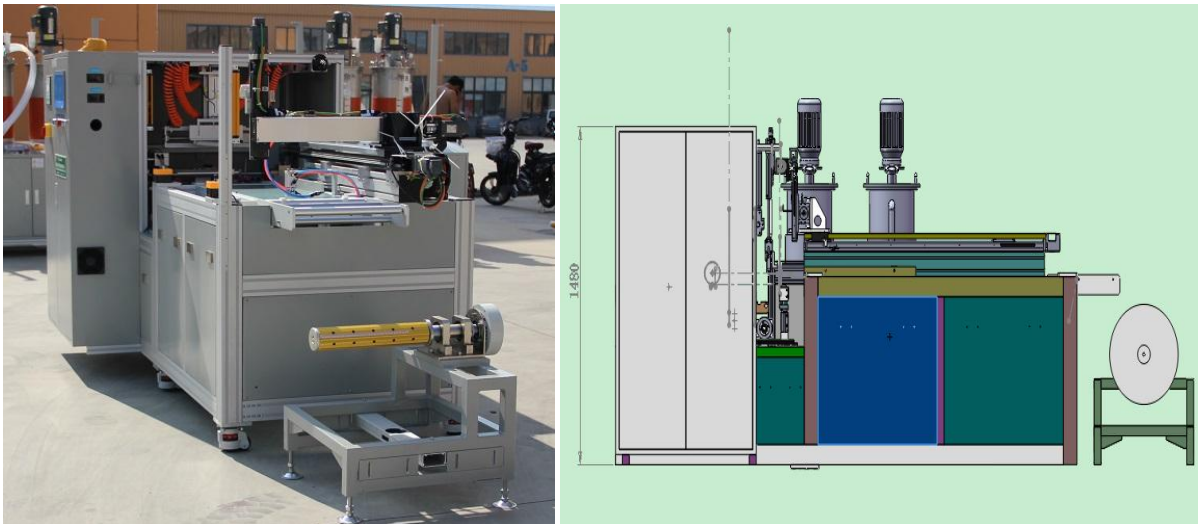


Brief introduction for domestic RO machine of water treatment planning

1. RO membrane element automatic rolling machine



1). Main Technical Parameters of rolling machine:

Scope of application	Suitable for most domestic membrane models currently on the market (adjustable) Included model: 1812 (2-layer membrane) ~ 3013 (6-layer membrane) Maximum roll diameter 100mm
Frame	European standard industrial heavy duty aluminum profile
Operation	Single operation (35s-45s/pc, calculated with model 1812 model 2-layer membrane) suitable for manual proficiency
Delivery Gluing	Automatic glue application by robot (to ensure uniform glue line and adjustable width)
Power	AC 220V / 5KW
Air source pressure	0.4 ~ 0.7 Mpa

2).Main Technical Parameters of dispenser :

Mixing ratios and requirements	Stable proportions, accurate dosing and adequate mixing
Radio Range	100:100 (Weight ratio) Can be customized according to requirements
Delivery Range	3.5g-17.6g (Take Fuller's glue as an example)
Delivery Density	±2%
Mixing Method	Static mixing

3). Main configuration of the roll-making system

Main Installations	Installations Content	QTY	Note
Feeding center tube part	Fixed Cone System	1	AirTac cylinder custom machined components
	Pneumatic tooling heads	1	Precision Bearings Special Customized Parts Material SUS304
Rolling System	Servo Motor	1	Germany Siemens Servo Motor 400W
	Reduction gear	1	Domestic
	Transfer Part	1	Domestic
Tape Winding System	Transfer Part	1	Shangyin Ball Screw Customized machined components
	Reduction gear	1	Domestic
	Servo Motor Driven	1	Germany Siemens Servo Motor 400W
	Tape cutting cylinder	1	AirTac cylinder custom machined components
MEM, Spacer Transfer Part		1	AirTac cylinder Germany Siemens Servo Motor
Ultrasonic Welding		1	Domestic

