



SHANDONG SANJIANG SMART EQUIPMENT CO.,LTD

山东三江智能装备有限公司

Specialized Design Team
Specialized Production Equipment / Specialized After-sales Service

专业化设计团队
专业化生产设备 / 专业化售后服务

ENTERPRISE INTRODUCTION



ENTERPRISE INTRODUCTION 企业简介

山东三江智能装备有限公司成立于1998年，是集研发、生产、销售为一体的高新技术企业。公司主要产品为高品质玻璃机械产品，包括高品质行列式制瓶机、全自动码垛包装线、节能环保型供料道供料机三大系列一百多个产品。

拥有专业研发设计团队，多名高级工程师负责相关的设计项目，技术人员占公司总入数30%，技术水平在国内行业领域名列三甲。公司坚持以人为本，靠科技进步。

拥有一个省级中心和一个市级研究中心：山东省工程技术研究中心、潍坊市企业技术中心；公司先后被评为：山东省科技小巨人企业、山东省创新型中小企业、潍坊市专精特新企业、潍坊市重点实验室、并承接潍坊市科技发展计划项目；国家高新技术企业拥有70多项专利技术，其中包括3项发明专利，39项实用新型专利，1项外观专利，和30项软件著作权专利技术；

唯一持有原国家轻工业部颁发的“供料道科技进步三等奖”证书。

唯一拥有曾出国专业培训的电加热供料道设计、制造工程师。

唯一通过国家级科技成果鉴定的托盘自动码垛包装设备（线）。

唯一能够为玻璃厂提供框架、单柱、平推、双立柱等多种结构形式的托盘全自动和半自动码垛包装生产线。

The company was established in 1998 and is a high-tech enterprise integrating research and development, production, and sales. The company's main products are high-quality glass machinery products, including more than 100 products in three major series: New series LS. machines, fully automatic palletiser packing lines, energy-saving and environmentally friendly forehearth, and others.

We have a professional R&D and design team, with multiple senior engineers responsible for related design projects. Technical personnel account for 30% of the total number of employees in the company, and our technical level ranks among the top three in the domestic industry. The company insists the theory of people oriented, relying on technological progress.

It has a provincial center and a municipal research center: Shandong Engineering Technology Research Center and Weifang Enterprise Technology Center; The company has been successively awarded the titles of Shandong Science and Technology Little Giant Enterprise, Shandong Innovative Small and Medium sized Enterprise, Weifang Specialized, Refined, and New Enterprise, Weifang Key Laboratory, and has undertaken Weifang Science and Technology Development

Plan projects; National high-tech enterprises have over 70 patented technologies, including 3 invention patents, 39 utility model patents, 1 appearance patent, and 30 software copyright patented technologies;

The company is the only one being awarded 3rd price certificate by the formal State Light Industry Ministry of China for "Forehearth Science & Technology Advancement".

The company is the only one whose engineers have been trained on electric-heating forehearth design and manufacturing in United Kingdom.

The company is the only one that can provide automatic or semi-automatic glassware palletizing & packing production line with different palletizing machines including frame-type pole-type for glass plants in China.

The company is the only supplier of automatic palletizing and packing production line which was firstly identified by the technical experts from Chinese Federation of Light Industry Association as an advanced achievement.

CORPORATE CULTURE

企业文化

核心价值观：创新 品质 团队 执行 价值
Core Values: Innovation, Quality, Team, Execution, Value.

公司使命：服务客户、激励同行、回报社会、体现价值
Company Mission: Serving Customers, Inspiring Peers, Repaying Society, Demonstrating Value.

公司愿景：成为业务领域内综合性的一流企业
Company Vision: To become a first-class comprehensive enterprise in the business field.

管理方针：以人为本 靠科技进步
Management Policy: People-oriented, relying on technological progress.

质量方针：精益求精 追求完美
Quality Policy: Constantly striving for excellence and pursuing perfection.

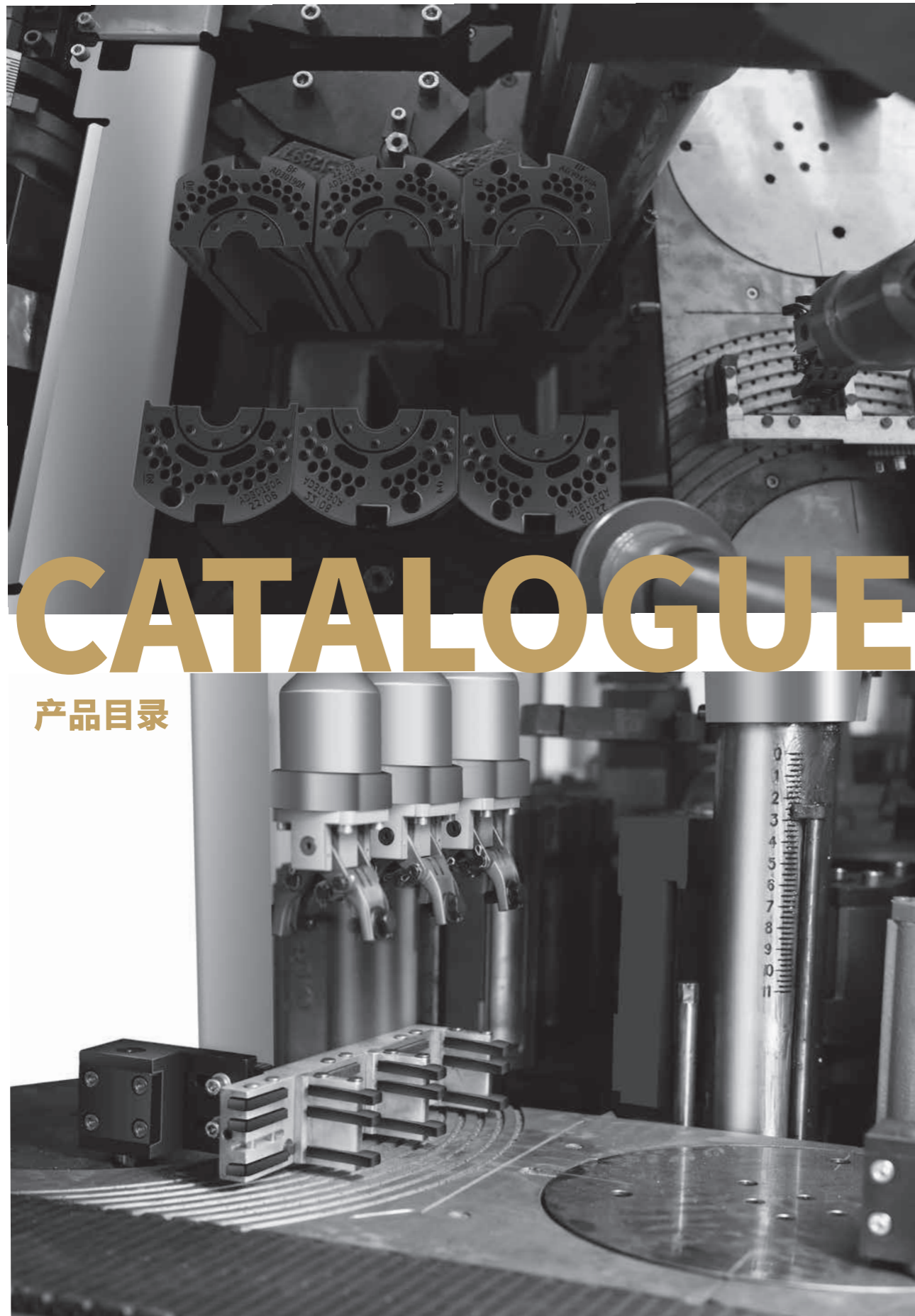
环境方针：遵守法规 节能降耗 创造绿色经济
Environmental Policy: Compliance with regulations, energy conservation and consumption reduction, creating a green economy.

经营理念：致力于客户的满意和成功而成就自我
Business Philosophy: Committed to achieving self-worth through customer satisfaction and success.

HONOR QUALIFICATION

荣誉资质





热端设备
Hot-end Equipment

- 行列式制瓶机 /I. S. Machine/**02**
- 供料机 /Gob Feeder/**10**
- 热端蒸涂机 /Hot-End Coating Machine/**12**
- 稳压阀 /Pressure Stabilizing Valve/**12**
- 弧线递送机 /Curved Transfer Wheel/**13**
- 横向输瓶机 /Cross Conveyor/**13**
- 推瓶机 /Stacker/**13**
- 涂油机器人 /Robot Oiler/**14**

冷端设备
Cold-end Equipment

- 瓶罐托盘码垛包装设备 /Glassware Palletizing System/**15**
- 横向捆扎机 /Horizontal Strapping Machine/**21**
- 顶压式自动垂直捆扎机 /Automatic Vertical Strapping Machine With Top Press/**22**
- 自动缠绕机 /Automatic Stretch Wrapper/**23**
- 托盘燃气热缩机 /Pallet Shrink-Wrapping Machine/**26**
- 排瓶机、输瓶机 /Liner & Single-Line Conveyor/**27**
- 瓶罐自动热缩包装机 /Automatic Glassware Shrink-Wrapping Machine/**28**
- 冷端喷涂机 /Cold-End Coating Machine/**12**
- 隔板清洗机 /Partition Cleaner/**24**

窑炉附属设备
Furnace Auxiliary Equipment

- 搅拌机 /Glass Liquid Stirrer/**09**
- 气加热供料道 /Gas-Heating Forehearth/**08**
- 电加热供料道 /Electric-Heating Forehearth/**09**
- 加料机 /Batch Charger/**29**
- 捞料机 /Scraper/**31**

New Series I.S.Machine 高品质行列式制瓶机

山东三江智能装备有限公司以优化设计和精湛的制造工艺彰显着产品的先进性和高品质。HD-108、140 型为中心距 108mm 和 140mm 双滴制瓶机和 108x2 三滴制瓶机，有 6 组、8 组、10 组、12 组机，适合于大规模玻璃瓶罐制品的生产。

I.S. Machine made by Sanjiang is well known by its optimized engineering design and remarkable technique. Type HD-108 and Type 140 I.S. Machine (center distance 108mm and 140mm) 108 x 2T.G., are available with selections of 6-section 8-section 10-section 12-section which is widely used in glassware production lines.

