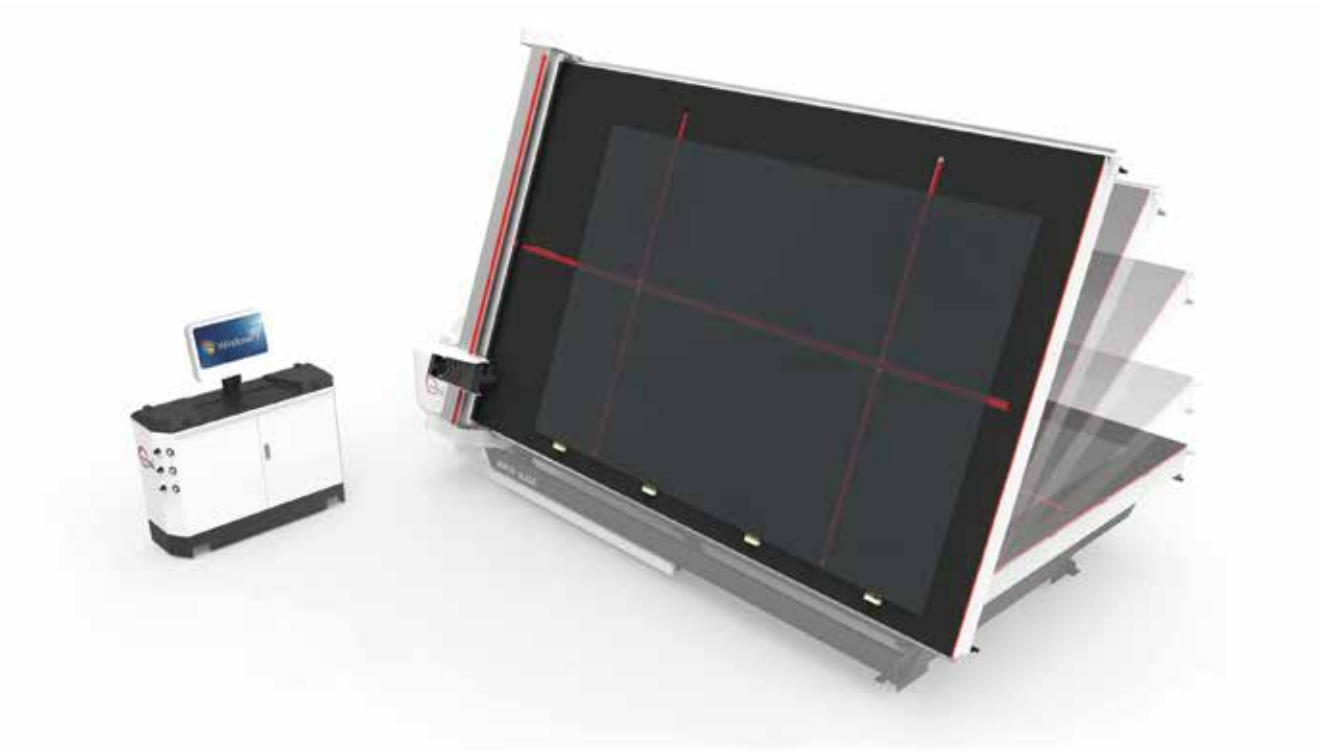
翻转切割机

TITILABLE CUTTING TABLE

功能特点：上片切割分片集成在一个台面，翻转的台面方便人工上片，占地空间小，适合小规模切割作业。

Characteristic: Loading, cutting and break out in one table, tiltable table facilitates manual loading, save space and good for small quantity production.

基础技术参数：	Basic parameters:
最大玻璃尺寸：4200×2800mm/6000×3300mm	Maximum glass size: 4200 × 2800mm / 6000 × 3300mm
最小玻璃尺寸：400×350mm	Minimum glass size: 400×350mm
玻璃厚度范围：3-19mm	Glass thickness range: 3-19mm
最大切割速度：170m/min	Maximum cutting speed:170m/min
直线切割精度：+/-0.15mm（2000mm）	Line cutting accuracy:+/-0.15mm (2000mm)
对角线切割精度：<0.15mm（2000mm）	Diagonal cutting accuracy: <0.15mm (2000mm)



