THE SOLUTION OF FULLY AUTOMATIC PLASTIC THERMOFORMING

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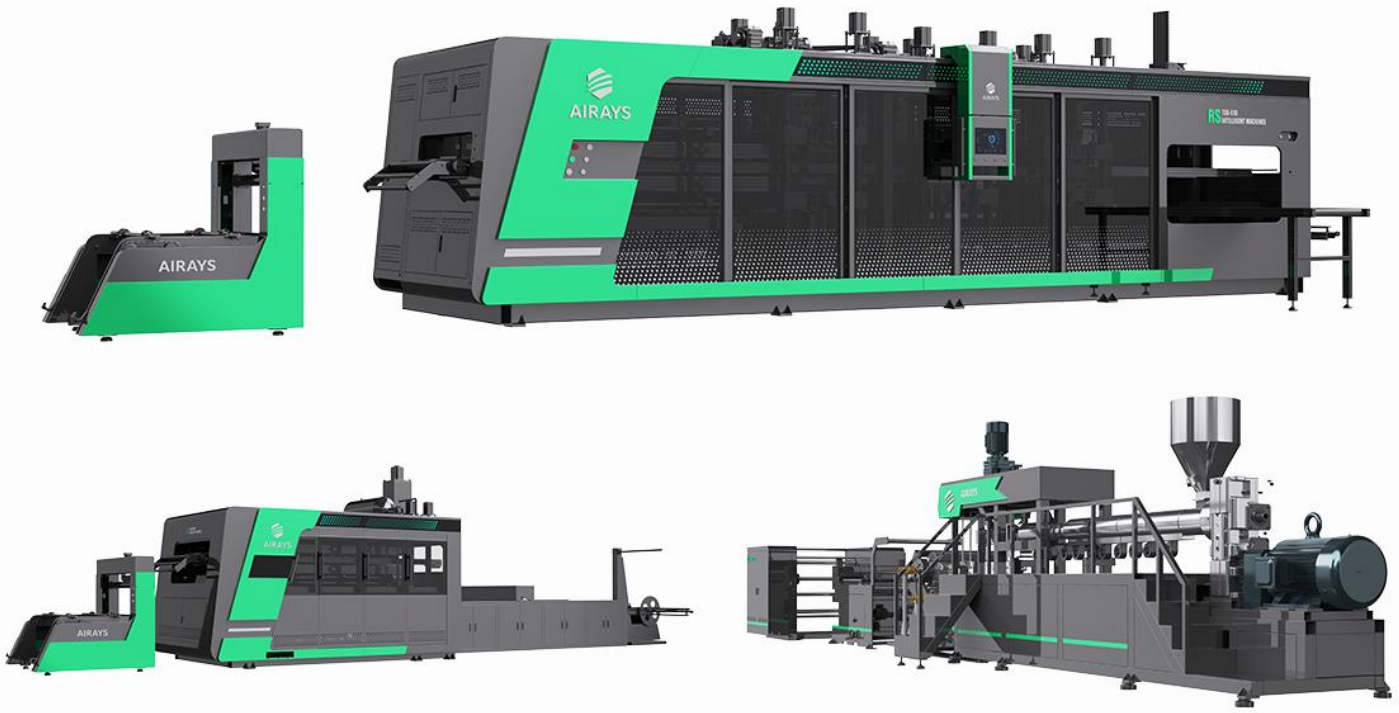

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Shaping the Future with Cutting-edge Innovation

AIRAYS

Company Brief Introduction

Wenzhou Rayshape Machinery Co., Ltd. is a subsidiary of Elemotion Group, located in the beautiful coastal city of Pingyang County, Wenzhou, Zhejiang Province, at No. 19, East Section of Pinghai Avenue, Binhai New Area. It is a manufacturing enterprise that integrates mechanical and software R&D, production, marketing, and after-sales service.

In 2021, Elemotion invested in Wuhu Youhe Automation Technology Co., Ltd., which was officially renamed Wenzhou Rayshape Machinery Co., Ltd. in 2025 and is now wholly owned by Wenzhou Elemotion Holdings.

Wenzhou Rayshape Machinery Co., Ltd. boasts a seasoned R&D team, strong operational and after-sales service capabilities, as well as a solid financial foundation. The company is dedicated to the development and production of high-end, energy-efficient, and highly automated equipment, including positive and negative pressure plastic thermoforming machines, plastic sheet extrusion lines, and plastic roll forming machines.

