



High-speed Linear
PET Blow Molding System
高速PET吹瓶系统

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Refreshing Your Products



SMARGON BLOW-MOLDING SYSTEM

Delivers Quality PET Packages at
High Speeds
高速高品质PET吹瓶解决方案

Based on Smargon's plenty expertise and know-now in PET bottle blowing, Smargon series automatic stretch blow molding system has been entirely redesigned. Its development has led to new high-speed manufacturing solutions aimed at productivity and package quality for PET bottles up to 12500 bph per unit. In collaboration with the customer and our international partners, we develop solutions for: WATER, CSD, FRUIT JUICE, VITAMIN DRINKS, OIL, WINE, FOOD, MEDICINES, CHEMICAL PRODUCTS, DETERGENTS, COSMETICS, OTHERS. Versatility, yield, reduced operating costs: these unavoidable goals force us to innovate.

SMARGON系列全自动吹瓶系统是Smargon公司汇集了最新的高速PET吹瓶工艺推出的新一代拉伸吹瓶设备, 单机产量最高可达12500瓶/小时。通过和客户以及合作伙伴的协作, SMARGON系列机器可以满足以下各领域的吹瓶需求: 水, 碳酸饮料, 果汁, 维他命饮料, 食用油, 食品, 医药, 化工产品, 清洁剂, 化妆品, 等等。Smargon公司不仅让您感受到人性化的业务关系, 而且为您提供一站式的服务界面。选择能真正促进您发展的合作伙伴吧!

Fast, Simple, Reliable 高速, 简洁, 可靠



Smargon creates a simple and extremely versatile technology which is able to provide the customer with the highest performance compared to the linear blow molding machine available on the market while maintaining an excellent container quality.

Smargon公司致力于发展简单且极通用的技术, 向客户提供高性能的直线式PET吹瓶设备。

High Production 高产量

High outputs up to 1250bottle/hour/cavity for water bottle application. The oven, preform transfer and blowing unit all have independent drives, which ensure the dead mechanical cycle time remains the same. Molding actions are operated by a set of cams, mounted on one single shaft for highly consistent synchronization.

针对水瓶运用产量达1250瓶/小时/腔。加热/吹瓶双循环独立运行, 合模, 封口, 底模上下动作完全同步。

Low Energy Consumption 低能耗

Electrical operational system application reduces low-pressure air consumption, guarantees the maximum energy savings. Patent designed pitch changeover system ensure 50.8mm spindles pitch inside heating oven, which reduce 55% of heating tunnels' length comparing with constant pitch machine for significant heat energy saving.

电动系统的运用, 显著减少低压空气消耗。专利设计变中心距系统, 烘箱长度比定中心距系统短55%以上, 节能效果明显。

Quality Bottle 优异吹瓶效果

High efficient clamping, contribute invisible bottle parting line. Machine handles items by the neck only until bottle is blown. Precise longitudinal heating profile and perfect homogeneity of circumferential temperature result in an even material thickness that guarantees superior bottle appearance and makes it possible to reduce bottle weight.

高效合模系统, 保证完美无痕的瓶身合模线。精确的双轴向均匀加热, 确保瓶身厚度均匀, 实现轻量化吹瓶目的。



Easy to work with-LIFE CYCLE SERVICES 服务至上

The relationship between SMARGON and the customer starts with the conception and design of the blowing machine that best fits their needs and finishes at the end of the useful life of the product.

At SMARGON, we do not talk about After-sales Service but LIFE CYCLE Service: we give you our complete know-how right from the first minute! This close cooperation and service is generally available over the entire useful life of our machines. Service not only refers to maintenance and repairs. Smargon service also includes a complete range of products such as training, spare parts, molds, consultation and support from your own SMARGON expert.

