



Nozzle Type Vacuum & Gas Flushing Packaging Machine

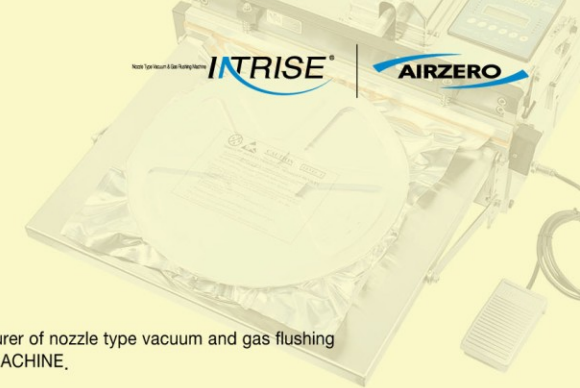


Nozzle Type Vacuum & Gas Flushing Machine **INTRISE**[®]



“Meet reliable INTRISE, and you could see your future”

INTRISE responds rapidly to consumers' changing needs with precise and systematic design, using drawing systems of 3D computer graphics.



Greeting

INTRISE CO., LTD is the leading exporter and manufacturer of nozzle type vacuum and gas flushing packaging machine, AIRZERO VACUUM PACKAGING MACHINE.

AIRZERO VACUUM PACKAGING MACHINE is a new concept of packaging machine with many merits, compared to chamber type packaging machine, AIRZERO VACUUM PACKAGING MACHINE suck air directly from the inside of packing envelope by using a nozzle stroke. So, the work is completed very quickly.

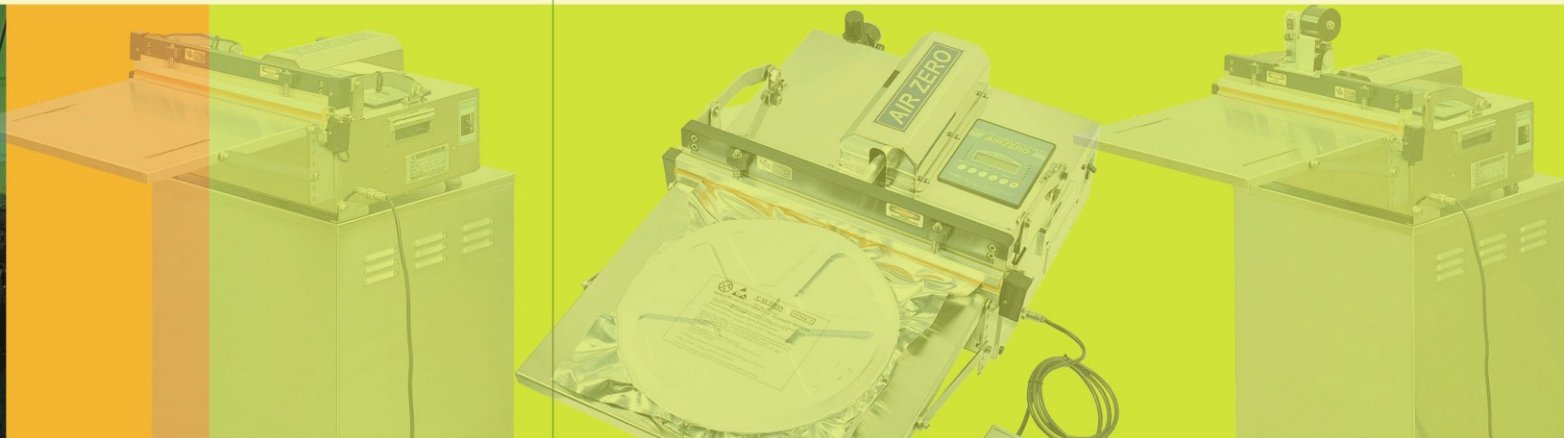
In addition to that, with the digital control box and vacuum sensor, AIRZERO VACUUM PACKAGING MACHINE has more special merits such as Packing process control both by vacuum degree and time, Separate control of 1st and 2nd vacuum degree, LCD / LED Indicator showing the operation and condition of machine, etc. So, AIRZERO VACUUM PACKAGING MACHINE 's excellent features overwhelm other company' s packaging machinery.

Complying with the increasing importance of packaging for commercial value, AIRZERO VACUUM PACKAGING MACHINE is successfully expanding the market in packaging industry field through a unique combination of skilled personnel, technical quality control, quick delivery, competitive price, and a variety of ready and tailor made vacuum and gas flushing packaging machinery available to meet your production line' s need, backed up by aggressive and continuous R & D.

Please go over AIRZERO VACUUM PACKAGING MACHINE 's various vacuum and gas flushing packaging solutions at the website,

www.airzero.co.kr / www.intrise.co.kr

and feel free to contact us if there is any way that AIRZERO VACUUM PACKAGING MACHINE can be of assistance concerning packaging of your products,





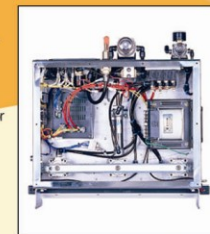
Nozzle Type Vacuum & Gas Flushing Packaging Machine



The basic structure of AIRZERO vacuum packaging machine

It is the smallest-sized nozzle type vacuum packing machine using a pneumatic method, and of a patented structure allowing safety system.