These machines are compatible with a wide range of materials such as A-PET, R-PET, C-PET, BOPS, HIPS, PP, PLA, and PVC, enabling the production of various plastic finished products.

Wenzhou Rayshape Machinery Co., Ltd. carries forward Elemotion's spirit of diligence and continuous improvement, constantly striving for self-surpassing excellence. Embracing innovation, the company has successively developed high-quality automated equipment and is committed to learning from Elemotion's path toward becoming a leading enterprise in the industry.

AIRAYS

Quotation

No.	Photo	Description Of Goods	Qty.	Unit Price (USD)	Amount (USD)
1		Three-Station Thermoforming Machine Model: RS-650-450-3	1		
Total					

ATTN Pls:

1. FOB NINGBO/SHANGHAI PORT, CHINA;
2. Voltage: 380V/50HZ/3P;
3. The quotation is valid within one month.

Payment term:

4. By T/T. 30% as deposit
5. 70% balance should be paid before shipment

Delivery time:

6. Within 45 working days since the deposit received and the drawing confirmed.

Packing:

7. Standard packaging

Warranty period:

8. 12 months since date of the buyer receive the machine. Within this guarantee, if parts damaged or destroyed not caused by human factors, seller will provide it free of charge, freight will be on buyer's account.

Installation, Adjusting & Commissioning:

9. The supplier must arrange for installation technicians to install and commission the machine in the buyer's country. But the buyer should pay for the charges covering round-trip tickets of engineer, VISA, accommodations, meal, translator and any other charges happened in Buyer's country. Technicians are free of charge within 7 days, and the buyer should pay 150USD per day more than 7 days.

All Servo Motor Multi-Stations Thermoforming Machine

Model： RS-650-450-3　　With Double Moving System

INTRODUCTION

RS-650-450-3 positive and negative pressure multi-station plastic thermoforming machine， uses internationally advanced plastic sheet forming technology. It is a plastic sheet forming equipment with mechanical, pneumatic and electrical integrated design. It can automatically complete all actions such as loading, feeding, heating, forming, punching, cutting, stacking, finished product transportation, and edge material winding.

It is suitable for processing different materials, such as A-PET, R-PET, C-PET, BOPS, HIPS, PP, PLA, PVC and barrier materials, processing high transparency, high stretch, shallow stretch, round, square, upper and lower two-way stretch, flanged and other products, including trays, lids, fruit and vegetable boxes, flower pots, shells, seedling trays and plates, etc.

It can make some products which unable to be made in one station thermoforming machine, like for example: PLA products, plastic lids or containers which has holes, the packing containers (fruit box, egg trays) with body and cover connected etc.

FEATURES AND ADVANTAGES

1. High degree of standardization, complete functions, safe, efficient, energy-saving and hygienic.
2. It integrates mechanical, pneumatic and electrical integration, and is controlled by microcomputer and programmable controller (PLC).
3. Easy-to-operate human-machine interface, and has the function of remote connection.

4. Electric lifting, double-station large-diameter unwinding, allowing a single person to load coils weighing up to 600KG.

5. Servo feeding, stepless adjustment of sheet length, high speed, accuracy and stability.

6. The upper and lower electric heating furnaces are used for four-stage heating and protection to reduce the impact of air convection on temperature, so that the product molding is stable, from 0-400 degrees in just 3 minutes, improving production efficiency. The electric heating furnace can automatically remove the device.

7. A new real-time distributed digital dynamic hot forming temperature control system is used to control the temperature of the tile at a single point, and it has automatic compensation control, with an accuracy of ±1℃. Energy saving of about 15% and extended furnace plate service life.

8. The quick mold change system can conveniently, quickly, accurately and safely change molds, reduce machine downtime, reduce labor waste, and improve production efficiency.

9. The mold opening and closing of the forming, punching and cutting stations are controlled by servo motors, with high precision, low wear, fast speed and low noise. Each station is supported by four columns, combined with a five-point structural connecting rod, which has good stability.