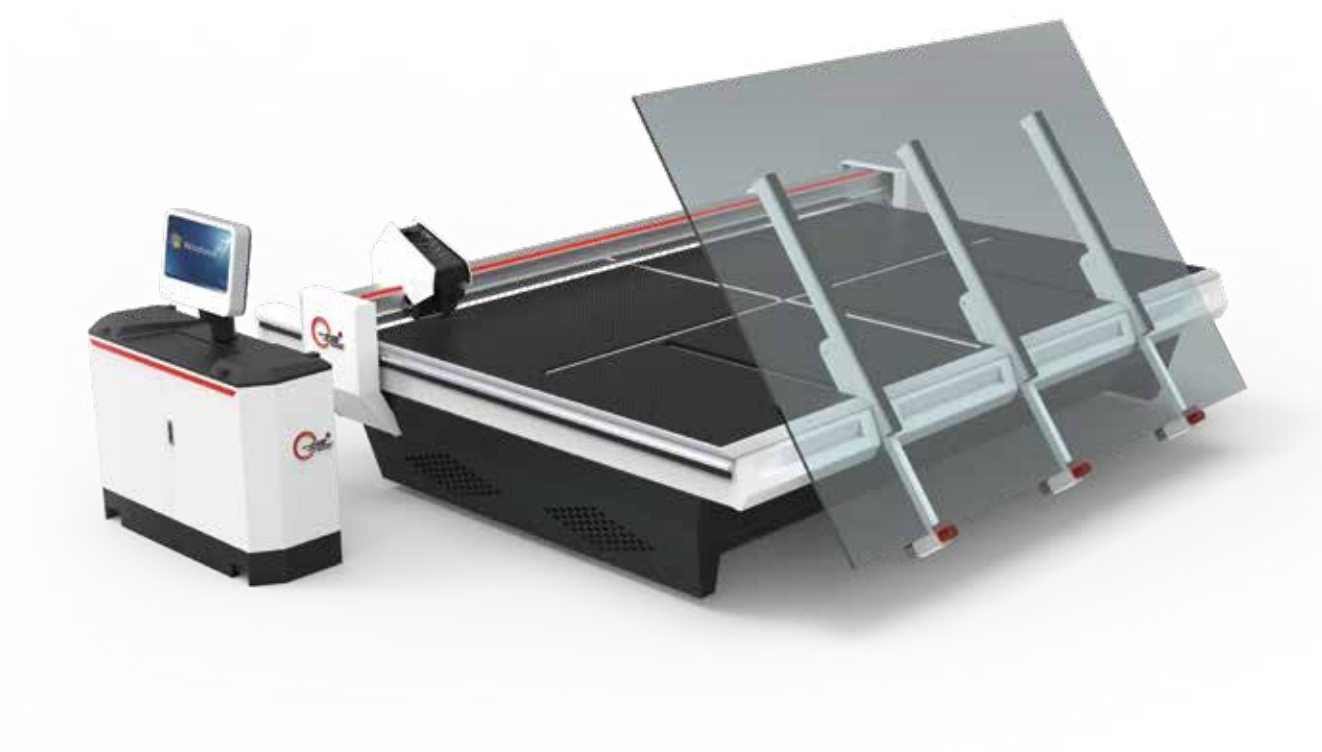
三合一玻璃切割机

3 in 1 CUTTING TABLE

功能特点：上片切割分片集成在一个台面，占地空间小，适合小规模切割作业。

Characteristic: Loading, cutting and break out in one table, save space and good for small quantity production.

基础技术参数：	Basic parameters:
最大玻璃尺寸：3600×2500mm	Maximum glass size: 3600 × 2500mm
最小玻璃尺寸：2100×1830mm	Minimum glass size: 2100×1830mm
玻璃厚度范围：3-19mm	Glass thickness range: 3-19mm
最大切割速度：170m/min	Maximum cutting speed:170m/min
直线切割精度：+/-0.15mm（2000mm）	Line cutting accuracy:+/-0.15mm (2000mm)
对角线切割精度：<0.15mm（2000mm）	Diagonal cutting accuracy: <0.15mm (2000mm)



卧式理片机

HORIZONTAL BUFFER FOR DOUBLE EDGER

功能特点：解决双边磨频繁开合的问题，提高磨边效率。
Characteristic: Make double edging machine more efficient.

基础技术参数：	Basic parameters:
最大玻璃尺寸：3000×2500mm / 5000×2000mm	Maximum glass size : 3000×2500mm / 5000×2000mm
最小玻璃尺寸：400×300mm	Minimum glass size : 400×300mm
玻璃厚度范围：3-19mm	Thickness range : 3-19mm
存片层数：9层 或 20层（需挖约1000mm地坑）	Slot quantity : 9 or 20 layers (1000mm pit required)
运行节拍：10-15s	Circle time : 10-15s