在Smargon, 良好的服务起始于和客户的第一分钟接触, 并伴随机器完整的使用寿命周期。我们奉行全方位服务理念, 不拘泥于售后环节, 乐于和您分享经验和建议, 帮助您实现快速生产启动以及承诺的生产效力。

CONSULTATION&DESIGN

01 PRODUCTION CONSULTATION 生产咨询

20-year experience and know-how in PET field ensure us to provide the best consultation to optimize your PET bottle production.
提供最优化吹瓶生产解决方案

02 BOTTLE DESIGN 瓶型设计

We can carry out your conception into really design and share SMARGON gallery with you.
可将您的设想转化为实际设计, 并有众多方案供参考。

03 FACTORY LAYOUT 工厂布局

Factory blueprint service is available and we can provide full set of layout arrangement.
提供工厂布局设计蓝图。

MANUFACTURE

04 MANUFACTURE & QC 制造/品控

Well-constructed manufacturing process and QC system strictly control the whole production flow.
完善的生产和品控系统, 为机器质量提供强有力保障。

05 INFORMATION 信息交流

Timely information update in the whole process, including producing schedule, sample, shipment and document.
及时信息交流, 便于您掌控整个生产进度。



MAINTENANCE & SUPPORT

06 INSTALLATION & COMMISSION 安装调试

SMARGON experts are always ready to provide installation & commission service once the machine arrival.
经验丰富的工程师随时待命, 为您提供安装调试服务。

07 SPARE PARTS 配件供应

It supplies 100% of necessary replacement parts during machine's whole using life.
终身确保机器所需各项可更换配件的供应。

08 MAINTENANCE 维护保养

Preventive maintenance according to official SMARGON procedures and user manual.
提供详细用户手册, 确保机器得到及时有效的维护与保养。

09 TRAINING 培训

Technical training in the installation, use and maintenance of equipment.
完善培训机制, 贯穿调试, 使用及维护全过程。

10 TECHNICAL SUPPORT 技术支持

Technical assistance with 24-hour in case of unforeseen occurrences.
及时迅捷的技术支持服务。

Quality Assurance 品质保证

Most of spare parts on all our blowing system are with international standard, such as SIEMENS, FESTO, Schneider, SEW, PARKER and other world famous brands, which make our machine run stable and be easy for maintenance.



SMEA Series

Fully Electrical Servo-motor Driven
全电式伺服电机驱动

Refreshing Your Products



Up to 12500 bottle/hour/unit
最高产量达12500瓶/小时

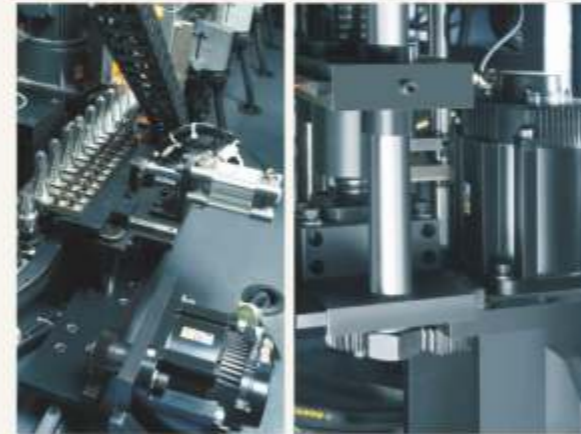
SMEA series is designed for cold-filling bottle production and the output is from 7000BPH to 12500BPH per unit. It adopts fully-electrical servo-motor driven mode, which make it stable, power-saving, friendly-operation and low maintenance and is ideal choice for medium and large enterprise.

SMEA系列吹瓶机用于冷灌装瓶子的生产，单机产量7000瓶/小时至12500瓶/小时。该系列采用全电式伺服电机驱动模式，运行稳定，节能，操作简单，维护低，是大中型企业的理想选择。



1 Preform Feeding 上胚和理胚

Preforms are fed by star-wheel to load onto chain spindles continuously. 采用连续式行星轮入胚系统。