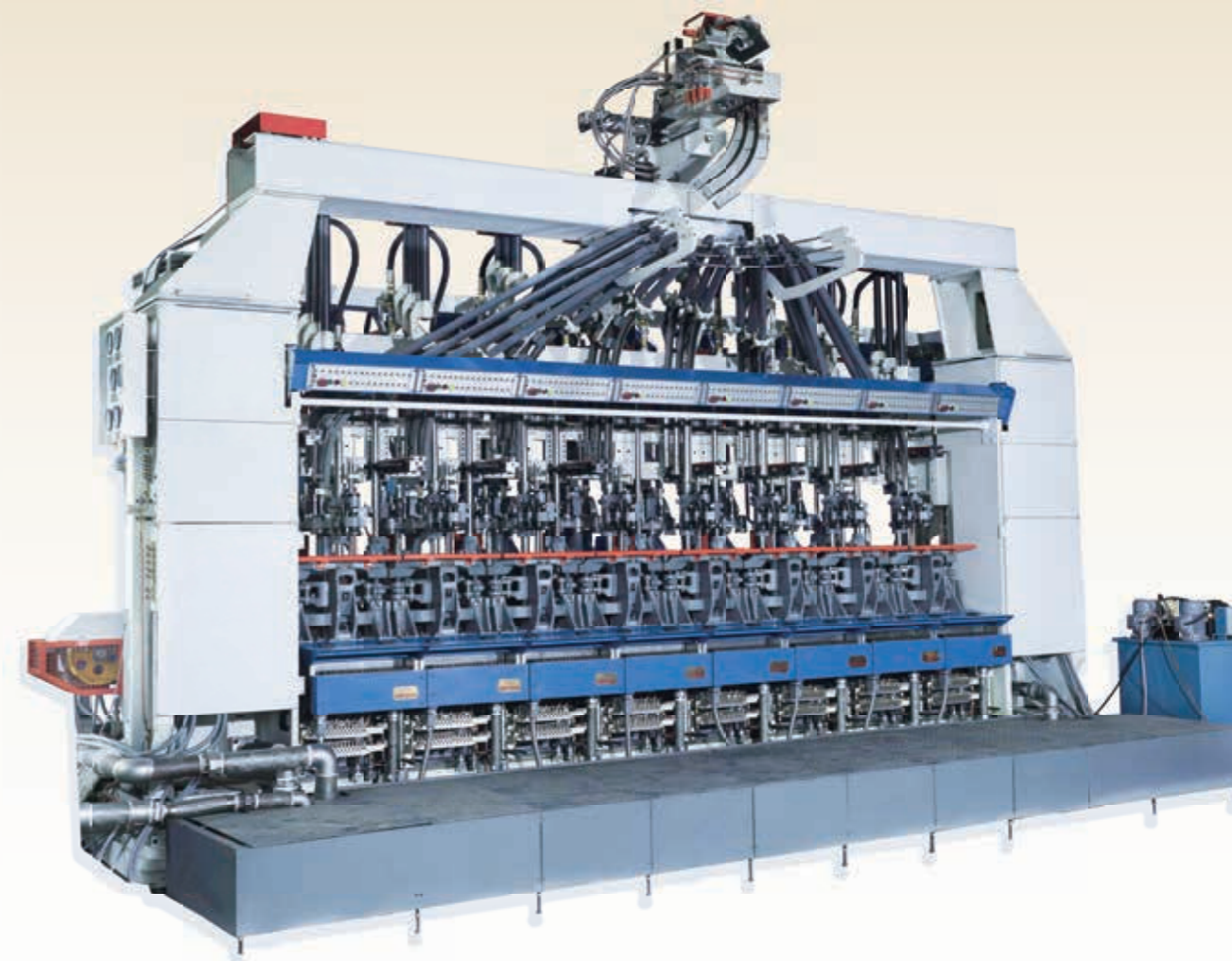
卓越的特性 Excellent Characteristic:

- 优选了关键零部件的材质，热处理和制造精度，提高了使用寿命
- 选用世界知名品牌的轴承，阀类，密封件，提高寿命和可靠性
- 采用密封式的浸油润滑铰链油箱液位显示，保证了铰链油箱和凸轮油箱的可靠润滑
- 纯正的美国 LINCOLN（林肯）自动润滑系统
- 齿形链传动钳瓶悬臂机构和快换钳瓶夹具
- PLC 控制器电器控制系统
- Improved parts material heat treatment and process precision to make I.S.Machine long lasting service
- Cooperating with world famous brand bearings valves and sealing part to improve long lasting service and stability
- Oil level display for linkage oil box and cam box
Using US standard LINCOLN lubricant system
- Silent chains take-out cantilever and more efficient take-out tong
- PLC controller and electrical control system

先进的功能 Advanced features:

- 伺服分料器
- 伺服钳移器
- 伺服翻转器（或气动液缓翻转驱动）
- 电子拨瓶器（双伺服电机或单电机）
- 分体悬挂式流料系统
- 带导向定位盘的快换压吹机构
- 可快换套筒阀和高寿命电磁阀的电气阀箱
- 可快换单向阀的漏斗，扑气，正吹气和开关机构
- 带刻度的快换臂
- 带定中环和封闭凸轮的扑气，漏斗，正吹气机构
- 垂直冷却和真空成型的模底机构
- 多分步自动调相的灵活线同步系统
- 具备小口压吹功能
- 初型模气动平行开关机构；
- 成型模气动平行开关机构；
- 一键换组
- Servo gob distributor
- Servo take-out
- Servo invert (with pneumatic option)
- Servo pushers (double motor or single motor)
- Lift type separate delivery system
- Efficient press and blow mechanism with position navigation plate
- Valve block with quick-changeable cartridge valve and solenoid valve
- Funnel settle final blow mechanisms with quick-change check valve and OCM
- Quick-change arm with dial
- Settle funnel and final blow mechanism with centering ring and seal cam
- Bottom plate mechanism with verti-flow cooling and vacuum forming
- Multiple step flexible line phase synchronous system
- It's featured as NNPB
- Blank mold parallel MOC mechanism
- Blow mold parallel MOC mechanism
- One-key to change working section number

十组三滴行列机 10-Section T.G. I.S. Machine



制瓶机制瓶尺寸范围 Container Limits

吹 - 吹法 Blow&Blow		单位 /Unit(mm)						
制瓶机型号 I.S.Machine Type		HD 型				HSP 型		
		单滴 S.G.	108 双滴 D.G.	140 双滴 D.G.	159 双滴 D.G.	108*2 三滴 T.G.	159 双滴 D.G.	108*2 三滴 T.G.
瓶身最大直径 Max body diameter		150	92	110	120	90	120	76
瓶口以下最大高度 Max height under finish		315	276	342	342	287	347	304
瓶口最大直径 Max finish diameter		48	48	48	48	48	48	48

压 - 吹法 Press&Blow (小口压吹 NNPB)		单位 /Unit(mm)						
制瓶机型号 I.S.Machine Type		HD 型				HSP 型		
		单滴 S.G.	108 双滴 D.G.	140 双滴 D.G.	159 双滴 D.G.	108*2 三滴 T.G.	159 双滴 D.G.	108*2 三滴 T.G.
瓶身最大直径 Max body diameter		150	92(92)	110(110)	121(121)	90(90)	120 (120)	76 (76)
瓶口以下最大高度 Max height under finish		240	257(257)	302(302)	300(300)	268(268)	300 (300)	285 (285)
瓶口最大直径 Max finish diameter		90	83(38)	90(38)	90(38)	70(38)	90 (38)	70 (38)