*可定制尺寸
Customization is available

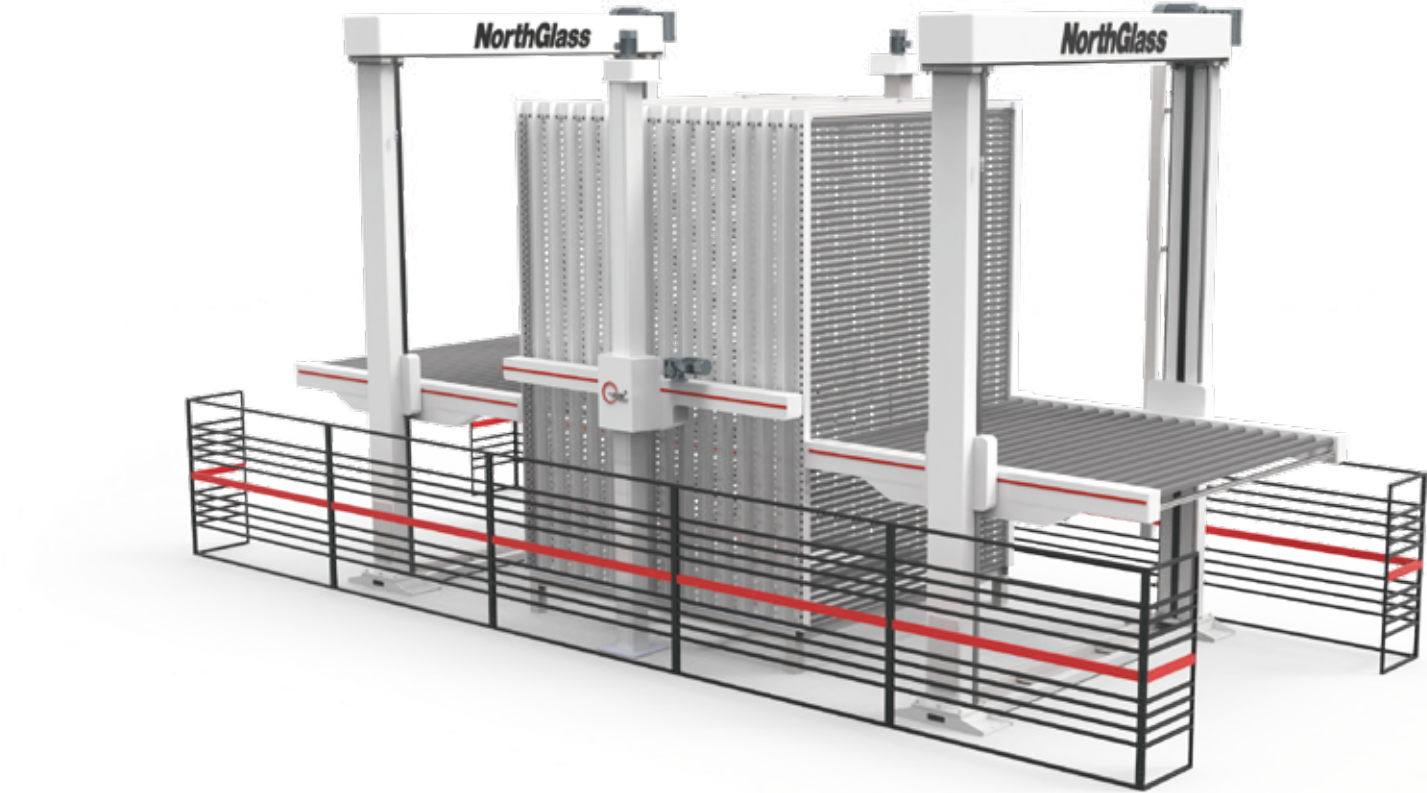
卧式理片系统

HORIZONTAL LIFTING SORTING SYSTEM

功能特点：由提升输送台，理片笼，笼边提升车和控制系统组成，玻璃可以水平存储在一层层的栅格内，存储的层数向空中发展，最高可达到9米，大大减小了设备的占地空间。作为钢化前的缓存，同时可以配合软件系统进行钢化前的自动优化摆炉。

Characteristic: Composed of lifting conveyors,sorter lifting system and cotrol system. The glass can be stored horizontally in a grid layer by layer. The height can be up to 9 meters, which greatly save the space for glass factory. It is as the buffer in front of tempering furnace, on the other hand, it can be integrated with automatic batching system for loading the glasses for tempering furnace automatically and efficiently according to software.

基础技术参数：	Basic parameters:
最大玻璃尺寸：3500×2500mm / 5000×3000mm	Maximum glass size : 3500×2500mm / 5000×3000mm
最小玻璃尺寸：800×600mm	Minimum glass size : 800×600mm
玻璃厚度范围：3-19mm	Glass thickness range : 3-19mm
存片层数：50层或70层每单元（可多个单元组合）	Layer quantity : 50 layers or 70 layer (Can be customized)
传输速度：6-40m/min	Transfer speed : 6-40m/min
升降机速度：2.2m/s	Lifting speed : 2.2m/s
运行节拍：20-35s	Circle time : 20-35s



立式磨边清洗机

VERTICAL SEAMING AND WASHING MACHINE

功能特点：由磨削室、输送台、清洗室以及控制程序组成。采用树脂金刚轮对玻璃进行倒棱处理，无需人工调节玻璃尺寸及厚度，空间布置灵活。

Characteristic: Composed of arising section,conveyors,washing section and control software.Glass chamfering by resign or diamond wheels, automatically work with different thickness and glass size, save space.

- 基础技术参数：
- 最大玻璃尺寸：3500×2500mm / 5000×2500mm / 6000×3000mm
 - 最小玻璃尺寸：500×500mm
 - 玻璃厚度范围：3-12mm
 - 磨边机磨轮配置：2组共8个磨轮
 - 清洗机毛刷配置：3对毛刷
 - 清洗机风刀配置：2对风刀

- Basic parameters:
- Maximum glass size : 3500×2500mm / 5000×2500mm / 6000×3000mm
 - Minimum glass size : 500×500mm
 - Thickness range : 3-12mm
 - Grinding head quantity : 2units (8wheels)
 - Brush quantity : 3 pairs
 - Air Knife quantity : 2 pairs



立式理片系统

VERTICAL BUFFER SYSTEM

功能特点：由穿梭车、理片笼、笼底运输车、轨道及控制程序组成。作为钢化前或钢化后缓存的同时，还可以配合北玻软件系统进行钢化前的优化摆炉或者中空前的理片配对。

Characteristic: Composed of shuttles, sorters, sorter conveyor, rails and control software in front of or behind tempering furnace, also can be integrated with automatic batching system for better loading rate for tempering furnace or glass pairing for IG line.