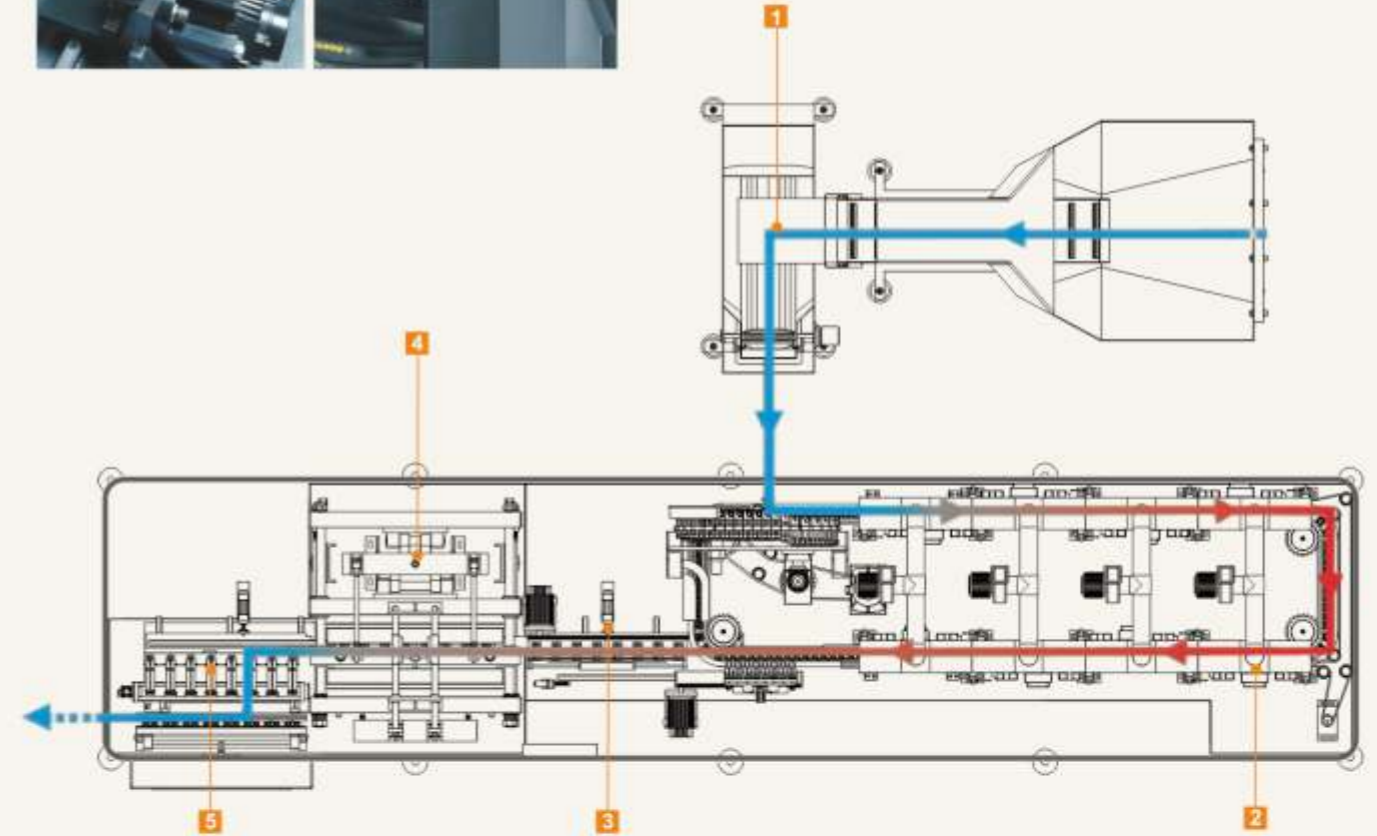


2 Preform Heating 管胚加热

During heating, the preforms are constantly rotated for a perfectly symmetrical distribution of heat. The necks of the preform are protected from oven-heating by means of protection ramp with cold water. 在加热区内，管胚匀速自转，确保均匀加热效果。管胚螺口经冷却水道保护，防止过热变形。

3 Pitch Changeover 中心距变更

After heating, the preforms go into pitch-change by servo motor by slider, the abutting preform's center distance changes from 50.8mm to mold's center distance. 加热后，伺服电机将管胚输送到托盘中心距变更系统，按照模具型腔中心距改变管胚托盘间距。



4 Stretching & Blowing 拉伸和吹瓶

After pitch changeover, the preforms are sent into the mold. The longitudinal stretching of the preform is carried out by a servo motor, then is pre-blow, high-pressure blow and exhaust. 中心距变更后，管胚被送入模具，并依次完成拉伸，预吹，高吹，排气各动作。