注: 括号内 (尺寸) 为特殊订货

Note- the data in brackets is for customized I.S. Machine

制瓶机消耗量 /Consumption

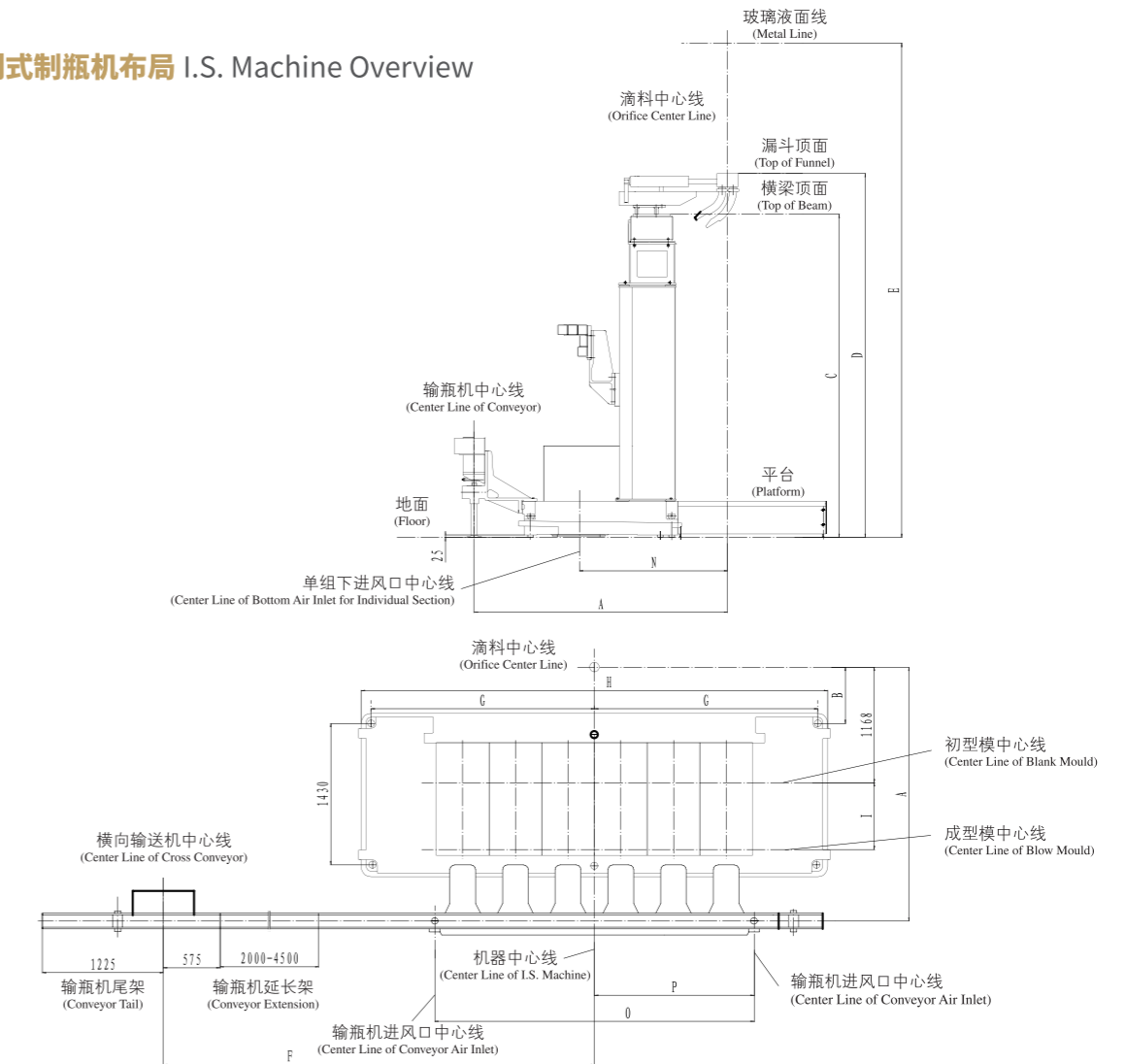
最大消耗量 (每组机消耗量) Max Consumption (per section)	单位 Unit	HD 型										HSP 型	
		单滴 S.G.		108 双滴 D.G.		140 双滴 D.G.		159 双滴 D.G.		108*2 三滴 T.G.		159 双滴 D.G.	108*2 三滴 T.G.
		吹吹 B&B	压吹 P&B	吹吹 B&B	压吹 P&B	吹吹 B&B	压吹 P&B	吹吹 B&B	压吹 P&B	吹吹 B&B	压吹 P&B		
操作空气 (0.21MPa) Operating air	M ³ /min	1		1		1		1		1		1	1
操作空气 (0.31MPa) Operating air	M ³ /min	2.8	3.6	2.8	3.6	2.8	3.6	3.4	4.2	3.7	4.8	5.5	5.5
真空 (0.085MPa) Vacuum	M ³ /min	0.7		0.8		1		1.2		1.3		1.2	1.3
冷却气 (12-16Kpa) (模具) Cooling air	M ³ /min	64		68		76		83		83		83	83
成模垂直冷却气 (12-16Kpa)	M ³ /min	20		20		20		20		20		20	20
停置板和输送带冷却气 (6Kpa) Cooling air	M ³ /min	15		15		17		20		20		20	20
冷却水 (0.21MPa) Cooling water	L/min	10		10		15		15		15		15	15

注: 冷却水消耗量为每台机

Note: the cooling water consumption is calculated according to per I.S.M/C

制瓶机最高机速 /Max speed of I.S.Machine	
13 转 / 分钟	13r/min

行列式制瓶机布局 I.S. Machine Overview



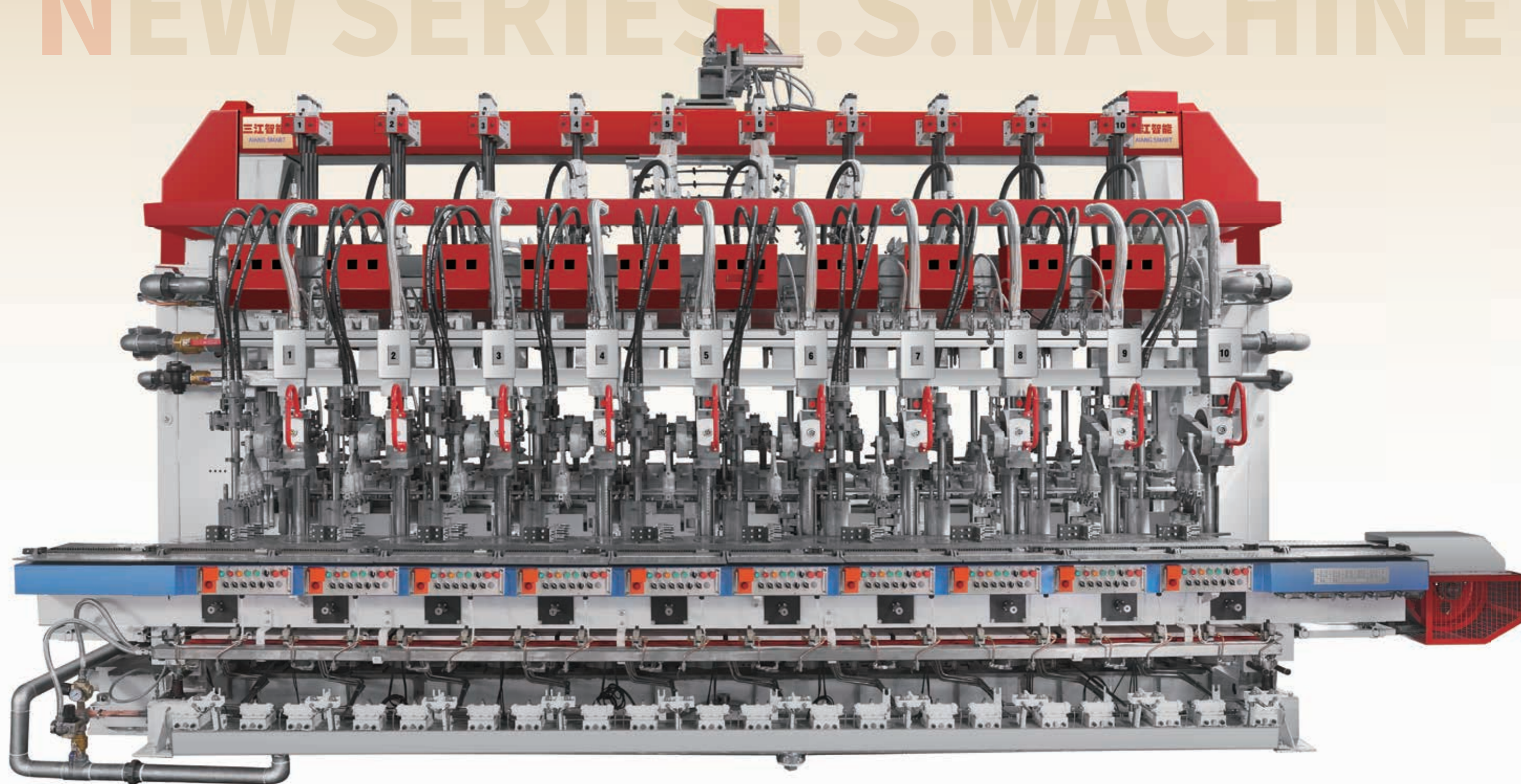
组数 Sec 尺寸 Dimension	单滴 S.G.			108 双滴 D.G.				140 双滴 D.G.				108*2 三滴 T.G./159 双滴 D.G.			
	6	8	10	4	6	8	10	6	8	10	12	6	8	10	12
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
A	2406	2406	2406	2406	2406	2406	2406	2568	2568	2568	2568	2608	2608	2608	2608
B	568	568	568	568	568	568	568	568	568	568	563	587	587	587	563
C	3269	3269	3485	3269	3269	3269	3485	3269	3269	3485	3785	3369	3369	3602	3902
D	3728	3728	3934	3728	3728	3728	3934	3728	3728	3934	4234	3867	3867	4100	4400
E	4700	4700	5000	5000	5000	5000	5300	5000	5000	5300	5700	5500	5500	5700	6000
F	3433	3967	4501	2899	3433	3967	4501	3433	3967	4501	4442	3433	3967	4501	4442
G	2264	2798	3332	1730	2264	2798	3332	2264	2798	3332	3874	2264	2798	3332	3874
H	4728	5796	6964	3660	4728	5796	6964	4728	5796	6964	8038	4728	5796	6964	8038
I	610	610	610	610	610	610	610	676	676	676	676	714	714	714	714
N	1502	1502	1462	1502	1502	1502	1462	1502	1502	1462	1412	1521	1521	1481	1431
O	3236	4304	-	2168	3236	4304	-	3236	4304	-	-	3236	4304	-	-
P	1618	2152	-	1084	1618	2152	-	1618	2152	-	-	1618	2152	-	-