基础技术参数：

最大玻璃尺寸：4200×2500mm / 6000×3000mm

最小玻璃尺寸：400×350mm

玻璃厚度范围：3-19mm

存片格数：25/40/55 每笼（可根据需求自由配置）

笼底车最大速度：1.5m/s

穿梭车最大速度：4m/s

穿梭车翻转角度：2-27°

地面水平要求：±5mm/4m² (2000mm×2000mm)

地面承重要求：≥5T/m²

地面强度要求：≥C25

Basic parameters:

Maximum glass size : 4200×2500mm / 6000×3000mm

Minimum glass size : 400×350mm

Thickness range : 3-19mm

Slot quantity : 25/40/55 per sorter (Can be customized)

Sorter conveyor max speed : 1.5m/s

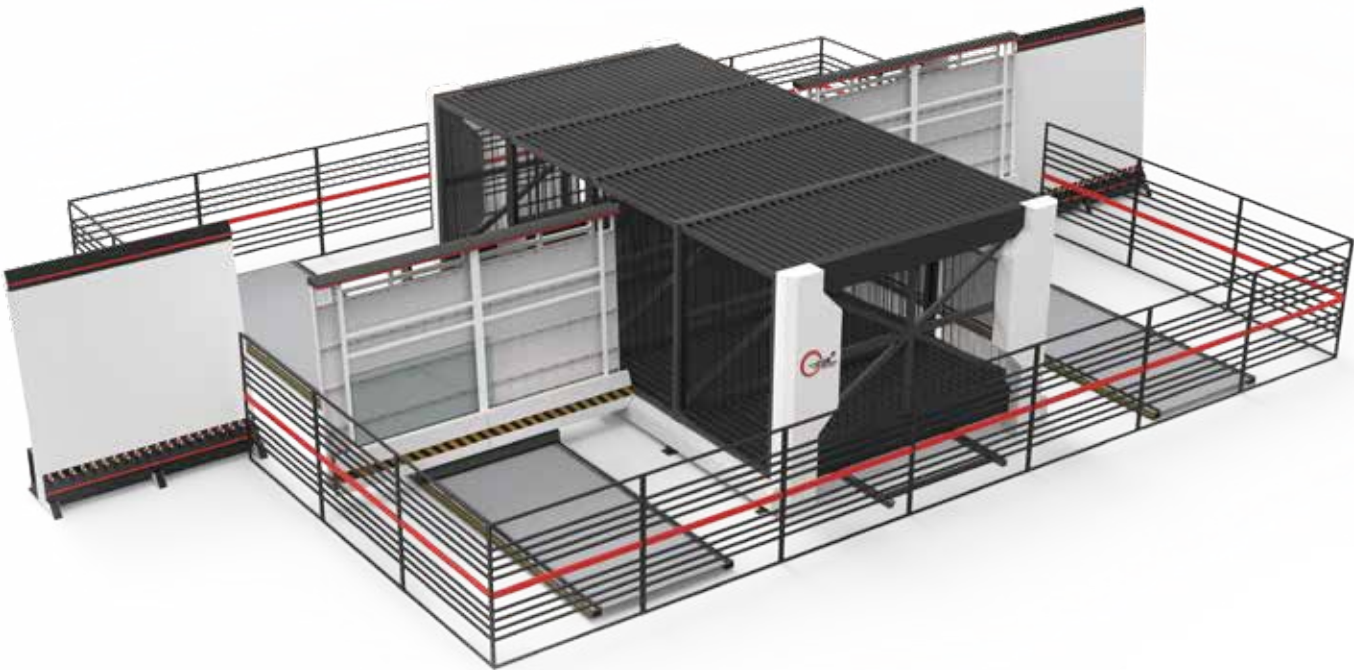
Buffer shuttle max speed : 4m/s

Tilting angle of shuttle : 2-27°

Ground level : ±5mm/4m² (2000mm×2000mm)

Ground bearing : ≥5T/m²

Ground Strength : ≥C25



钢化前自动摆炉系统

AUTOMATIC BATCHING SYSTEM FOR TEMPERING FURNACE

功能特点：在不降低钢化品质的前提下，匹配订单加工的同时，又能实现钢化前的全自动摆片及优化摆炉率。

Characteristic: Automatically loading glass for tempering furnace with optimization which can promise good tempering quality.