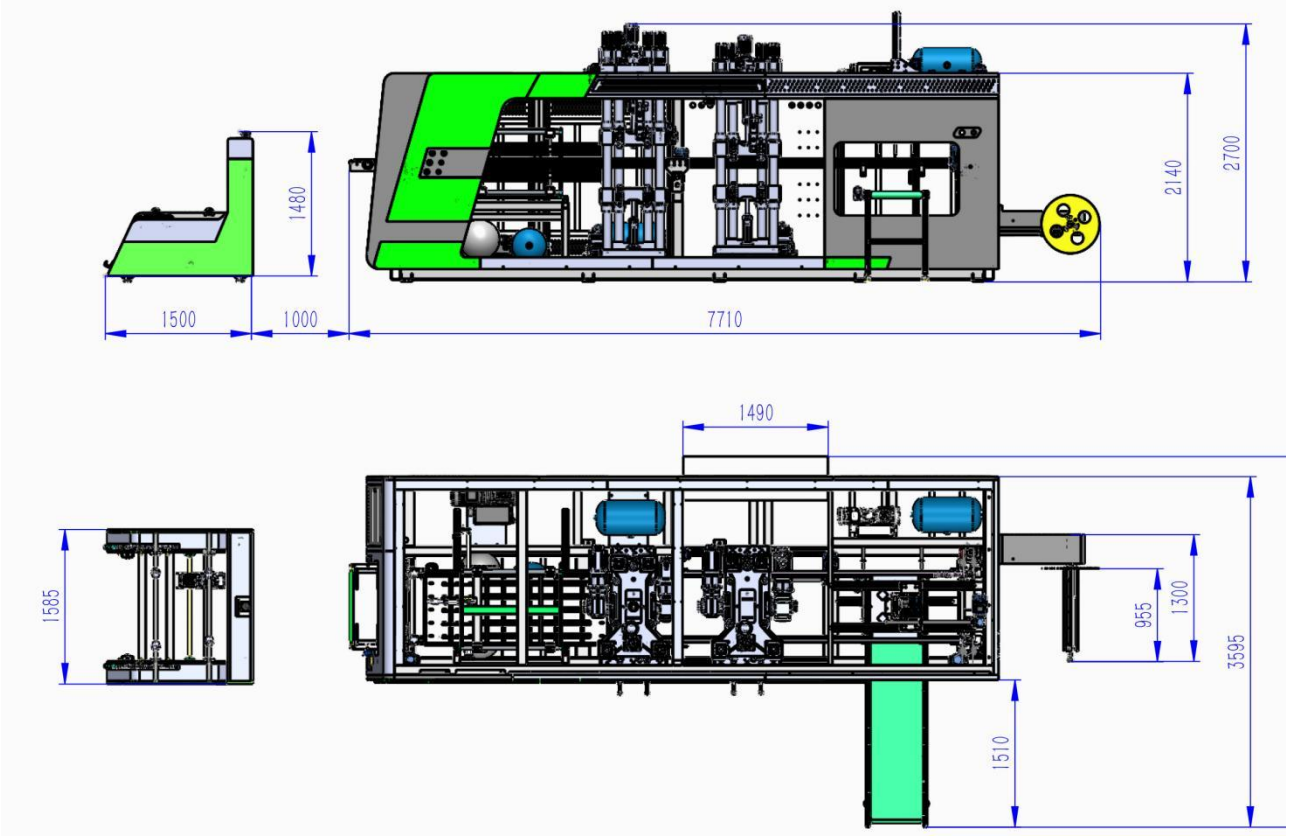
10. The unique vertical stacking concept ensures continuous stacking of products.

11. Automatic counting of finished product output, with production data memory function, can store 90 sets of operating data.

12. Combined with the edge material winding device, the entire production process is clean, without burrs and waste.

13. The design of the electrical cabinet is simple and refreshing, simplifying the machine assembly and wiring installation process.