注: 表中 F 的数值不包含延长架长度

Note: the length in row "F" does not include the extension conveyor length

高品质行列式制瓶机 New Series I.S.Machine

NEW SERIES I.S.MACHINE





Radiant-Type Electric-Heating Forehearth 辐射式电加热供料道

特点 Characteristics

1. 温度控制精度高
 2. 加热冷却布局合理、温度均匀恒定
 3. 保温效果好、节能显著、改善环境
 4. 选用优质材料、寿命长
 5. 自动温控、操作简单
- 1.High accuracy temperature control
 - 2.Appropriate arrangement of heating zone and cooling
 - 3.Zone for temperature stability and improves work environment
 - 4.Using high quality materials for superior life
 - 5.Easy handling with automatic temperature control system



GAS-HEATING FOREHEARTH 燃气加热供料道

特点 Characteristics

1. 燃料为天然气、石油液化气或城市煤气。
 2. 空气与燃气按比例混合，多喷嘴小火焰，加热均匀，燃烧充分，能源利用率高。
 3. 结构设计合理，冷却与加热有机结合，调控能力强。
 4. 控制精度高，性能可靠。
 5. 冷却布局合理、温度均匀恒定，适用于各种玻璃。
- 1.Fuels: Natural gas LPG Coal gas
 - 2.Excellent combination formula for air and gas Multiburner with small flame for homogenize heating leads to complete combustion low-energy consumption and high fuel utilization
 - 3.Appropriate structure design well combination of heating and cooling and cooling and flexible adjustment
 - 4.High accuracy temperature control and reliable performance
 - 5.Appropriate arrangement of heating zone and coolingzone for temperature stability and homogeneity suitable for various glasses

Model SJ Glass Liquid Stirrer SJ 型玻璃液搅拌机

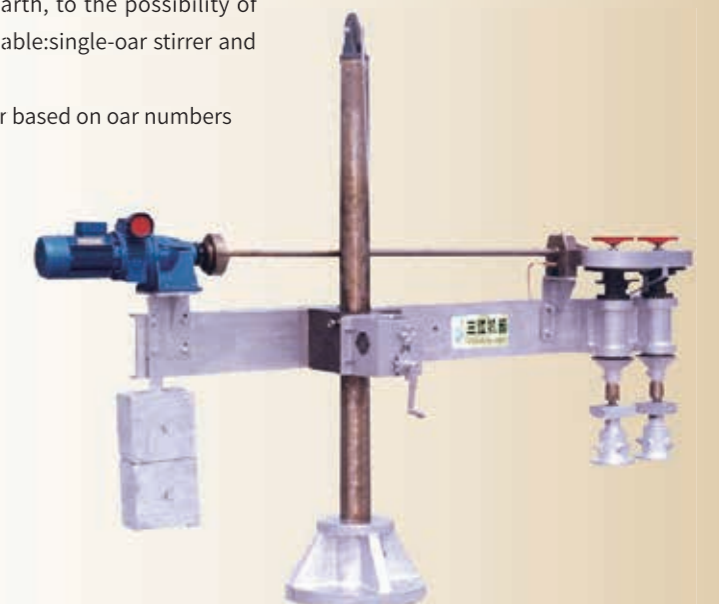
搅拌机与各种型号的料道配套使用，对减少或去掉玻璃制品的条纹等缺陷有明显效果。

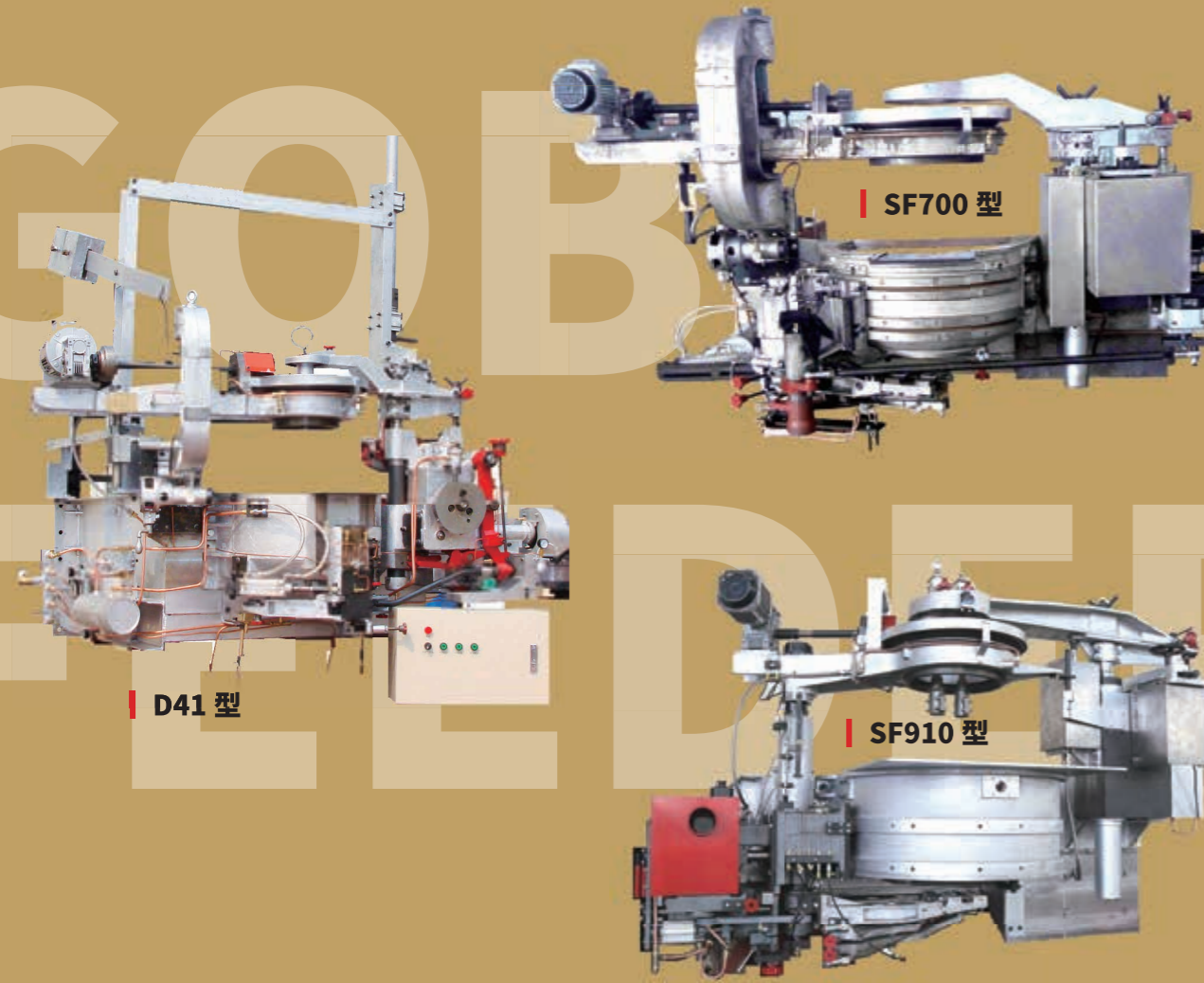
搅拌机按照桨数分类：单桨搅拌机、双桨搅拌机、三桨搅拌机。

按照结构分类：单立柱式搅拌机、龙门式搅拌机

The stirrer can be mounted in different models of fore hearth, to the possibility of having stripes on the glassware surface. Two types are available:single-oar stirrer and double-oar stirrer.

The stirrers: single-oar stirrer, double-oar stirrer, tri-oar stirrer based on oar numbers
Column-stirrer, Gantry-stirrer based on machine structure





Gob Feeder 供料机

各种系列和型号的供料机，适配多种成型机：行列式制瓶机、压机、吹泡机、手工机等。

伺服供料机的冲料机构和剪料机构，均采用伺服电机实现其动作功能，控制系统内置丰富的电子凸轮曲线，以此适应不同冲料速度和剪切速度的需要。

伺服供料机可实现多料重。

Series of feeders are available for integration with all types of forming machines (I.S. machine press machine blowing machine handy machine and etc.).

Servo motors are installed in servo feeder which are used to drive the plunger mechanism and the shear mechanism. There are many kinds of electric cam profiles stored in the control system which can meet different requirements for the speed of plunger mechanism and shear mechanism.

Servo gob feeder with multi-weight gob.