5 Bottle Discharging 出瓶

The blown bottles are removed from the molds by servo motor, and be evacuated either in bulk or directly feed to the filling lines via sucking conveyor. 瓶子被伺服电机移出模具，由吸风式输送带送出机器，或直接送往灌装线。



System Advantages

SMEA Series linear blow molding machines incorporate a series of innovative technical solutions, represents the new state of the art for linear blow molding machines in terms of performance and reliability.
SMEA直线式吹瓶系统融汇全新PET吹瓶技术，性能一流，耐用可靠。



Refreshing Your Products

Preform Loading 管胚进料系统

Star-wheel feeder, continuous & fast preforms feeding.
可靠的行星轮连续上胚机构，确保连续且高速的上胚过程。

Preform Heating 管胚加热系统

Chain pitch only 50.8mm inside oven, shorten heating tunnels up to 55%.
管胚托盘间距仅50.8毫米，烘箱缩短55%

Pitch-changeover 中心距变更系统

Unique designed pitch-change system as European style, efficient & energy-saving.
欧洲风格中心距变更系统，高效节能。

Clamping System 合模系统

Servo-driven clamping, only 0.38 seconds for mold-open and 0.38 seconds for mold-close.
伺服电机配合丝杆驱动，开合模动作各仅0.38秒。

Stretching & Blowing 拉伸吹瓶系统

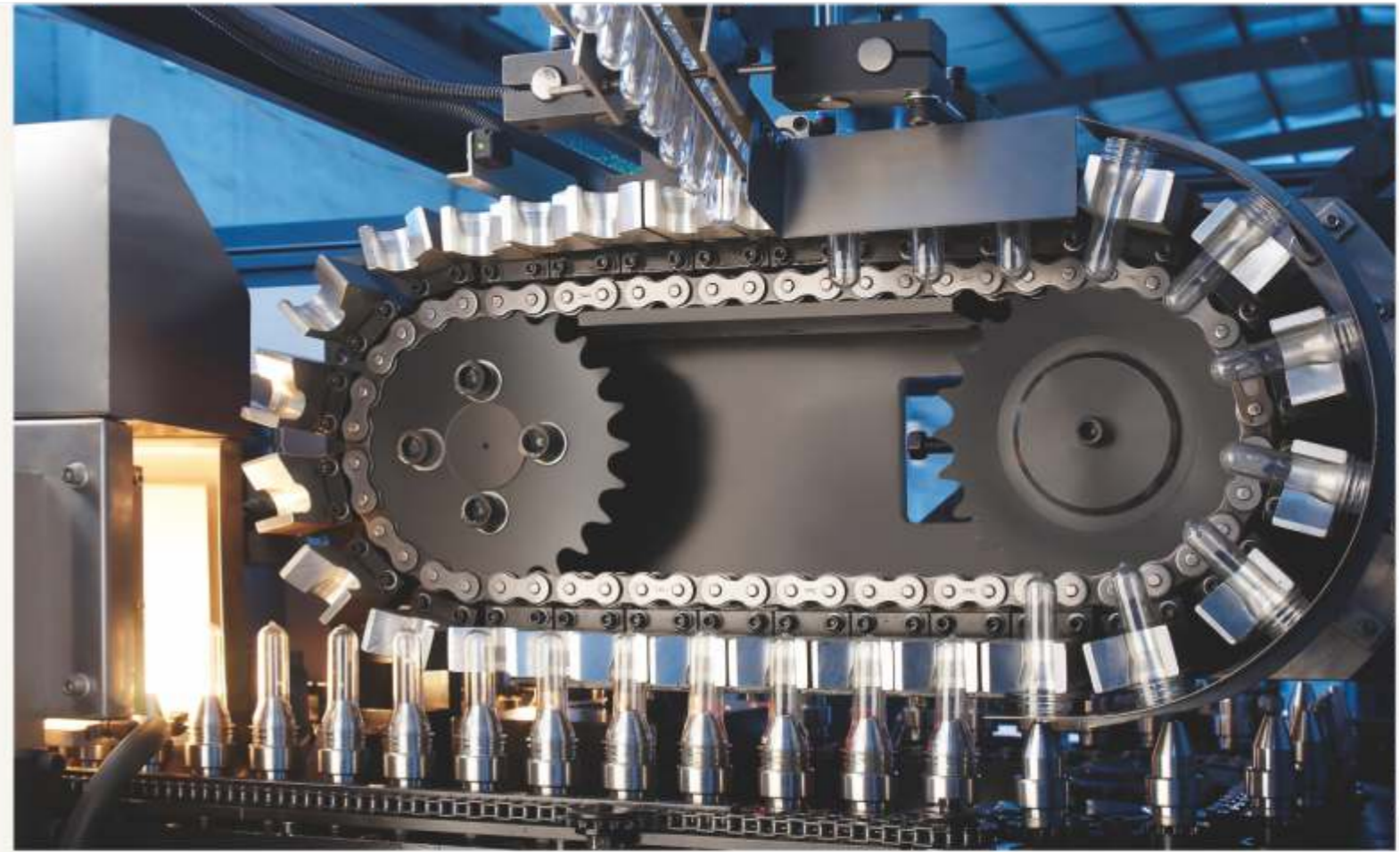
Servo-driven unit for stretch, speed adjustable and high repeatability.
伺服电机驱动拉伸动作，速度可调，重复性高。