基础技术参数：

最大玻璃尺寸：6000×3000mm

最小玻璃尺寸：400×350mm

玻璃厚度范围：3-19mm

传输速度：6-40m/min

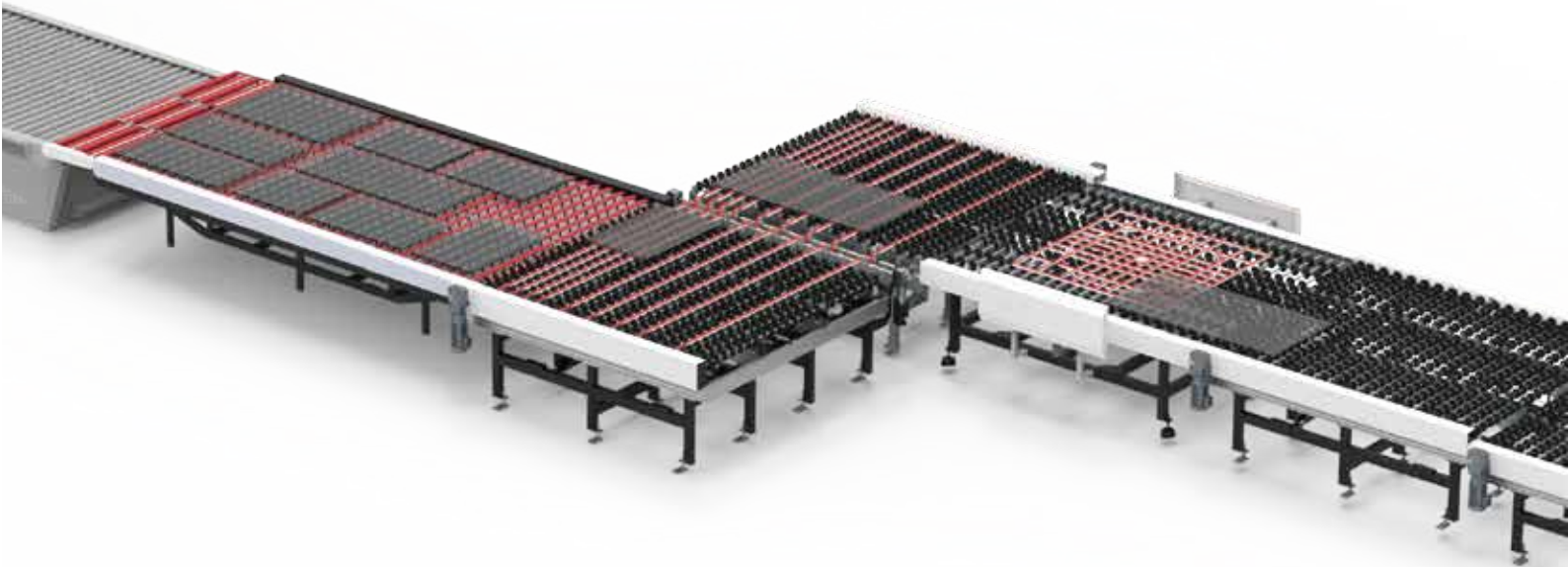
Basic parameters:

Maximum glass size : 6000×3000mm

Minimum glass size : 400×350mm

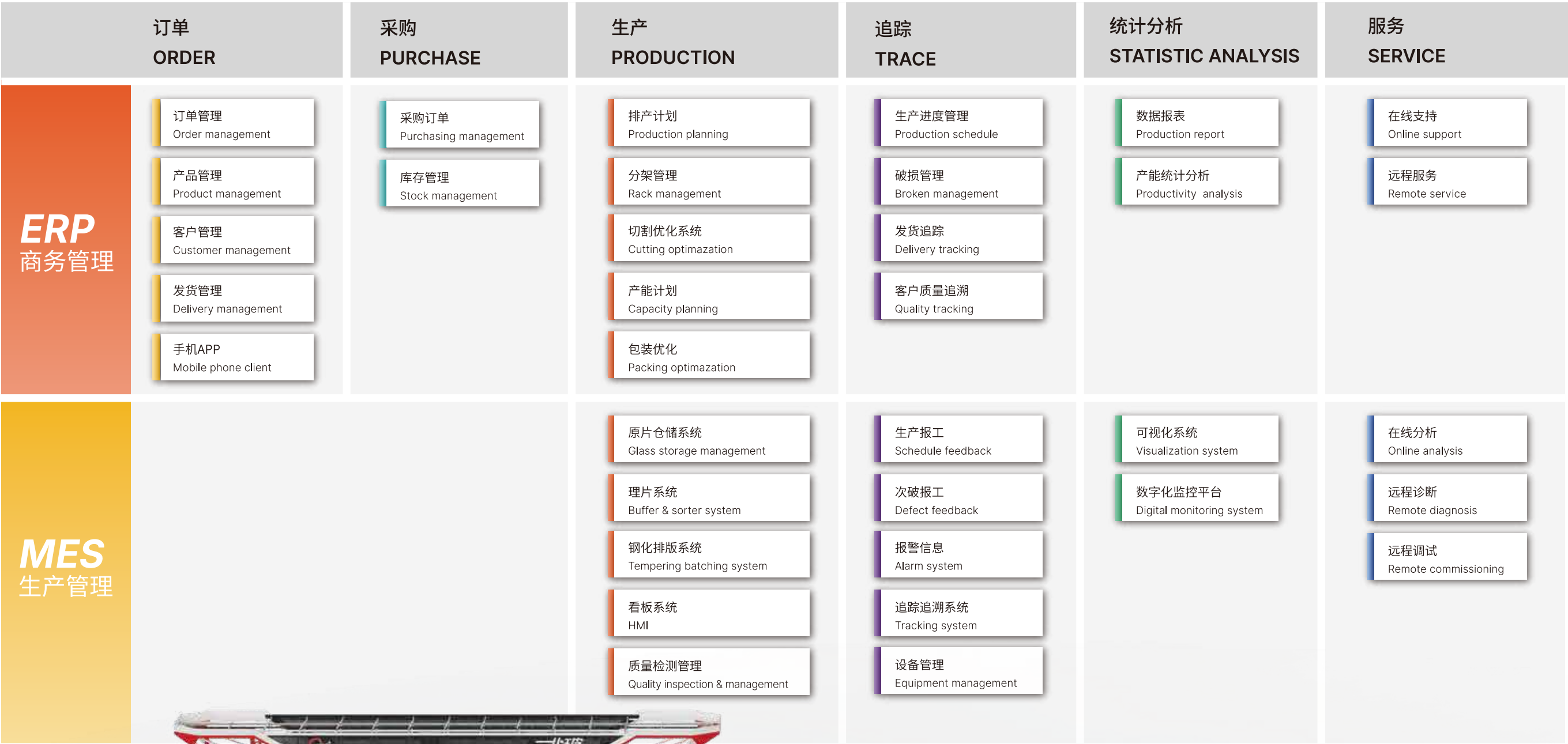
Thickness range : 3-19mm

Transfer speed : 6-40m/min



玻璃加工自动化软件系统架构

GLASS PROCESSING AUTOMATION
SOFTWARE SYSTEM ARCHITECTURE

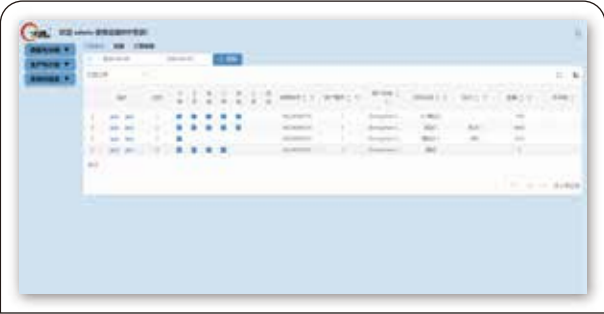


MES
智能设备

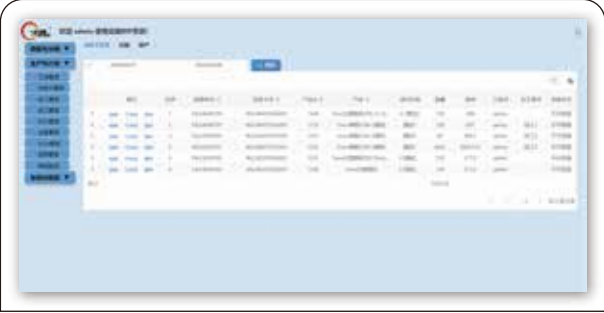


玻璃加工自动化软件系统模块

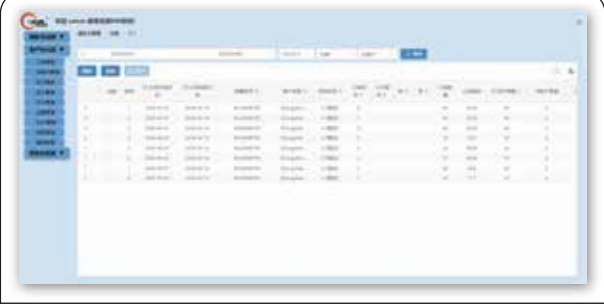
ERP-订单信息:创建订单,跟踪订单进度。
ERP-Order information: Create orders, track the progress of orders.



ERP-产品分架:对订单中的产品进行分架。
ERP- Product Assignment: Assign the glasses by rack in the order.

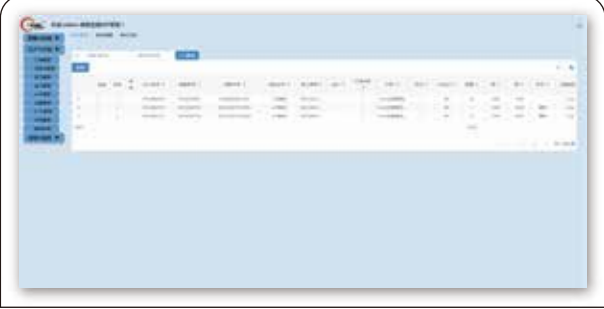


ERP-排产:对已经分架的玻璃信息进行生产计划排产。
ERP- Production Scheduling: Plan the production of the glass information that has been assigned.



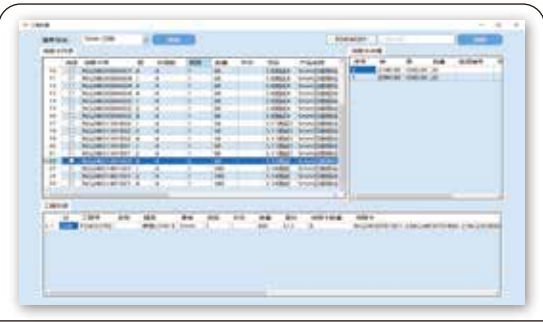
ERP-补片管理:将需要补片的玻璃生成补片单,可以与其他生产任务一起进行切割优化。

ERP- Residual Glass management: The glass that needs to be reproduced will be generated into a list, which can be optimized together with other production tasks.



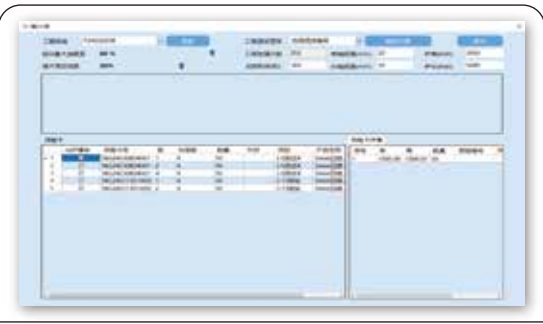
优化系统-创建工程任务:选择已经分架并排产的生产任务,将多架玻璃打包为一个工程任务。

System Optimization-Create project tasks: Select the production task that has been divided into racks and scheduled production tasks, make multiple assigned glasses into one project task.



优化系统-模拟计算:通过模拟的方式,控制生产过程中不出现爆笼现象,以及设置合理的钢化自动摆片配置方案。

Optimization system-simulation calculation: Through simulation, make sorter working efficiently in the production process, and set up a reasonable configuration for automatic batching for tempering furnace.