MACHINE STRUCTURE



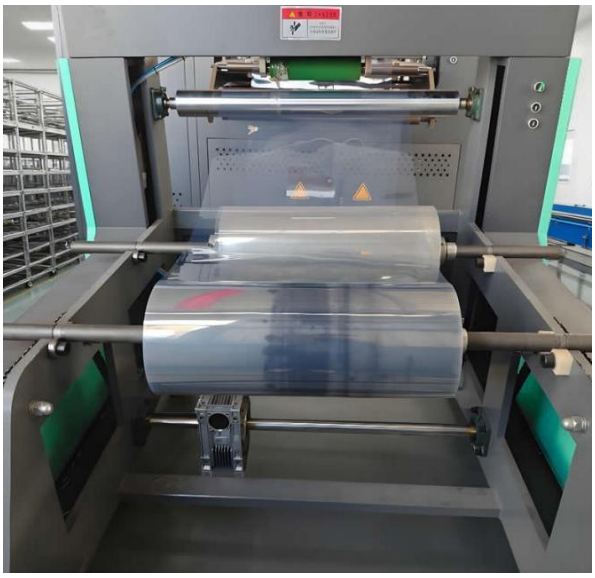
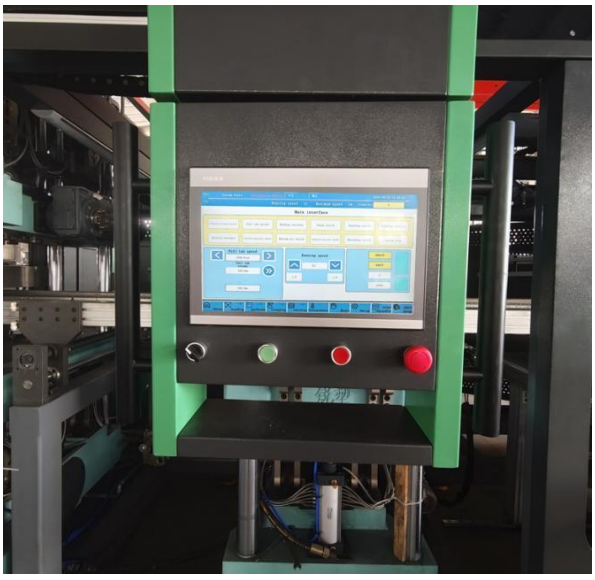
SPECIFICAITON

Sheet Materials	PP/PS/PET/PLA/PE/CPET	Air Consumption	3m³/min 0.5-0.8bar
Sheet Thickness	0.2-1.5mm	Weight	8500kg
Forming Area	650*450mm	Total Installed Power	116Kw
Width Of Sheet	370-700mm	Heating Power	90kw
Upper Forming Depth	100mm	Feeding Motor	3kw
Bottom Forming Depth	130mm	Control Forming Plug Motor Power	3kw
Max Speed	60moulds/min	Stacking Motor	1.8kw
The Longest Knife	8m	Winding Waste Of Edge Sheet Motor Power	0.4kw
Dimension	10210*2300*2700mm	Forming Motor	4.4kw*2
Forming clamping force	600kn	Cutting Motor	4.4kw*2
Punching clamping force	600kn		

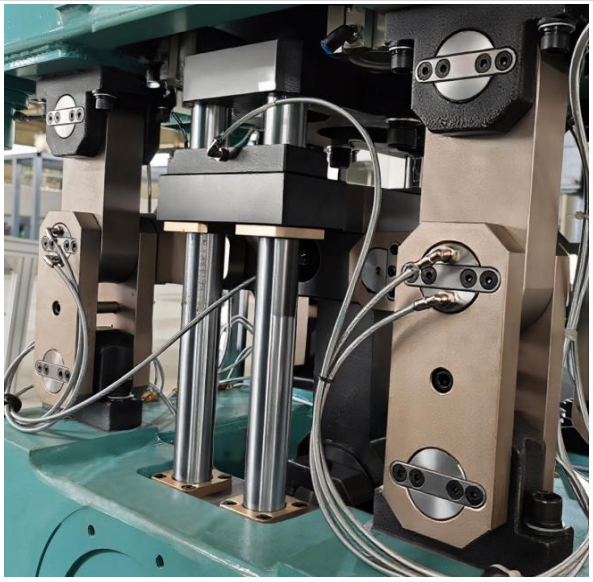
CONFIGURATION LIST

Motor Reducer	Guangdong	Temperature Module	Taiwan Delta
Molding Solenoid valve	Japan SMC	Heating Brick	Jiangsu Tianbao
Solenoid Valve	Japan SMC	Contactor	America Eaton
Cylinder	Taiwan AirTac	Low Voltage Apparatus	America Eaton
Servo Motor	China Inovance	Other Electrical Appliances	Germany Phoenix