Bottle Discharging 出瓶系统

Servo driven and synchronized with clamping and oven movements.
伺服驱动，与开合模和烘箱动作同步。

Control System 控制系统

SIEMENS industrial PLC with software developed by SMARGON.
10.4-inch color touch screen graphical interface.
西门子专业PLC控制系统。
10.4英寸图片显示彩色触摸屏



Technical Data 参数表

			SMEA6-7500	SMEA6-7500L	SMEA8-10000	SMEA8-10000L	SMEA10-12500
Max. Output	最大产量						
For Water Bottles *	针对水瓶 BPH		7500**	7500**	10000**	10000**	12500**
For CSD Bottles *	针对可乐瓶 BPH		6000**	6000**	8000**	8000**	10000**
Bottle Dimension	容器尺寸						
Outer Dia. (Max.)	最大外径 MM		70	90	70	90	70
Height (Max.)	最大高度 MM		240	320	240	320	240
Volume	容积范围 L		0.05~0.75	0.3~1.5	0.05~0.75	0.3~1.5	0.05~0.75
Blow-molding Station	吹瓶模块						
Mold Cavity Number	模具腔数 Cavity		6	6	8	8	10
Mold Cavity Center Distance	模具型腔中心距 MM		90	114.3	90	114.3	90
Preform Spindles Pitch	管胚托盘中心距 MM		50.8	50.8	50.8	50.8	50.8
Oven	加热烘箱						
No. of Heating Chamber	加热区数量 unit		6	10	8	14	10
No. of Heating Layer	加热灯管层数 layer		6	8	6	8	6
Electrical System	电力系统						
Voltage (3P+N)	电压/频率 V/Hz		380/50	380/50	380/50	380/50	380/50
Air	空气系统						
Pressure for Operation	操作压力 bar		8~10	8~10	8~10	8~10	8~10
Pressure for Blowing	吹瓶压力 bar		28~35	28~35	28~35	28~35	28~35
Cooling Water	冷却系统						
Pressure	冷却水压力 bar		4~5	4~5	4~5	4~5	4~5
Temperature	冷却水温度 °C		5~15	5~15	5~15	5~15	5~15

* For 0.5L bottle standard round shape. 最大理论产量针对0.5升标准圆形瓶。

** It depends on the preform design, preform thickness, bottle design and quality of PET resin. 实际产量取决于管胚设计，管胚厚度，瓶形设计，以及PET原料的品质。

SMHA Series

High-temperature Hot-filling Application
热灌装吹瓶革新设计

Refreshing Your Products



As know, all non-carbonated drinks containing sugar are sensitive to microbial contamination and therefore require a high temperature sterilization process during filling. Based on the above demands, Smargon Plastic has developed SMHA series, special for hot-filling bottle blowing application in fruit juice, tea, flesh juice and milk.

众所周知，所有含糖的非碳酸饮料对于微生物污染非常敏感，因此灌装时需要高温杀菌。SMHA系列吹瓶机正是针对热灌装瓶的生产所研发，适用于各种果汁，茶饮料，果肉饮料，乳饮料的生产线。



With SMHA series, for 350ml round shape hot-filling bottle with 25g preform (28mm neck finish), you can carry out up to 500 bottle/hour/cavity production rate with rejection below 0.3%, and the final bottle can bear filling temperature up to 95°C.