Spacer installation tension Axis		1	Easy to disassemble when installing the spacer
Tension controller		1	The tension value can be displayed directly
Basic configuration Part	Wheel and foot movable Fixed rack table	1	Industrial heavy duty APS aluminium profiles, Customized
	Device Basic configuration system	1	Taiwan HIWIN lead rails, custom machined components
	Electric control cabinet electrical control Part	1	Germany Siemens PLC, Siemens touch screen (10") Omron, Schneider, LG and other brand components

4).Main configuration of dispensing machine

1. Main agent barrel

Type	SUS304 Simple pressure barrel
volume	20L 1pc
Feeding method	Vacuum suction
Special configuration	Barrel with minimum limited sensing Manual stop valve between barrel and pump section

2.Hardening agent barrel

Type	SUS304 Simple pressure barrel
volume	20L/ 1pc
Feeding method	Vacuum suction
Special configuration	Barrel with minimum limited sensing Manual stop valve between barrel and pump section

3. Main metering pump

Type	Volume measurement method	Metering pump diameter	Φ15
Materials for metering pump chambers	SUS304Nitriding treatments	Piston material	SUS304Nitriding treatments
Pump section check valve	3T SUS+PTFE+EPDM		
Remark	Check valves and metering pumps are customized		

4. Hardener metering pumps section

Type	Volume measurement method	Metering pump diameter	Φ15
Materials for metering pump chambers	SUS304Nitriding treatments	Piston material	SUS304Nitriding treatments
Pump section check valve	3T SUS+PTFE+EPDM		
Remark	Check valves and metering pumps are customized		

5. Drive Source

Drive method	Siemens Servo motor drive
Remark	Power AC220V Air source (0.5Mpa~0.7Mpa)

6. Mixing Section

Static mixing	Method	Double liquid valve Static mixing
	Specification	MS08-24 Switzerland MIXPAC

7. Pipeline - Piping part

Pump OUT pipe	Main agent	Category	34PW (Imported from Japan, seamless anti-breathable crystals)
		Size·Length	1/4 lengths to be made

		Remark	
	Hardening agent	Category	34PW (Imported from Japan, seamless anti-breathable crystals)
		Size·Length	1/4 lengths to be made

5). The main performance characteristics of the machine:

1. Realize the whole process for the closed-loop tension control of spacer, ultrasonic welding of the central tube and spacer, automatic transfer membrane, automatic glue line, rolling membrane, tension membrane roll, outer ring tape forming and automatic finished product unloading.
2. The advanced servo drive mode is adopted to cooperate with precision tooling and three-axis manipulator gluing operation, which provides a reliable guarantee for the quality of finished products;
3. The machine is reasonable in design, beautiful in appearance, convenient in installation and durable in use.

It adopts the touch screen and PLC control system of human-machine interface, automatic tension adjustment, closed-loop control, infrared light fence safety protection and other facilities to ensure the safe operation and ease of use of the machine;

1. Motor: Siemens 2. PLC: Siemens 3. Touch screen: Siemens 4. Cylinder: AirTAC SMC 5: Drive screw: Taiwan Shangyin 6: Contactor: Schneider 7: Power and Relay: Omron 8: Switch Contactor: Schneider 9: Proximity Switch sensor switch photoelectric sensor: South Korea Autonics 10: Commercial product: Japan Misumi

2. Automatic domestic membrane sheet cutting and folding machine

1) Introduction of machine:

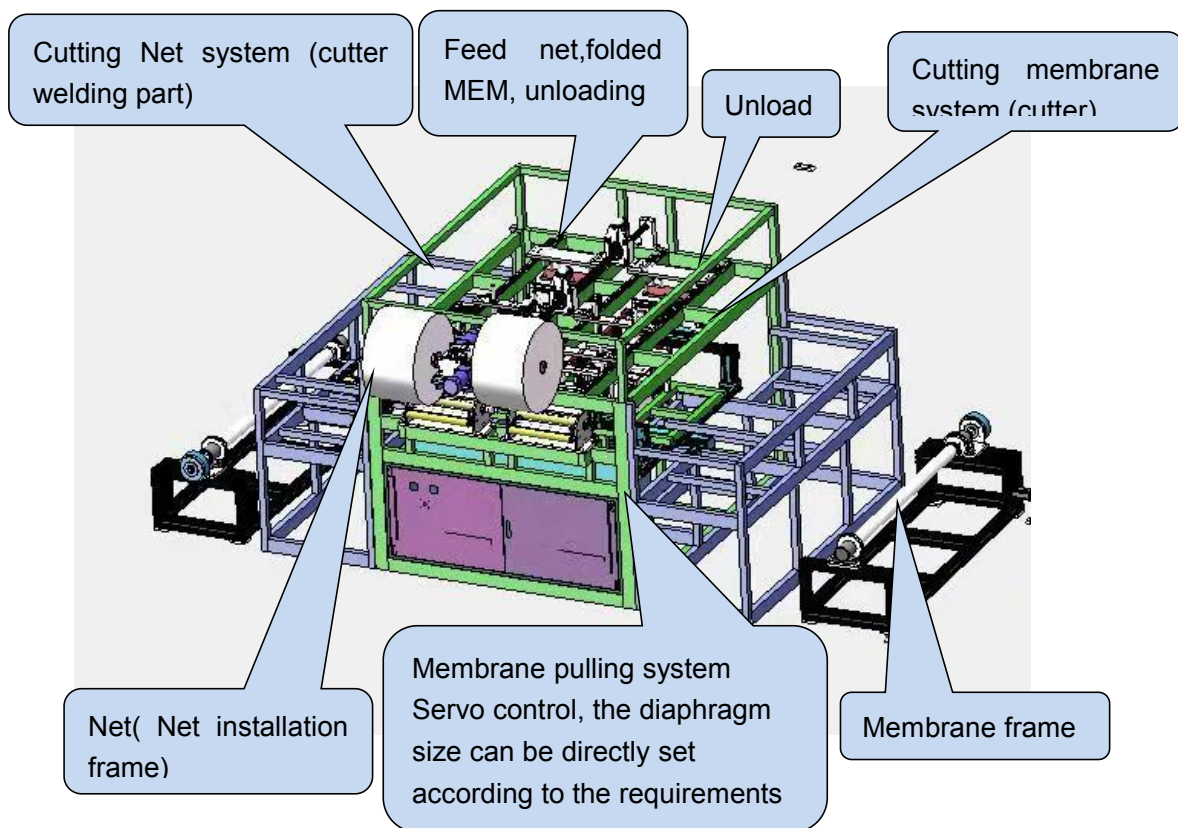
Double-station horizontal high-speed membrane sheet cutting and folding machine, adopts advanced Siemens servo drive mode, precision stepper motor and special related tooling parts. The quality of the finished products provides a reliable guarantee; the touch screen and PLC control system of the Siemens brand man-machine interface can be used to optimize the design of the program to the greatest extent, and can realize remote online monitoring, modification, uploading of programs and other operations, for the follow-up machine. After-sales service and maintenance provide the fastest, most convenient and effective guarantee; machine-related motion interference devices ensure the safe and stable operation of the machine through program interlock protection and other settings; the whole machine is reasonably designed, beautiful, and easy to install. Useful and durable.

The machine can meet the cutting and folding operations of products of various sizes and specifications, covering the width of the membrane within 1060-1020; the high-speed machine membrane can be compatible with the needs of different widths within the range of 250~330mm.

2) Main configuration list

No.	Machine section Name	QTY	Notes
1	Auto cutting membrane and membrane transfer section	2	Servo motor, Pneumatic components
2	Auto cutting net and folding membrane section	2	Servo motor, Pneumatic components
3	Welding for membrane and unloading	2	Servo motor, Pneumatic components, Ultrasonic welding
4	Electrical control system	1	Famous brand

3) The appearance of the machine is shown in the figure below: (subject to the actual specific design, for reference only)



It includes a rotating arm, a hinge shaft, a cylinder, an air expansion shaft and a bearing. The rotating arm is connected with the hinge shaft, the bottom of the pneumatic expansion shaft is connected with the bearing, and the cylinder is arranged at the bottom of the telescopic device. It can well improve the running accuracy of the air-expanded shaft, reduce the degree of shaft rotational vibration, and is easy to install.