- ❖ Vacuum using pneumatic method
 - Its mechanical power to operate a machine is so high that the sealing bars can be extended longer, compared to a vacuum packing machine using a electrical motor
 - When the nozzle moves forward, the last speed is controlled to go down for safety
- ❖ The safety device being equipped
 - When foreign materials such as fingers are inserted into sealing bars, the upper sealing bar automatically moves up.
- ❖ ISO9001 & CE certified



the inside of the machine



ISO Certificate



What's the Nozzle Type Vacuum and Gas Flushing Packaging Machine?

It is a new concept of vacuum packing machine using a nozzle to suck air directly out of the bag so that it overcomes many shortcomings of the chamber type vacuum packing machine. (Refer to Chamber type vs Nozzle type.)

- ❖ A method to suck air out of the bag,
 - Fast work speed
 - Little restricted from the size of products (possible to vacuum and gas flushing packing up to 200Liter with AZV-Series)
 - Vacuum packing for contents with high temperature (impossible with chamber type vacuum packing)
 - In vacuum packing, no product damage caused by an instant discrepancy in pressure
- ❖ Multi-functions
 - Sealing, vacuum packing, vacuum and gas flushing.
- ❖ Free adjustment for vacuum degree and gas
 - Vacuum packing at low vacuum possible (3kpa at lowest)
 - Gas flushing and substitution for the purpose of packing (impossible with chamber type vacuum packing)
- ❖ Neat and tidy packing shape
 - In vacuum packing, products can be arranged freely
- ❖ Various options
 - Various vacuum pumps can be applied according to products (pneumatic pump, oilless pump and oil pump)



Functions of and ways to use AZ-Series control-box

- ❖ VAC/TIME This button is to select whether you control vacuum procedure by time or by vacuum degree, (T and V appear at the lower-left side of LCD)
- V : Vacuum Degree (Kpa) of vacuuming The machine is operated by the preset vacuum degree. If you select 45, the vacuum works until the vacuum degree for the inside of vacuum bag approaches to 45 Kpa and the nozzle moves backward after that. Therefore, it is not related to vacuuming time.
- T : Time of vacuuming The machine is operated by the preset time for vacuuming. When you select 25, the vacuum works for 2.5 second and the nozzle moves backward after that.
- ❖ MODE This button decides the type of work, VACUUM, GAS1, GAS2, AND SEALING are changed one by one for each press of MODE button. (V, G1, G2 and S mean respectively VACUUM, GAS1, GAS2 and SEALING which appear at the lower-right side of LCD)
- S : Seal
• V : Vacuum → Seal
• G1 : Vacuum → Gas → Seal
• G2 : Vacuum1 → Gas1 → Vacuum2 → Gas2 → Seal
- ❖ TIME This button decides the work, of which time or vacuum degree is adjusted. With each pressing of TIME button, the turns are changed one by one from VACUUM1, VACUUM2, GAS1, GAS2, and SEALING to COOLING. Then, for each of them, you can adjust time or vacuum degree by UP and DOWN button.
- ❖ UP/DOWN Increase / Decrease time / vacuum degree for each selected process.
- ❖ STOP This is the Stop button. If you press the button, the machine come back to the original state. So, the nozzle moves backward and the sealing bar moves up.



Nozzle Type Vacuum and Gas Flushing Packaging Process

1. Preparation



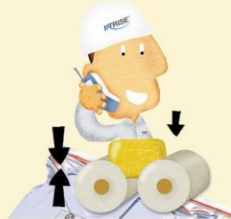
2. Vacuum



3. Gas Flushing



4. Sealing



Properties of AZ-Series products



The function of gas flushing and gas substitution are included in the basic function



Fuses for circuit protection are attached



Pneumatic utility (air regulator with filtering function) is attached to maximize work efficiency.



Control box Detachable (easy for after-sale service)



The best quality caster is attached for easy moving and fixing



In case of using a thick film to pack, upper and lower double hot wires are attachable



Nozzle Type Vacuum & Gas Flushing Packaging Machine

Gas Flushing Function



- ❖ Nitrogen Flushing Packaging
Oxygen substitution, moisture removal, damage prevention on contents from outside impacts, packaging of vacuum packaging looking with adjusting gas amount (usage: snacks, grains, coffee, etc)
- ❖ Nitrogen and Carbon Dioxide Flushing Packaging
Carbon dioxide playing a role of preventing microbes from growing (usage: fishery, meat, salted fish)
- ❖ Nitrogen, Carbon Dioxide and Oxygen Flushing Packaging
Preserving freshness and nutrients by holding breath and photosynthesis in check as much as possible (usage: vegetables and fruits)

Examples of AZ-Series use

As the importance of packaging as a factor for product quality becomes bigger, the range of applying vacuum and gas flushing packaging widens to a variety of fields.