使用SMHA系列吹瓶机，用25克（28毫米螺口）管胚生产350毫升热灌装瓶，可实现每腔每小时500瓶的生产速度，次品率低于0.3%，灌装温度高达95°C。

Technical Data 参数表

			SMHA1-500	SMHA2-1000	SMHA4-2000	SMHA6-3000	SMHA8-4000
Max. Output	最大产量						
For Round Bottles *	针对圆瓶	BPH	500**	1000**	2000**	3000**	4000**
Bottle Dimension	容器尺寸						
Outer Dia. (Max.)	最大外径	MM	70	70	70	70	70
Height (Max.)	最大高度	MM	240	240	240	240	240
Volume	容积范围	L	0.25~0.75	0.25~0.75	0.25~0.75	0.25~0.75	0.25~0.75
Blow-molding Station	吹瓶模块						
Mold Cavity Number	模具腔数	Cavity	1	2	4	6	8
Mold Cavity Center Distance	模具型腔中心距	MM	90	90	90	90	90
Preform Spindles Pitch	管胚托盘中心距	MM	90	90	50.8	50.8	50.8
Oven	加热烘箱						
No. of Heating Chamber	加热区数量	unit	2	3	4	6	8
No. of Heating Layer	加热灯管层数	layer	6	6	6	6	6
Electrical System	电力系统						
Voltage (3P+N)	电压/频率	V/HZ	380/50	380/50	380/50	380/50	380/50
Air	空气系统						
Pressure for Operation	操作压力	bar	8~10	8~10	8~10	8~10	8~10
Pressure for Blowing	吹瓶压力	bar	35~38	35~38	35~38	35~38	35~38

* For 0.35L bottle standard round shape. 最大理论产量针对0.35升标准圆形瓶。

** It depends on the preform design, preform thickness, bottle design and quality of PET resin. 实际产量取决于管胚设计，管胚厚度，瓶形设计，以及PET原料的品质。



SMPA Series

Entry-level Application for High-speed Automatic Blowing 入门级全自动高速吹瓶运用

For cold-filling bottle production requirement below 5000BPH, SMEA series will be too large. SMPA series is just designed for such purpose with output between 3000BPH to 5000BPH per unit using 4-cavity blow mold, suitable for mineral water, carbonated beverage, various no-gas drinks and edible oil production line.

SMPA系列吹瓶机用于冷灌装瓶子的生产，使用4腔吹瓶模具，单机产量3000瓶/小时至5000瓶/小时，非常适合饮用水，含气及非含气饮料，以及食用油的生产线。

Refreshing Your Products



Optimum Quality Containers 吹瓶效果优良

Throughout the reheating process, water-cooled protection ramps keep necks away from deformation. Progressive pitch rack for heating lamp ensures precision of the longitudinal heating profile. The rotations of preform in front of lamps provide perfect homogeneity of circumferential temperature. These combined features result in an even material thickness that guarantees superior bottle appearance and makes it possible to reduce bottle weight.

独特螺口冷却，确保瓶口不过度受热变形。优良的烘道设计，确保管胚理想的双向加热效果，非常适合轻量化吹瓶的运用。



High Production Rate 高产量

The oven, preform transfer and blowing unit all have independent drives for optimized individual cycles. This unique feature offers the flexibility to adjust blowing time according to the bottle, while the dead mechanical cycle time remains the same. Similarly, preform and bottle transfers are also built on a single transfer table. 加热/吹瓶动作独立且同步进行，吹瓶时间调整空间大，不影响机械干循环。

Easy Operate and Low Maintenance Costs 操作简便，易于维护

The SMPA linear blow molding machines have been designed for extremely easy use and enable very simple mould and configuration changes. 10.4" color touch screen displays a comprehensive range of machine setting and monitoring functions. A simple, clear and open design for each module makes machine operation easy to understand and facilitates setting. They are reliable systems with reduced maintenance time and costs.