4) Parameters of rolling machine

Range of application	Suitable for most domestic membrane models currently on the market (adjustable) 250mm-330mm
Frame	European standard industrial heavy duty aluminum profile
Range of membrane width	1060mm-1200mm
Operation	Automatic operation Manual duty

Production Efficiency	6S /leaves
Power	AC 220V / ≤ 3 KW
Air source pressure	0.4 ~ 0.7 Mpa

5) Main configuration list

Main Installations	Installations Content	QTY	Note
Auto cutting and pulling membrane system	Pulling MEM section	2	SMC AirTAC cylinder Custom machined parts Germany Siemens servo motors
	Cutting MEM section	2	SMC AirTAC cylinder Custom machined parts
Membrane feeding system	Transfer section	2	Custom machined parts, rollers, German Siemens servo motors SMC cylinders, etc.
Auto cutting net system	Pulling net section	2	German Siemens servo motors SMC cylinders, etc.
	Cutting net section	2	AirTAC SMC cylinder Brand cutters
Folding membrane system	Folding membrane section	2	German Siemens servo motors ball screws AirTAC SMC cylinders
	Feeding net section	2	German Siemens servo motors AirTAC SMC cylinders
	Unloading section	2	German Siemens servo motors AirTAC SMC cylinders
Control part	Electrification control	1	Germany Siemens PLC, Siemens touch screen, Omron, Schneider, LG and other brand electrical components

6) The performance advantages of automatic membrane sheet cutting and folding machine

1. Strong product compatibility

The machine is fully compatible with the production of most types of machine products in the current domestic machine market, such as 1812-3013 and other types of membrane with different widths, and the adjustment is fast and convenient.

2. high degree of automation

The machine realizes automatic membrane cutting, automatic net cutting, automatic membrane folding and welding process, and it only takes 12 seconds to realize the whole process of folding membrane.

3. High qualified rate of finished products

The machine adopts a variety of combined tooling to ensure that there is no deviation or waste during the membrane cutting and folding process, thereby comprehensively improving the qualified rate of finished products, saving labor, and greatly improving production efficiency.

4. Good safety and reliability

The key parts of the machine adopt safety measures such as safety fence, mechanical limit, sensor monitoring, interlock control, etc. to ensure the smooth progress of the machine operation and debugging process, minimize the risk of uncertain factors such as mistake operation, and avoid unnecessary injury and damage.

5. Significant cost savings

Compared with manual membrane cutting, the machine efficiency has been greatly improved, and at least 4-5 people have been saved. Avoid the loss caused by the loss of employees. Compared with manual membrane cutting, the labor intensity of employees is greatly reduced. Employees engaged in membrane cutting work only need to be on duty, which reduces an important cause of employee loss.

7) Appearance size of machine:



Machine size: 2300mm×5500mm×1860mm

1. Motor: Siemens
2. PLC: Siemens
3. Touch screen: Siemens
4. Cylinder: AirTAC SMC
5. Drive screw: Taiwan Shangyin
6. Contactor: Schneider
7. Power and Relay: Omron
8. Switch Contactor: Schneider
9. Proximity Switch sensor photoelectric sensor: South Korea Autonics
10. Commercial product: Japan Misumi

3. Automatic RO Membrane Element Trimming Machine



1) Main Parameter

Range of application	Suitable for most domestic membrane models currently on the market (adjustable) Included model: 1812 (2-layer membrane) ~ 3013 (7-layer membrane)
Frame materials	European standard industrial heavy duty aluminum profile
Operation	One Operator
Power	AC 220V / 1KW
Production Efficiency	2pc-3pc/min 12 hours can produce 1500pcs-2200pcs

2) Main configuration

Main Installations	Installations Content	QTY	Note
Automatic trimming	Membrane drive system	1	Custom machined parts, Japan Sankyo Servo Motor 750W
Broadcasting and unloading system	Tighten section	1	AirTAC cylinder Custom machined parts
	Trimming and unloading system	1	AirTAC cylinder Custom machined parts
Machine Frame	Aluminum	1	Belgium APS aluminium heavy-duty profiles, Custom machined parts
Control section	Machine electrification control	1	Siemens PLC、Siemens touch screen, Omron、Schneider、LG brand components

3) Performance advantages of machine :

1) The membrane element automatic trimming machine realizes the whole-process integrated operation of automatic cutting and trimming of membrane elements, automatic broadcasting, forming and automatic finished product unloading.