Feeder data sheet 供料机参数表

参数 parameter	型号 type	SF910 供料机 (单滴、双滴、三滴) (S.G.、D.G.、T.G.)	SFD41 Servo cut	SF700 供料机 (单滴、双滴) (S.G.、D.G.)	G706 供料机 (单滴) (S.G.)	D41-66IV (凸轮剪料) (Cam cut)
滴料数量及剪刀中心距 (毫米) God quantity and C.D.of shear blade(mm)		单滴, S.G. 双滴 (110mm)D.G. 三滴 (76,89mm)T.G.	单滴 S.G. 双滴 (76mm)D.G.	单滴 S.G. 双滴 D.G. (C.D.:76mm or 110mm)	单滴 S.G.	单滴 S.G.
冲料和剪料的相位调节范围 Plunger and cut adjustment		在不停机情况下, 0°~360°范围内可以任意 调节 Adjustable in 0°~360° while machine runs	在不停机情况下, 0°~360°范围内可以任意 调节 Adjustable in 0°~360° while machine runs	在不停机情况下, 0°~360°范围内可以任意 调节 Adjustable in 0°~360° while machine runs	停机时可以调节 60°在运 行中可以调节 ±24° Adjustable in 60° while machine stops,Adjustable in ±24° while machine runs	停机时可以调节 60°在运 行中可以调节 ±24° Adjustable in 60° while machine stops,Adjustable in ±24° while machine runs
装机剪切角度 Shear cut angle		右 30°~左 90°, 订货时 指明装机角 度 R 3 0°~L90°,the shear cut angle shoule be mentioned while order	0°	右 30°~左 90°, 订货时 指明装机角 度 R 3 0°~L90°,the shear cut angle shoule be mentioned while order	0°	0°
日最大出料量 (吨/天) Max pull(T/D)		120	40	60	60	40
单滴料重 (克) Single gob weight (gram)		单滴: 50~4000S.G. 双滴 (110): 100~1100D.G. 三滴 (76,89): 20~500T.G.	20~1500	单滴: 20~4000S.G. 双滴 (76): 15~350D.G. 双滴 (110): 15~600D.G.	20~4000	20~1500
机速范围 (剪/分钟) Machine speed(cut/ Min)		12~120	12-95	12~95	12~95	3-35
匀料筒转速 (转/分钟) Revolving tube speed(RPM)		3~12 转/分钟变频调速 3~12rpm controlled by inverter	3~12 转/分钟变频调速 3~12rpm controlled by inverter	3~12 转/分钟变频调 速 3~12rpm controlled by inverter"	3~12 转/分钟变频调 速 3~12rpm controlled by inverter"	3~12 转/分钟变频调 速 3~12rpm controlled by inverter"
匀料筒高度调节范围 (毫米) Tube height adjustment(mm)		-25~+75	0~75	0~75	0~75	0~75
冲头行程调节范围 (毫米) Plunger stroke adjustment(mm)		11~100	32~112	32~112	32~112	32~112
冲头高速调节范围 (毫米) Plunger height adjustment(mm)		0~100	-20~+100	-20~+100	-20~+100	-20~+100
滴料中心至料道出口 (毫米) Distance from gob center to forehearth outlet (mm)		356	190.5	216	216	190.5
料盆口宽 (毫米) Spout opening width (mm)		460,560,610	410	410,460	410,460	410
料盆深度 (毫米) 根据出料量确定 Spout depth(mm) according to pull		279 254	216 145	216	216	216
匀料筒内径 (毫米) 根据出料量确定 Tube inside diameter(mm) according to pull		(7"~12") 178 203 229 254 279 305	(5"~7") 127 152 178"	(5"~9") 127 152 178 203 229	(5"~9") 127 152 178 203 229	(5"~7") 127 152 178

Hot-End Coating Machine 热端蒸涂机

主要技术参数 Main Technical Data

- 内循环速度: 8~14m/s
- 外循环速度: 2.5~6m/s
- 气源压力: 0.2MPa
- 涂料泵流量: 0~4ml/min
- 适宜瓶罐高度: 50~350mm
- 额定功率: 0.9kW
- Inner circulating speed: 8~14m/s
- Outer circulating speed: 2.5~6m/s
- Air pressure: 0.2MPa
- Dope pump flow: 0~4ml/min
- Bottle height: 50~350mm
- Rated power: 0.9kW

RT3 型热端蒸涂机: 适合 8 双机及以下机型成型机
MODEL RT3 Hot-end Coating Machine suitable for 8-section D.G. I. S. Machine

RT5 型热端蒸涂机: 适合 10 双机及以上机型成型机
MODEL RT5 Hot-end Coating Machine suitable for 10-section D.G. I. S. Machine



MODEL PTY Cold-end Coating Machine PTY 型冷端喷涂机

主要技术参数 Main Technical Data

- 气源压力: 0.35-0.6MPa
- 喷枪最大移动速度 0.45m/s
- 冷端喷涂机有 PTY 型、LP2 型 2 大系列, 多种规格, 根据客户退火炉宽度定制。
- Air pressure: 0.35-0.6MPa
- Maximum spray gun movement speed: 0.45m/s
- There are 2 series, type PTY and type LP2, with various specifications customized according to the customer's annealing furnace width.



Pressure Stabilizing Valve TQVW 型稳压阀

主要技术参数 Main Technical Data

- 气源压力: ≤ 0.8MPa
- 常用输出气压范围: 0.12~0.35MPa
- 公称通径: Φ75mm、Φ127mm
- 输出气压变化范围: ±0.002MPa
- Air pressure: 0.8MPa
- Normal output pressure range: 0.12~0.35MPa
- Diameter of throttle valve: Φ75mm, Φ127mm
- Air outflow pressure controlling accuracy: ±0.002MPa



Model HST Curved Transfer Wheel HST 型弧线递送机

HST 型弧线递送机是为高速传递玻璃容器而设计。能够完成玻璃容器的高速、平稳、准确递送, 适用于高机速玻璃制瓶生产线。

Model HST Curved Transfer Wheel is designed for conveying the glassware from I.S. machine or press machine to cross conveyor in front of the annealing lehr quickly and stably which is especially applicable to high-speed glassware production line.



Triaxial Servo Stacker 三轴伺服推瓶机

三轴伺服推瓶机由三台伺服电机驱动, 实现推瓶、抬头及跟随动作。
Triaxial Servo Stacker is driven by 3 servo motors for stacking, headlifting, and following action.

主要技术参数 Main Technical Data

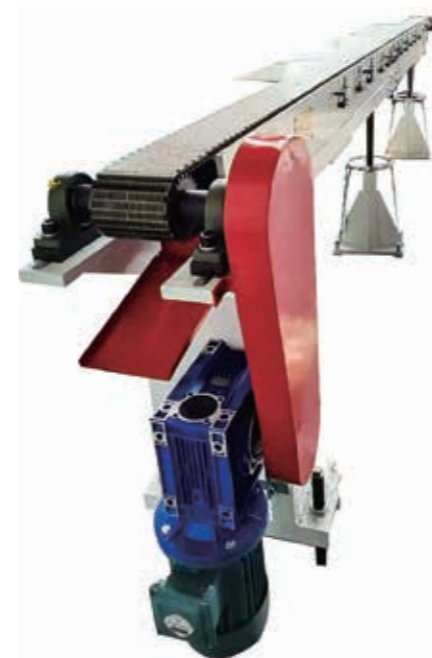
- 推瓶行程: 350mm
- 跟随行程: 300mm
- 推杆抬头高度: 424mm
- 推瓶速度: 1-15 次 / 分
- Stacking stroke: 350mm
- Following stroke: 300mm
- Push rod head height: 424mm
- Stacking frequency: 1-15 times/min



Model HS Cross Conveyor HS 型横向输瓶机

横向输瓶机用于退火炉前玻璃制品的横向输送, 与推瓶机配合将玻璃制品送入退火炉。

HS Cross Conveyor is installed in front of annealing lehr for cross conveying the glasswares and works with stacker to push them into annealing lehr.



Robot Oiler 涂油机器人

设备特征 Characteristics

我司研制的机器人涂油设备主要代替制瓶机初模侧人工涂油工作。玻璃瓶的制造工艺决定了制瓶机周围高温、高噪音、多油烟的恶劣环境。使用机器人涂油设备可大大减少对人力的需求，让有限的人力投入到机器无法替代的工作中。

The robot oiling developed by our company mainly replaces the manual oiling on the blank mold LS. machine. The harsh environment of high temperature, high noise, and oil fumes around the LS. machine. The robot oiler can greatly reduce the demand for manpower, allowing limited manpower to be invested in tasks that machines cannot replace.

机器人涂油优点 Advantages of robot oiling

1. 喷枪涂油更均匀，保证同一台机每一组的均匀度统一。
 2. 喷枪涂油减少其对相邻模具的影响，保证质量。
 3. 减少润滑油使用量，与人工涂油相比可减少 1/2 的用量。
- 1.The spray gun applies oil more evenly, ensuring a uniform degree of uniformity for each group of the same machine.
2.Spray gun oiling reduces its impact on adjacent molds and ensures quality.
3.Reducing the amount of lubricating oil used can reduce the usage by half compared to manual oiling.