10.4英寸彩色触摸屏界面，存储所有有关机器控制，加热，吹塑过程的参数，警报和故障诊断，生产统计数据。简单，易懂，便于操作。有效降低机器的维护时间和成本。

Technical Data 参数表

			SMPA4-5000	SMPA4-4000XL
Max. Output	最大产量			
For Water Bottles *	针对水瓶	BPH	5000**	4000**
For CSD Bottles *	针对可乐瓶	BPH	4000**	3200**
Bottle Dimension	容器尺寸			
Outer Dia. (Max.)	最大外径	MM	70	108
Height (Max.)	最大高度	MM	240	340
Volume	容积范围	L	0.05~0.75	0.3~2.0
Blow-molding Station	吹瓶模块			
Mold Cavity Number	模具腔数	Cavity	4	4
Mold Cavity Center Distance	模具型腔中心距	MM	90	127
Preform Spindles Pitch	管胚托盘中心距	MM	50.8	50.8
Oven	加热烘箱			
No. of Heating Chamber	加热区数量	unit	4	4
No. of Heating Layer	加热灯管层数	layer	6	8
Electrical System	电力系统			
Voltage (3P+N)	电压/频率	V/Hz	380/50	380/50
Air	空气系统			
Pressure for Operation	操作压力	bar	8~10	8~10
Pressure for Blowing	吹瓶压力	bar	28~35	28~35
Cooling Water	冷却系统			
Pressure	冷却水压力	bar	4~5	4~5
Temperature	冷却水温度	°C	5~15	5~15

* For 0.5L bottle standard round shape. 最大理论产量针对0.5升标准圆形瓶。

** It depends on the preform design, preform thickness, bottle design and quality of PET resin. 实际产量取决于管胚设计，管胚厚度，瓶形设计，以及PET原料的品质。

SMLA Series

Extra Large Bottle Application
超大容量瓶运用



SMLA系列吹瓶机专为5升到10升的大容量瓶生产所设计，单机产量1200瓶/小时至2500瓶/小时。

采用专利设计的变中心距系统，管胚在加热烘箱中的间距仅95毫米，相对于其他定中心距机器来说，单瓶能耗至少降低35%。



SMLA series is specially designed for extra large bottle production with volume between 5L to 10L, and the output is from 1200BPH to 2500BPH per unit.

Patent-design pitch changeover system allows the preform holder's pitch to be only 95mm inside the heating oven, which leads to 35% energy saving result at least comparing with other constant-pitch machine.

Technical Data 参数表

			SMLA2-1200	SMLA2-1200L	SMLA4-2500	SMLA4-2500L
Max. Output	最大产量					
For Round Bottles *	针对圆瓶	BPH	1200**	1200**	2500**	2500**
Bottle Dimension	容器尺寸					
Outer Dia. (Max.)	最大外径	mm	170	200	170	200
Height (Max.)	最大高度	mm	350	450	350	450
Volume	容积范围	L	2 - 5	5 - 10	2 - 5	5 - 10
Blow-molding Station	吹瓶模块					
Mold Cavity Number	模具腔数	Cavity	2	2	4	4
Mold Cavity Center Distance	模具型腔中心距	mm	190	230	190	230
Preform Spindles Pitch	管胚托盘中心距	mm	95	95	95	95
Oven	加热烘箱					
No. of Heating Chamber	加热区数量	unit	4	4	6	6
No. of Heating Layer	加热灯管层数	layer	9	10	9	10
Electrical System	电力系统					
Voltage (3P+N)	电压/频率	V/Hz	380/50	380/50	380/50	380/50
Air	空气系统					
Pressure for Operation	操作压力	bar	8~10	8~10	8~10	8~10
Pressure for Blowing	吹瓶压力	bar	28~35	28~35	28~35	28~35
Cooling Water	冷却系统					
Pressure	冷却水压力	bar	4~5	4~5	4~5	4~5
Temperature	冷却水温度	°C	5~15	5~15	5~15	5~15

*For 5L bottle standard round shape. 最大理论产量针对5升标准圆形瓶。

**It depends on the preform design, preform thickness, bottle design and quality of PET resin. 实际产量取决于管胚设计、管胚厚度、瓶形设计，以及PET原料的品质。