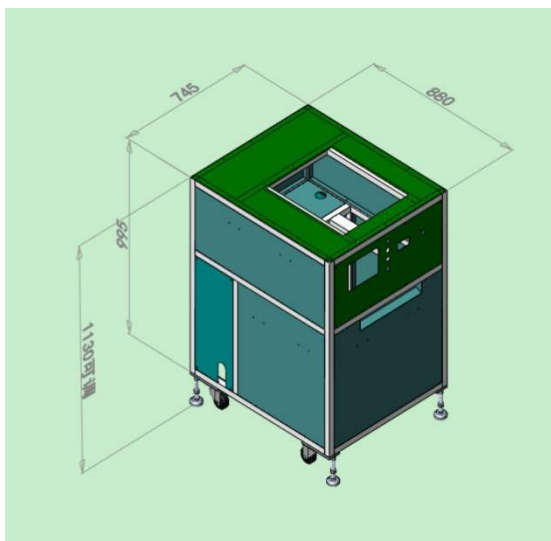
2) The servo drive mode is adopted to cooperate with the precision tool operation, which provides a reliable guarantee for the quality of the finished product

3) The human-machine interface touch screen, PLC control system, foot switch control and other facilities are used to ensure the safe operation and ease of use of the machine; the whole machine is reasonably designed, beautiful, easy to install, and durable.

4) The machine is almost fully compatible with the production of most types of membrane products in the current domestic membrane market, such as 1810, 1812, 2012, 2812, 3013 and other types of membrane products with different membrane layers and different widths. It is fast and convenient, and parameters can be adjusted.

1. Motor: Siemens 2. PLC: Siemens 3. Touch screen: Siemens 4. Cylinder: AirTAC SMC 5: Drive screw: Taiwan Shangyin 6: Contactor: Schneider 7: Power and Relay: Omron 8: Switch Contactor: Schneider 9: Proximity Switch sensor switch photoelectric sensor: South Korea Autonics 10: Commercial product: Japan Misumi

4. Glue Separate Paper Winding Machine



(1) Parameters

Machine name	Glue Separate Paper Winding Machine
Size (L*W*H)	800×700×1150 (mm) (Subject to the final design update)
Model	LS-ZGZCR-T
Weight	Almost 100KG
Power	220V/50Hz, 1KW
Air pressure	0.5-0.7MPa Dry, clean and stable compressed air
Control method	Taida PLC+Taida Touch Screen
Stick tape method	Automatic
Processing time	3second
Loading method	Automatic
Unloading method	Automatic
Range of suitable center tube	10'' / 12'' / 13''

(2) Main configuration

Main Installations	Installations Content	QTY	Note
Center tube transfer system	Transfer rotation section	1	custom machined components、lead rails、AirTAC cylinder
Install tape	Install tape section	1	Xinjie Stepper motor AirTAC cylinder
Control section	Machine electrification control	1	Taida PLC、Taida touch screen, Omron、Schneider、LG brand components

(3) Main features of the Machine

1. Automatic adhesive tape placement at both ends of the center tube.
2. Winding motor is servo motor, fast speed and high working efficiency.
3. One machine can meet the capacity requirement of 15 membrane rolling machines.