Glassware Palletizing System 瓶罐托盘码垛包装设备

单柱式、框架式、平推式瓶罐托盘自动码垛包装设备能够满足 12 组三滴制瓶生产线要求。夹瓶头、推瓶头可旋转 90 度，可自动供放空托盘、隔板、顶框。适用不同规格、瓶形的瓶罐托盘码垛包装，根据生产要求，为用户配备整套的自动或半自动托盘码垛设备。

Glassware Palletizing System can be used in 12-section T.G. glassware production line. With alternative options of 90 turning header automatic empty-pallets feeding machine and automatic trays feeding machine the palletizing system can be designed to automatic or semi-automatic according to clients' order.

主要技术参数及特点 Main Technical Data & Feature

- 码垛托盘规格（长 X 宽 X 高）：1200 x 1000 x 150mm 或用户要求的非标尺寸托盘
- 最大码垛能力：
普通式：45 秒/层
高速式：26 秒/层
- 气源压力：0.25MPa
- 装机功率：5~20kW
- Pallet size (L W H):1200 x 1000 x 150mm Special dimension would be designed according to customer's requirement
- Max speed:
Standard type:45s/1ayer
High speed type:26s/1ayer
- Air pressure: 0.25MPa
- Installed power:5~20KW



Type GM Automatic servo palletiser GM 全伺服自动码垛机

Robot palletiser 机器人码垛



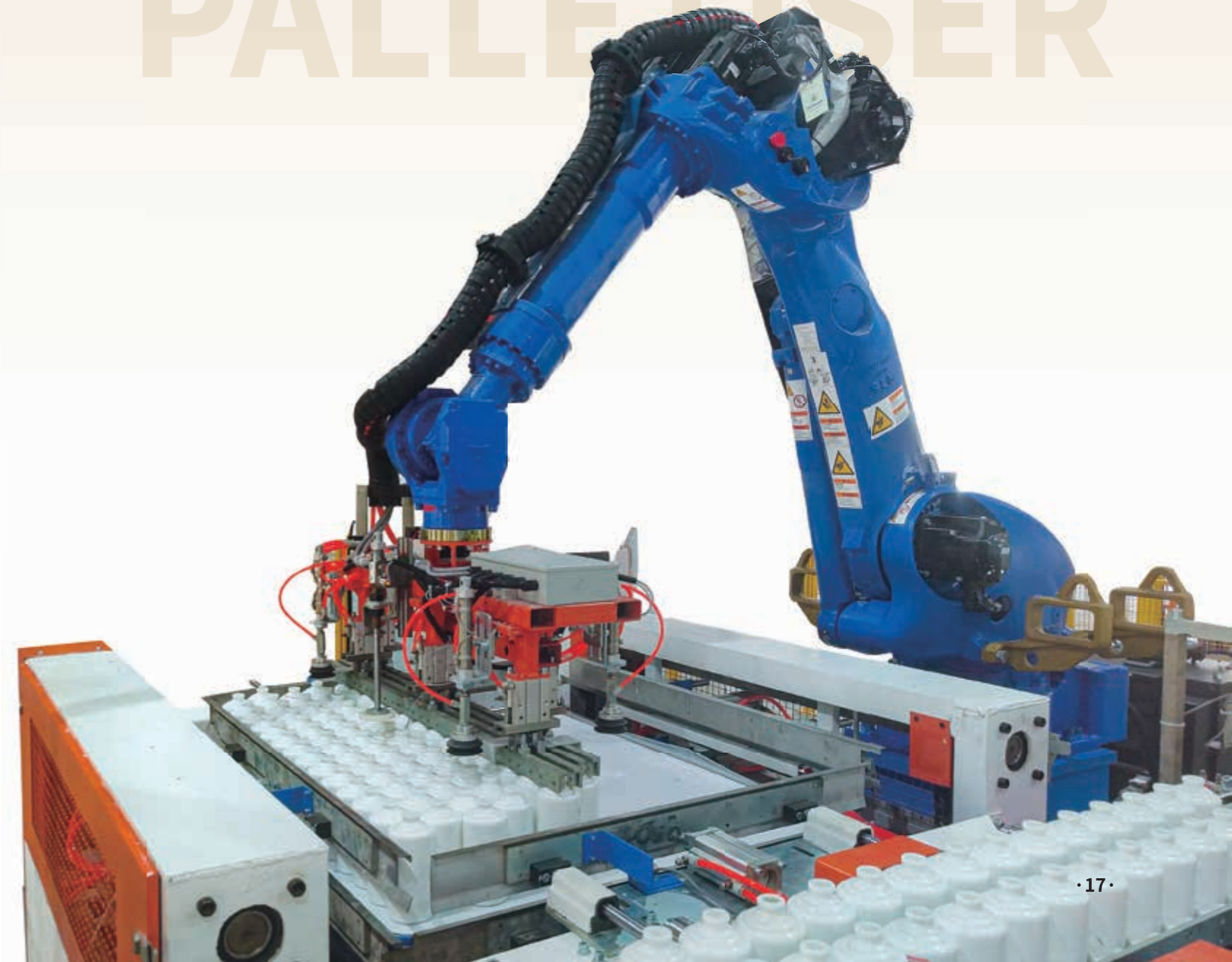
- 所有机构均采用伺服电机驱动，动作更加柔和精准
- 直线导轨导向，动作更加顺畅
- 同步带传动动作更加稳定
- 装机总功率：40Kw
- 气源压力：≥ 0.5Mpa
- 码垛速度：≤ 30 秒 / 层
- 托盘规格：1200*1000*150(可定制)
- 码垛瓶垛最大高度：2600mm(可定制)

- All mechanisms are driven by servo motors, resulting in softer and more precise movements
- Linear guide rail for smooth motion
- Timing belt drives stably
- Total installed power: 40Kw
- Compressed air-pressure: 0.5Mpa
- Speed: 30 seconds/layer
- Tray specification: 1200*1000*150(Other size customizable)
- Max height: 2600mm(Other size customizable)



针对异型瓶和特殊要求瓶型研发的机械手码垛，主要是采用 PLC 与机器人程序融合与特殊定制夹具配合实现异型瓶的码垛包装。
The robotic arm palletizing developed for non-round shaped bottles and special requirements. It mainly uses PLC and robot program integration and special customized fixtures to achieve the palletizing and packaging of special-shaped bottles.

ROBOT PALLETISER



Sing-pole Palletiser 单柱式码垛机

码垛系统采用气囊夹持和真空吸盘两种码垛方式，以适应不同类型的瓶子，气囊夹持适用于小口长颈瓶，真空吸板适用于广口瓶。单柱式码垛机可以实现这两种码垛方式的快速切换；

The palletizing system adopts two ways of airtube holding and vacuum suction cup to adapt to different types of bottles. The airtube holding is suitable for small long neck bottles, and the vacuum suction cup is suitable for wide mouth bottles. Type single pole palletizer can realize the rapid change of these two palletizing modes;



SING-POLE PALLETISER

Model MT Pushing-Type Palletizing Machine MT 型平推式码垛机



MODEL MT PUSHING-TYPE PALLETIZING MACHINE

Palletiser System Affiliated Equipment

码垛包装线 - 公共输送打包设备

| 梭车 Shuttle



防撞系统:

防撞传感器: 梭车配备先进的防撞传感器, 能够实时检测周围障碍物, 避免与障碍物或其他设备发生碰撞

Collision Avoidance System:

Collision Sensors: The shuttle is equipped with advanced collision sensors that can detect surrounding obstacles in real-time, preventing collisions with obstacles or other devices.

高效性与智能化:

梭车通过无线通信系统能实时接收调度任务, 根据仓储系统需求智能选择路径, 极大提高工作效率

Efficiency and Intelligence:

The shuttle can receive scheduling tasks in real-time through the wireless communication system, intelligently selecting the path based on the warehouse system's needs, greatly improving work efficiency.

安全性:

无线防撞梭车的防撞系统是其最重要的安全特性之一。通过实时检测并规避潜在障碍物, 它可以有效减少仓库操作中的碰撞风险, 保障员工安全和设备的长久使用。

Safety:

The collision avoidance system of the wireless shuttle is one of its most important safety features. By detecting and avoiding potential obstacles in real-time, it effectively reduces the risk of collisions during warehouse operations, ensuring the safety of employees and the long-term use of the equipment.