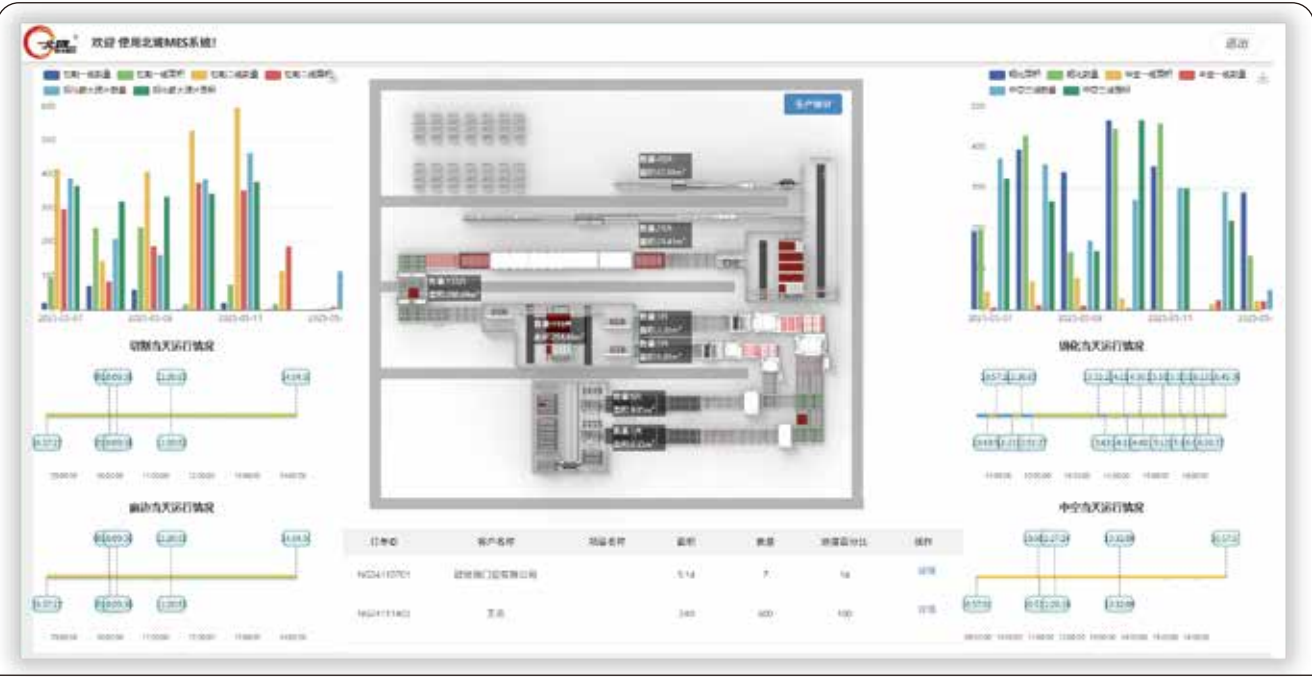
优化系统-最终优化:通过选择优化倾向于钢化效率优先还是切裁率优先,得到合适的最终优化结果并确认后保存。

Optimization System - Final Optimization: By selecting yield rate or tempering loading rate in priority, final optimization results are obtained and confirmed.



GLASS PROCESSING AUTOMATION SOFTWARE SYSTEM MODULES

MES-可视化系统:动态展示整厂生产任务和生产数据的可视化,帮助企业更好的分析和管理工作。
MES-Visualization System: Dynamically display the entire factory's production tasks and production data to help enterprises better analyze and manage the production process.



MES-原片仓储:作为玻璃原片的仓储设备,管理原片库存,以及配合生产任务更高效的输送原片至下道工艺设备。

MES-Glass Storage System: As a storage device for raw glass, it manages the inventory of raw glass and efficiently conveys the glass to the next process equipment in coordination with production tasks.



MES-钢化前立式大理片笼:对冷加工后的玻璃进行更合理、高效的存/取,钢化自动排片算法保证钢化生产的品质和效率。

MES-Vertical Glass Buffer System Before Tempering: Provides more rational and efficient storage of glass after cold processing. The automatic tempering batching ensures the quality and efficiency of the tempering process.



MES-上片:选择经过优化系统最终保存的工程任务,开始生产工作。

MES-Glass Loading: Select the optimized engineering tasks saved by the system to start the production process.



MES-中空前立式大理片笼:对钢化后的玻璃在理片笼内完成高效、合理的存/取,保证中空生产的合理顺序和效率。

MES-Vertical Glass Buffer System Before IGU: Efficiently and rationally stores and retrieves glass after tempering within the glass buffer system cages, ensuring a reasonable sequence and efficiency for the production of insulating glass.



研发、销售、生产、工程、售后、云数据全方位一站式服务体验

R&D, sales, production, after sales, data and software, one stop service by NorthGlass Automation.