5. Automatic vacuum Testing Machine



1) Main configuration of machine

No.	Part Name	QTY	Notes
1	Vacuum test part	1	Vacuum pumps , Solenoid valves
2	Display panels	1	Touch screen Digital pressure display
3		1	Indicated light
4	System electrification control	1	Famous brand

2) Parameters

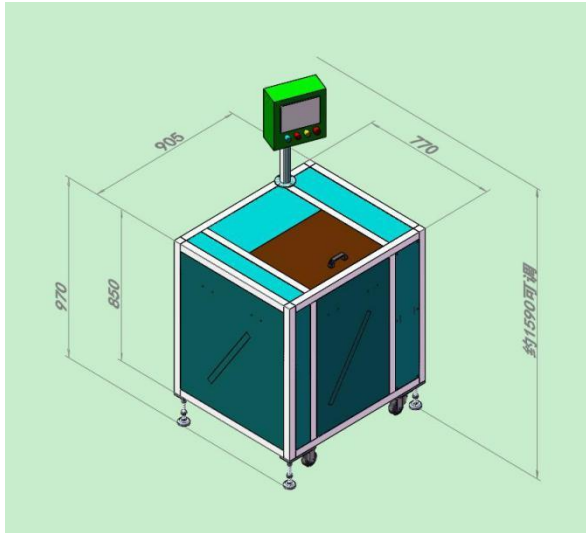
Machine Name	Vacuum Test Machine
Size	Length×width×height=460×460×591 (mm) 。
Model	FSQ-01
Weight	Almost 150KG
Operating voltage, power	220V/50Hz,1Kw
Control method	Small PLC Touch Screen
Detection method	Four group Detection
Range of suitable element	1810~3013

3) Main performance characteristics of the machine:

1. Manual loading and unloading, four head setting, almost 5 seconds/pc.
2. One machine is expected to meet the capacity requirements of 6 set membrane rolling machine.

6. Brine Seal Tape Winding Machine

Machine dimensions:(CAD drawing)



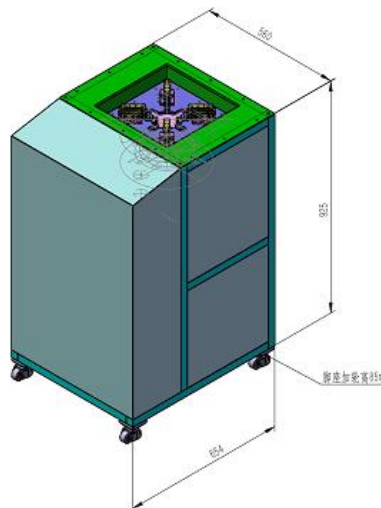
1) Main functions, production efficiency, power, degree of automation

Scope of application	Suitable for most domestic membrane models currently on the market (adjustable) Included model: 1812 (2-layer membrane) ~ 3013 (7-layer membrane) Maximum roll diameter 100mm
Operation	Manual loading and unloading, automatic white tape wrapping
Power	AC 220V /1KW (Instantaneous maximum power)
Air source pressure	0.4 ~ 0.7 Mpa
Production Efficiency	Single operation (10s-15s/pc 12 hours capacity 3000pcs-4000pcs,suitable operator' experience

1. Motor: Siemens 2. PLC: Siemens 3. Touch screen: Siemens 4. Cylinder: AirTAC SMC 5: Drive screw: Taiwan Shangyin 6: Contactor: Schneider 7: Power and Relay: Omron 8: Switch Contactor: Schneider 9: Proximity Switch sensor photoelectric sensor: South Korea Autonics 10: Commercial product: Japan Misumi

7.Element Brine Seal Assembly Machine (Servo Drive)

Machine dimensions:(CAD drawing)



1) Main functions, production efficiency, power, degree of automation

Scope of application	Suitable for most domestic membrane models currently on the market (adjustable) Included model: 1812 (2-layer membrane) ~ 3013 (7-layer membrane) Maximum roll diameter 75mm
Operation	Manual loading and unloading, automatic assemble brine seal
Power	AC 220V /1KW (Instantaneous maximum power)
Air source pressure	0.4 ~ 0.7 Mpa
Production Efficiency	Single operation (5s-8s/pc 12 hours capacity 6000pcs-8000pcs,suitable operator' experience

1. Motor: Siemens 2. PLC: Siemens 3. Touch screen: Siemens 4. Cylinder: AirTAC SMC 5: Drive screw: Taiwan Shangyin 6: Contactor: Schneider 7: Power and Relay: Omron 8: Switch Contactor: Schneider 9: Proximity Switch sensor switch photoelectric sensor: South Korea Autonics 10: Commercial product: Japan Misumi