协同工作:

无线防撞梭车在公共线与其他设备协同工作, 提高工作效率。

Collaborative Work:

The wireless shuttle works in collaboration with other equipment on common line, improving overall work efficiency.

| 无线梭车 Wireless Shuttle



Model SL2500 Horizontal Strapping Machine SL2500 型横向捆扎机

MODEL SL2500 HORIZONTAL STRAPPING MACHINE

| 主要技术参数及特点 Main Technical Data & Feature

- 原装进口焊接式捆扎头, 运行可靠;
- 收带拉力可调节, 最大达 180kgf;
- 最大包装速度: 25 托盘单元 / 小时 (按 6 层 / 托计);
- 托盘高度自动识别;
- 托盘规格按照用户要求;
- 码垛高度按照用户要求;
- 适用 PET 捆扎带。
- Qualified strapping head for stable running
- The strap tension can be adjusted (max.180kg!)
- packing capacity: 25 pallets/hour if the full pallet is 6 bottle-layers/pallet)
- Pallet height can be recognized automatically
- Pallet specification is per to customer's requirements
- Pallet height is per to customer's requirements
- Applied to PET straps



Model DYC2 Automatic Vertical Strapping Machine With Top Press

DYC2 型顶压式自动垂直捆扎机

主要技术参数及特点 Main Technical Data & Feature

• 2台原装进口焊接式捆扎头，运行可靠	• With 2 sets of qualified strapping head for stable running
• 压头压力可调节，最大达 2000kgf	• Pressure of press head can be adjusted(max.2000kgf)
• 收带拉力可调节，最大达 180kgf, 各条带拉力均匀	• The strap tension can be adjusted(max.180kgf)strap tension adjustable
• 2条带同时捆扎，2×2 包装方式	• It can strap two straps at the same time with the packing mode: 2x 2
• 最大包装速度：40 托盘单元/小时	• Packing capacity: 40pallets /hour
• 托盘高度自动识别	• Pallet height can be recognized automatically
• 托盘规格按照用户要求	• Pallet specification is per to customer's requirements
• 码垛高度按照用户要求	• Pallet height is per to customer's requirements
• 适用 PET 捆扎带	• Applied to PET straps

Model R 1200 Automatic Stretch Wrapper

R1200 型自动缠绕机

主要技术参数 Main Technical Data

• 包装能力：20-30 托/时	• Packing capacity: 20-30 pallets/hour
• 托盘规格 1200x 1000mm 或按用户要求	• Pallet size: 1200 1000mm or per to customer's requirements
• 托盘高度按照用户要求	• Pallet height: according to customer's requirements
• 包装材料：LLDPE 拉伸薄膜	• Packing material: LLDPE film
• 宽度：500mm, 厚度：20-35 μm	• width: 500mm thickness: 20-35μm
• 悬臂最大回转直径：3390mm	• Rotary-arm gyration diameter: max. 3390mm
• 悬臂最大缠绕空间：2180mm	• Stretching space of rotary-arm: max. 2180mm
• 设备整机尺寸（长 X 宽 X 高）：4950 x 2150 x 4010mm。	• Overall dimension(L W H): 4950 x 2150 x 4010mm

Pallet Shrink-Wrapping Machine 自动套袋燃气热缩机

ZQR 型托盘燃气热缩机在 QR 型的基础上增加了自动套袋的功能，提高了包装生产线的效率和自动化水平。

ZQR is designed based on model QR pallet shrink wrapping machine and new device of film-covering was designed and installed to improve automation and efficiency.



主要技术参数 Main Technical Data

燃烧介质：液化气 (LPG) 或天然气 (natural gas)	Fuels: LPG or natural gas
耗气量 (标准大气压)	Gas consumption (under standard air pressure)
A、液化气 (LPG) : 0.15m ³ / 托盘	A.LPG: 0.15m ³ /pallet
B、天然气 (natural gas) : 0.5m ³ / 托盘	B. Natural gas: 0.5m ³ /pallet
气源压力范围：0.1-0.4MPa	Gas pressure range:0.1-0.4MPa
装机功率：20kW	Installed power: 20kW
热缩能力：40 托/小时	Capacity: 40 pallets/hour
托盘重量：150~1500kg	Pallet weight: 150~1500kg
托盘高度：根据客户要求	Pallet height: up to the customer's requirement

Model QR Pallet Shrink-Wrapping Machine QR 型托盘燃气热缩机

QR 型托盘燃气热缩机可单机使用，也可配在码垛包装线上，对套在瓶垛上的热缩塑料薄膜进行热缩。薄膜热缩后将瓶子与托盘缩裹为整体，满足防雨、防尘、防倾倒，达到理想的运输包装效果。

Model QR Pallet Shrink-wrapping Machine can be used alone or be equipped with palletizing & wrapping production line to shrink the film covered on the full pallets. The film after shrink will become an integrated part of the full pallet so that bottles can be transported dust-proof and collapse-proof.



主要技术参数 Main Technical Data

燃烧介质：液化气 (LPG) 或天然气 (natural gas)	Fuels: LPG or natural gas
耗气量 (标准大气压)	Gas consumption (under standard air pressure)
A、液化气 (LPG) : 0.15m ³ / 托盘	A.LPG: 0.15m ³ /pallet
B、天然气 (natural gas) : 0.5m ³ / 托盘	B. Natural gas: 0.5m ³ /pallet
气源压力范围：0.1-0.4MPa	Air pressure range: 0.1-0.4MPa
装机功率：8.25kW	Installed power: 8.25kW
热缩能力：50 托/小时	Capacity: 50 pallets/hour
托盘重量：150~1500kg	Pallet weight: 150~1500kg
托盘高度：根据客户要求	Pallet height: up to the customer's requirement



Liner & Single-Line Conveyor 排、输瓶机

位于退火炉末端，用于玻璃瓶罐生产过程中的自动排瓶和连续输瓶，亦可用于其它制品的排列和输送，在单行输瓶段两侧配置检验工位，可完成对制品的自动或人工检验。
Conveyor is installed at the end of annealing lehr and is used to line and convey the bottles automatically. Inspection stations are equipped at both sides of the straight conveying section; therefore the glassware can be inspected automatically or manually.

无压力瓶罐输送线 Jam-free Conveyor



Model XT Automatic Glassware Shrink-Wrapping Machine XT 型瓶罐自动热缩包装机

瓶罐自动热缩包装机用于玻璃瓶罐及罐装物品的热缩包装。
Thermo-shrink technology is used in this system to pack glass containers automatically.

主要技术参数 Main Technical Data

- | | |
|---------------------|-----------------------------------|
| •最大集瓶方阵: 700x400mm | •Max Size: 700 x 400mm |
| •适用膜厚度: 0.05~0.15mm | •Hood Thickness: 0.05~0.15mm |
| •加热装机功率: 30kW | •Heating Installed Power: 30kW |
| •正常生产功率: 约 15kW | •Normal Energy Consumption: 15kW |
| •最大包装能力: 4 包/分钟 | •Max packing capacity: 4 bags/min |



Partition Cleaner 隔板清洗机

优势 Advantages of the Partition Cleaner

机架主要拼焊而成，一体式结构。
操作采用 PLC 编程屏幕显示及触屏控制系统；
清洗采用特制滚动毛刷清洗专用海绵辊吸水；
独特的外观设计，可自由推进推出，节能环保，效率高。

The frame is mainly welded together, with an integrated structure. The operation uses a PLC programming screen display and touch screen control system. The cleaning process utilizes specially designed rolling brushes and sponge rollers for water absorption. The unique design allows for easy movement in and out, offering energy-saving, environmental benefits, and high efficiency.

技术参数 Technical Data

最大清洗宽度：≤ 1050mm
电路：380V / 50HZ
输送辊直径：70mm
输送电机：1.5kw 1台 1.1kw 1台
毛刷电机：1.5KW 1台
输送速度：0-15m/min
清洗能力：每分钟清洗 10 张

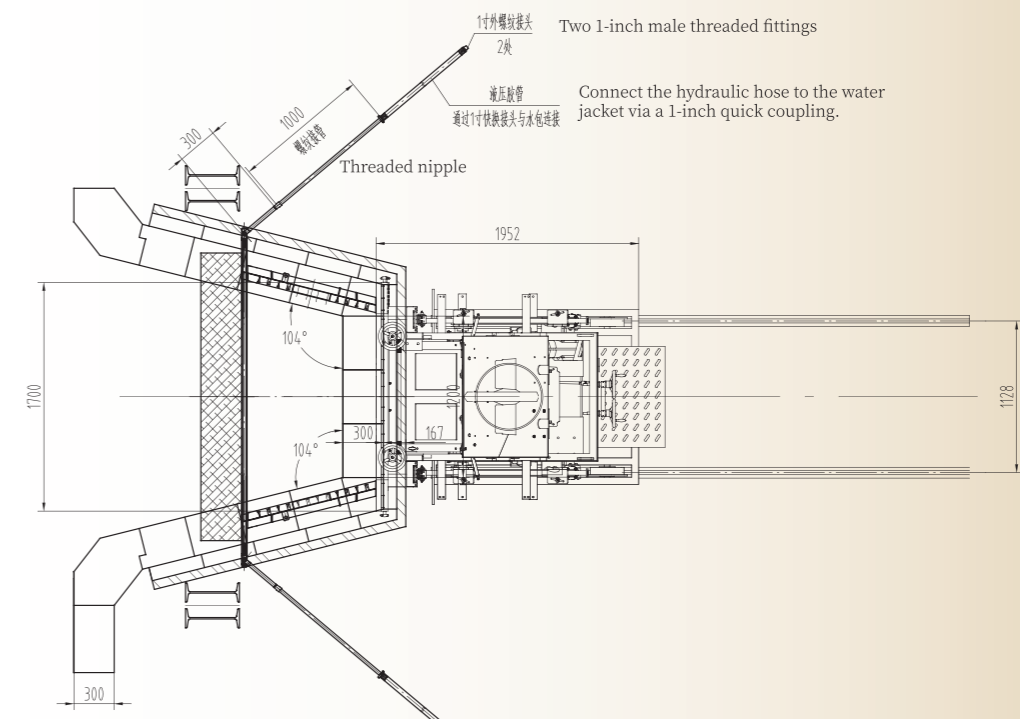
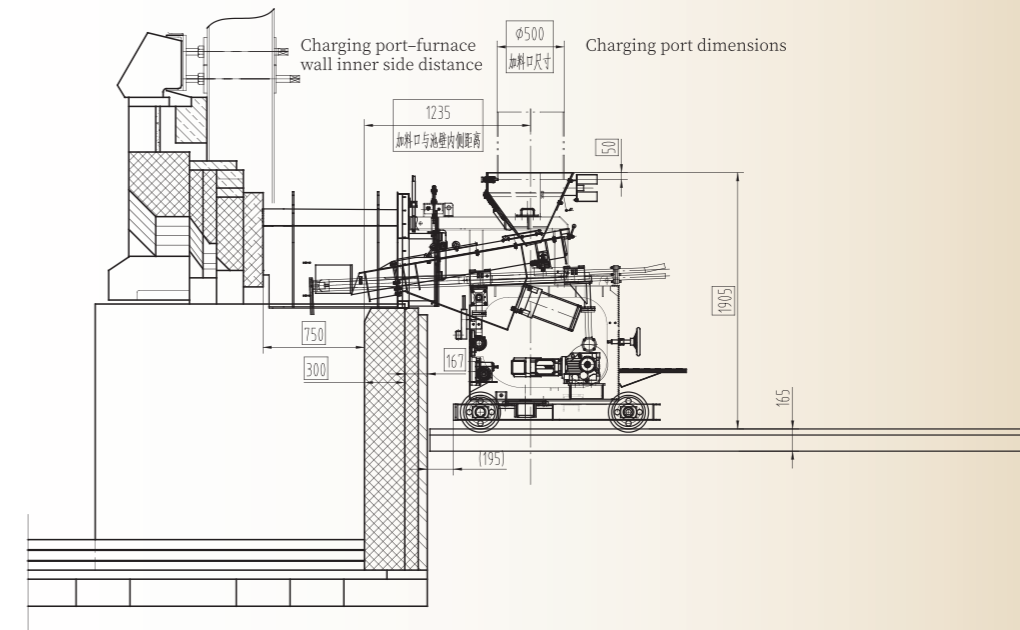
Maximum cleaning width: ≤ 1050mm
Circuit: 380V / 50HZ
Conveyor roller diameter: 70mm
Conveyor motors: 1.5kw x 1 unit, 1.1kw x 1 unit
Brush motor: 1.5KW x 1 unit
Conveyor speed: 0-15m/min
Cleaning capacity: 10 sheets per minute