ESSENTIAL COMPONENT

	**Loading sheet part:** Load automatically, lower human resource cost. Proximity switch clever control, getting the rid of falling down of the sheet by conveying too fast. Double stations, big diameter, reduce the frequency of changing sheet coil, improve the the production efficiency. Max undertake roll of sheet Weight:600kg, Diameter 800mm.
	Feeding sheet part: Automatic feeding reduces human resource costs. Actively transport the sheet and reduce the load on the conveying servo motor. Cleverly control the proximity switch to prevent the sheet from falling too quickly during transportation.
	**Human-machine interface:** Controlled by microcomputer and programmable controller (PLC), all action programs can be operated through the human-machine interface, simple and convenient, 15-inch touch screen.

	Heater: 1. Vacuum insulation cotton is installed in the heater, which has a fast reaction speed, short processing time and energy saving. 2. The furnace body is divided into two layers, the layout of the heating tiles is optimized, so that the plate is heated evenly.
	Molding station: 1. Mold changing auxiliary mechanism, using sliding guide rails and support rods to achieve fast mold change, saving time and effort. 2. Adopting high-power servo motor drive, high precision, high efficiency and low noise.
	Molding mold: The working principle is a combination of positive and negative pressure, and some nylon plugs are used to assist stretching in the mold to make it have stronger molding ability. There is cooling water in the mold cavity to speed up the cooling speed and make demolding easier.

	Guide head structure： The workstation is supported by four columns (45# steel, hard chrome plated). The integrated mold table (QT-600 steel) is made by a high-precision CNC milling machine. Therefore, it is wear-resistant, stable, and accurate, which prolongs the service life of the equipment.
	**A five-point-connecting-rod structure:** This structure design provides more stable operation and faster speed.
	Mold change structure: The punching hole station has the same mold changing structure as the cutting station.Greatly reduce mold change time and labor costs, improve production efficiency and safety factor, and provide convenience for your diversified product chain.

	Servo motor: The station mold closing, forming auxiliary stretching, and pull-tab parts are all driven by servo motors, which have fast speed, low noise, high precision, and high efficiency.
	Servo-controlled conveyor belt： Set conveyor belt parameters directly on the operation screen. Freely adjust and control conveying length and speed.
	Rewinding waste of edge sheet: Our multi-station thermoformers feature a winding unit with torque motor to efficiently collect the offcuts and wind them into a roll with one side retractable, which can be conveniently removed at the end of production. This advanced waste management system improves operating efficiency and cleanliness, making multi-station thermoformers ideal for high-quality and sustainable production.

PRODUCTS RANGE

AUXILIARY EQUIPMENT：

PHOTO	SPECIFICAITON
	Name： Air Compressor
	Motor Power： 22kw
	Capacity： 3.8m^3 / 0.8/mpa
	Dimension： 1200mm*880mm*1550mm
	Weight:： 600kg
	Air tank： 1000L
With a unique coating design, it features high strength, sturdiness and durability, a long service life,low energy consumption, and low noise.High-efficiency oil/gas separation design with high efficiency. There is also a good shock absorption design, enabling smooth and silent operation. It adopts cyclone air intake, with a filtration precision of 99.9%, and still ensures reliability even in harsh environments	
	Name： Chiller 5P
	Cooling capacity： 14.6kw/50hz 12600 Kcal/h/50Hz
	Compressor power： 3.75kw
	Cooling water flow: 5m^3 /h
	Pipe Diameter： DN25
	Water pump power： 0.75kw
	Weight： 190kg
	Dimension: 1200mm*630mm*1230mm
Chiller is a kind of cooling water equipment that can provide constant temperature, constant flow and constant pressure.It is mainly used for cooling and process cooling of precision instruments and industrial equipment.Chiller is mainly used for cooling and process cooling of precision instruments and industrial equipment.	
	Name： Online crusher
	Blade material： DC53
	Feed port size： 800mm
	Crushing motor： 11KW
	Fan motor： 4KW
	Traction motor： 0.75KW
	Traction system： 1000W servo motor
	Dimension： 1200mm*1700mm*1800mm
It is used for grinding the skeleton of sheet to flakes,then transporting by the blower through pipe to extrusion hopper,ensure continuously production or can be customized according customer different requirements.	