维修服务
Maintenance
Service



备件支持
Spare parts
support



产品升级
Product
update



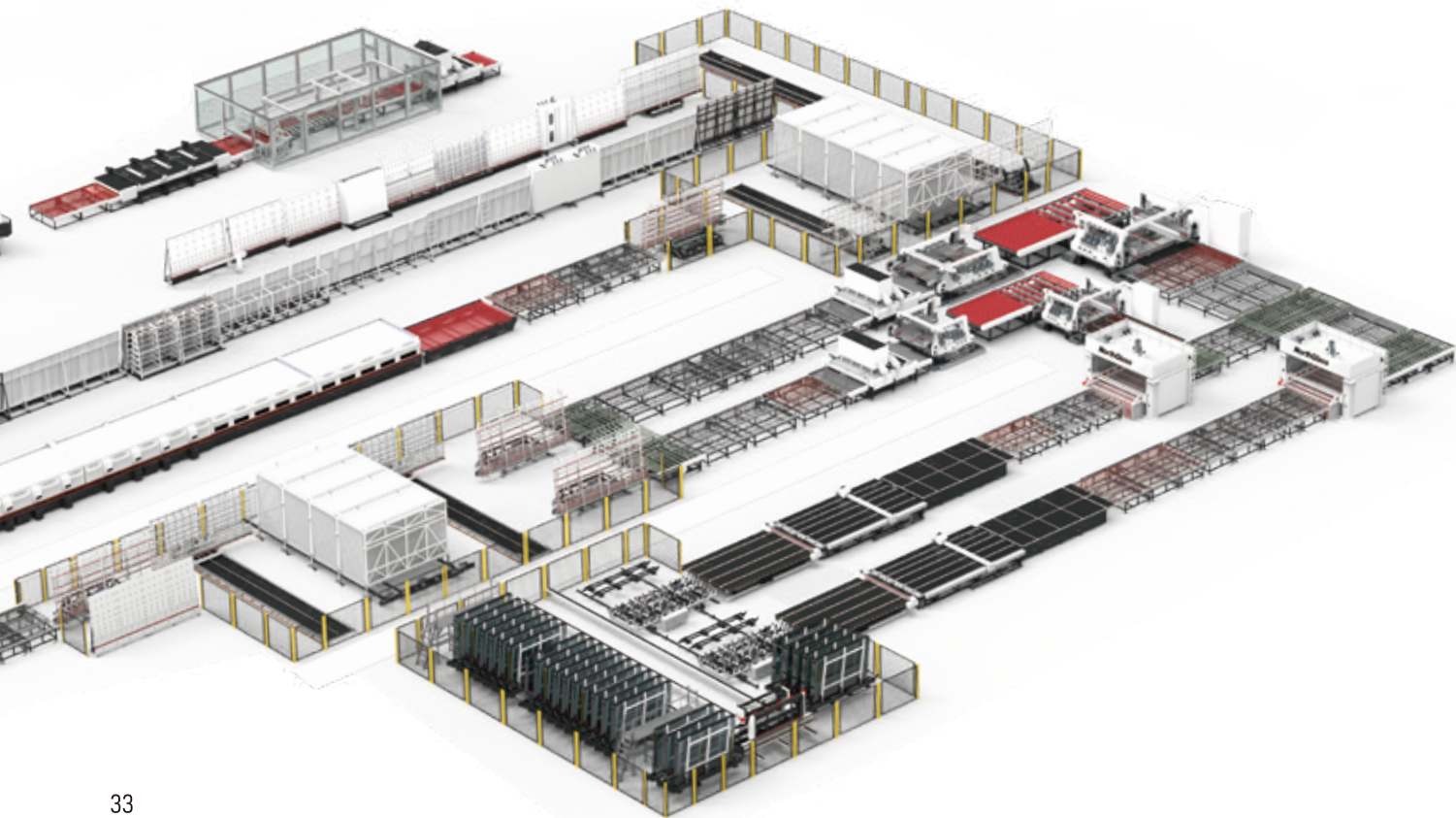
技术培训
Technical
training



设备搬迁
Machine
moving



数据服务
Data
service



系统性培训 Systematic Training

从北玻学院到客户现场，从理论到实践，从管理到生产，我们将提供手把手的教学，帮助客户完成从传统工厂到智能化工厂的转型。

From NorthGlass factory to the customer site, from theory to practice, from management to production, we will provide systematic training to help customers complete the transformation from traditional factories to smart factories.

定制化陪产 Customized Accompanying Production

从售前到售后，我们提供全程一站式服务，根据客户需求，提供定制化的陪产服务，保证客户在过渡期能顺利运行。

From pre-sale to after-sale, we provide one-stop service throughout the whole process, and provide accompanying production services according to customer needs to ensure the smooth operation during the transition period.

定期设备体检 Regular Examination of Equipment

连线交付后，我们将为客户提供每年数次设备体检服务，对设备和系统进行全面检查和评估，发现潜在问题，提出解决方案，确保设备和系统正常运行。

To ensure the normal operation, after the delivery, we will provide customers with equipment examination services several times a year, comprehensively inspect and evaluate the equipment and systems, find potential problems, and propose solutions .

24小时快速响应 24h Fast Response

我们提供24小时快速响应服务，一旦接到客户需求，将立即启动响应程序，迅速安排现场或远程服务。

We provide 24-hour quick response service. Once we receive the customer's demand, we will immediately start the response procedure and quickly arrange on-site or remote service.

终身软件升级 Lifelong Software Upgrade

我们提供终身软件服务，包括软件版本升级、软件修复、技术支持和咨询服务等。

We provide lifelong software services, including software version upgrade, software repair, technical support and consulting services.

注：画册中所有产品以最终选择型号的技术参数为准，并可定制超长、超宽、超速、超级节拍的个人产品
All the products listed in this catalogue are subject to the technical parameters of the final models, and the personalized products which are overlength, overwidth, overspeed or super beat can be customized.