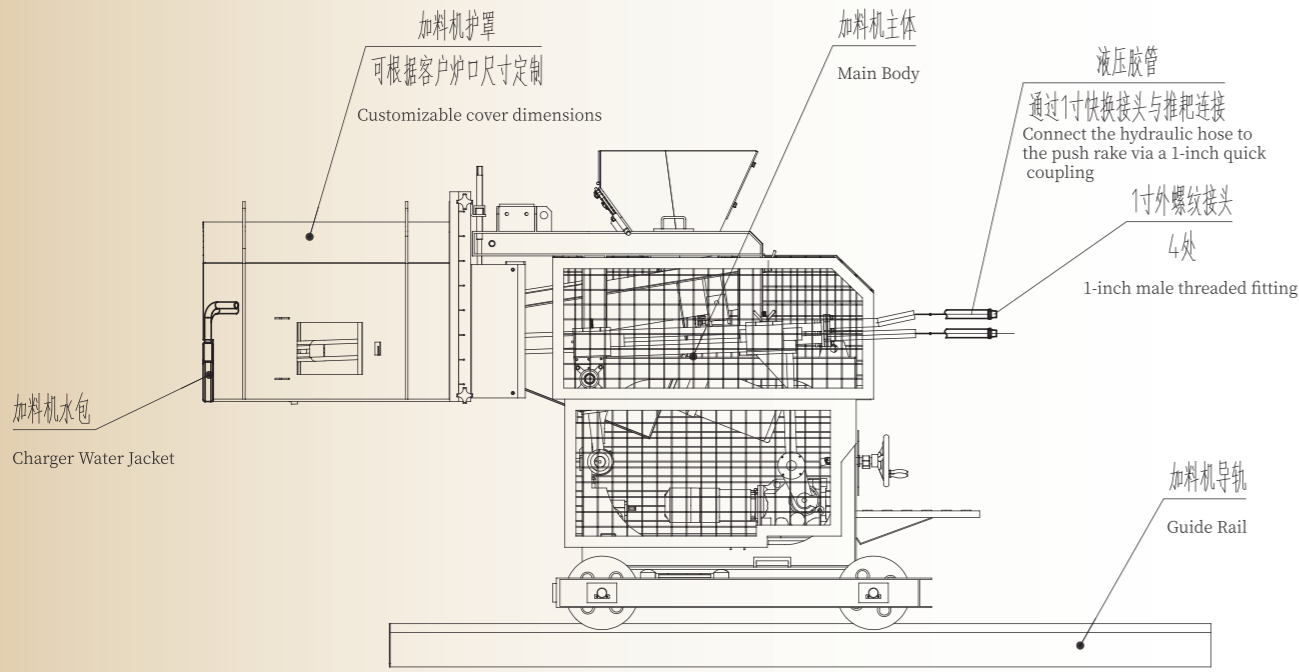


Batch Charger 双推耙加料机

加料机采用了密封方式。可以节能 5%左右、而且还可减少配合料对池壁砖的腐蚀。此外还解决了加料工程中出现的粉料乱飞，成分损失，乱飞浪费，环境卫生等多种问题。

The batch charger adopts a sealing device. It can save about 5% energy and also reduce the corrosion of the mixture on the pool wall bricks. In addition, it also solves various problems such as powder flying, component loss, flying waste, and environmental hygiene that occur in the feeding project.



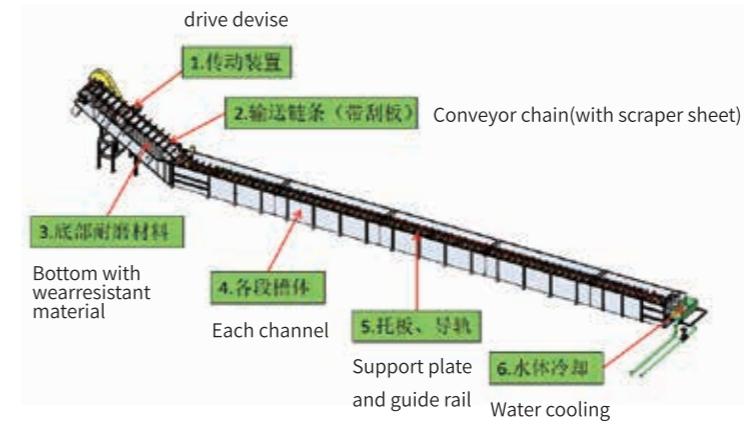


主要技术参数 Main Technical Data

- 加料能力: 450T/D
 - 环境温度: 50-60°C
 - 冷却类型: 软水冷却
 - 原料类型: 混合料:
 - ①主要成分: 碎玻璃、石英石、纯碱、方解石、长石;
 - ②原料含水量: 4-6%, 整体较干燥, 不粘稠。
- Batch charger capacity: 450T/D
 - Environmental temperature: 50-60°C
 - Cooling type: soft water cooling
 - Raw material type: Mixture:
 1. Main ingredients: broken glass, quartz stone, soda ash, calcite, feldspar;
 2. Raw material moisture content: 4-6%, overall dry and not sticky.



Scraper 刮板式捞料机



针对客户现场设备可长可短, 也可 2 台捞料机并排使用 (需配皮带式输送机)
The length would be designed based on the customer's requirement, and it can be used side by side with two scraper(Belt conveyor in need)



捞料机出口 Cullet exit



皮带输送机(选配) Belt conveyor



捞料机出口 Cullet exit



捞料机链条刮板 Scraper sheet



捞料机全貌 Full view



捞料机全貌 Full view

主要技术参数 Main Technical Data

- 设备名称: 刮板式捞料机
 - 设备型号: GB1200
 - 出料量: 400T/D
 - 设备主要组成部分: 机架、驱动系统、链条刮板、铸石耐磨板、电控系统
 - 生产速度: 0.04m/s (可调可控)
 - 安全拉绳开关设备运行监控: 过载报警、停转报警
 - 水温控制: 自动控制
 - 紧固件: 所配螺栓、螺母等紧固件材质为 304 不锈钢
 - 底部耐磨安装: 槽体底部全部铺设铸石板, 两侧使用耐磨钢板提高设备使用寿命。
 - 设备外形尺寸: L=28000mm; W=1200 mm; H=1100mm
- Scraper data:
 - Scraper type: GB1200
 - Capacity: 400T/D
 - Main components: rack, drive system, chain scraper, cast stone wear-resistant plate,
 - Production speed: 0.04m/s (adjustable and controllable)
 - Safety rope switch equipment operation monitoring: overload alarm, shutdown alarm
 - Water temperature control: automatic control
 - Fasteners: The material of the bolts, nuts, and other fasteners used is 304 stainless steel
 - Bottom wear-resistant installation: Cast stone slabs are laid at the bottom of the tank, and wear-resistant steel plates are used on both sides to improve the service life of the equipment.
 - Equipment dimensions: L=28000mm; W=1200mm; H=1100mm

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