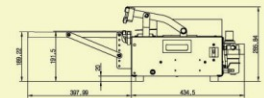
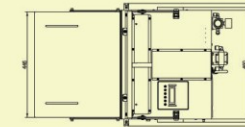
- ❖ Semiconductor and industrial products
Prevention of oxidization, moisture and static electricity, particle elimination and reduction in logistics cost

Applied items	Customers
Semiconductor and wafer	Motorola, Crossmos Ltd, Seoul Semiconductor, Hynix Semiconductor, Comico, Venture town in Suwon University, Ijin Diamond, etc.
Various ICs and electronic components	Terrasem, Samsung Electro-Mechanics, Samsung Electronics Co. in Gumi, LG Electronics, Samsung Techwin, etc.
Optical tools	Sekonix, Nano Optics, Taeyoung Optics, Bangju Optics, Haseong Optics, LT ULTRA, etc.
Machinery	DF Tech, Cinos Engineering, etc.
Mobile phone	Korea Alps, SI Talepac, Daeho MMI, Sina Tech, Samyoung Electronic Communications, etc.
Research equipment	Institute for Advanced Engineering, Korea Electronics Technology Institute, Korea Atomic Energy Research Institute, Byeongjeom Agricultural Technology Research Institute, etc.
Medical field	SAEROMPHARM, Greencross, Fresenius-kabi Greencross, Sang-a Medical, Tsumura, ID Biochem, Department of pathology of Seoul National University, etc.
Silicon	Korea Shinetsu Silicon, Thai Shinetsu Silicon, etc.
Clothes and others	Ministry of National Defense, The Jungang Research Center of the Cultural Heritage, Mitsubishi, LG INNOTECH Indonesia, etc.



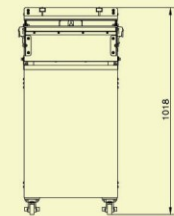
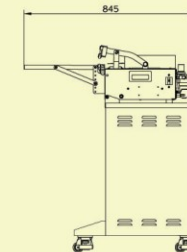
Desktop nozzle type vacuum packaging machine (AZ-450E)

- ❖ Suitable for a limited space



Stand-attached nozzle type vacuum packaging machine (AZ-450ES)

- ❖ Suitable for the case of requiring working stand below



- ❖ Foods
Shelf life extension, and freshness and flavor maintenance

Applied items	Customers
Dried fish and meat	Donghae Geonomul, Deoksu Yulong, etc.
Vegetables	Singsingwon, Pulhananongwon, Wonhyeop55, Myeongmun Catering, Seongdo Nongsan, Biosystech, etc.
Grains	Hyunmenara, Baegam Nonghyup, Cheongjeong Migokcheorijang, Naju Agricultural Technology Center, etc.
Fish and meat	Songdo Susan, Gil Susan, Daeseon Mulsan, Mokpo Suhup, Leecaderna, etc.
Nuts	Hanbando Foods, Nakaoka Foods, etc.
Hot goods	Ganjung Nongsan, Midang Namwongol Chuotang, etc.
Others	Bamsong Foods, Mokpo Suhup, Daemyang Bamboo Nara, Petworld, Kyunghee University, Haitai Dairy Gangjin Plant, Shenyang Marina, A.T.C Com, Korea royal com, etc.

Model name	Sealing length	Sealing width	Packing capacity	Vacuum Pump	Required Power	Max. Instantly consumed power	Required Pneumatic pressure
All AZ-Series except AZV-Series	450mm	5mm	1 - 10 EA/min (different depending on the size and the property of products to be packed)	Ejector pump, oil pump, oilless pump (Refer to kinds of pump)	1ph, 220V / 110V 50/60 Hz	1.8 KW	5 - 7 kg/cm ²
		10mm				2.5 KW	
	600mm	5mm				2.2 KW	
		10mm				3.2 KW	
	800mm	5mm				2.6 KW	
		10mm				3.5 KW	

* If you want other specification, please refer to our sales dept.



Nozzle Type Vacuum & Gas Flushing Packaging Machine



Angle-adjustable nozzle type vacuum packaging machine (AZA-450ES)

- ❖ Free angle-adjustment of a upper head by handling is possible in maximum of 45°
- MidangNamwongol Chuoatang, Cheongjeong MikokCheorijang



Height-adjustable nozzle type vacuum packaging machine (AZH-450ES)

- ❖ Free height-adjustment of rack by handling is possible in maximum of 150mm
- Suitable for the case when wafer, tray and height adjustment is required frequently
- LG Electronics, Samsung Electro-Mechanics, Sekonix



Upper and lower double heat wires nozzle type vacuum packaging machine (AZ-450ES-D)

- ❖ Used in thick packaging film



Sealing bar extended nozzle type vacuum packaging machine (AZ-800-ES)

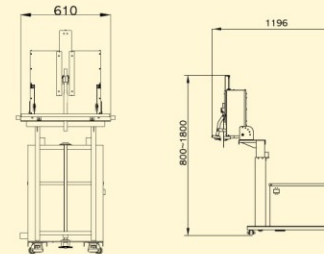
- ❖ Sealing bar is extended to 800mm



Vertical nozzle type vacuum packaging machine (AZV-600)

Suitable for packaging bulky or heavy products, Inclination and height adjustable (Equipped with an UP/DOWN electric power drive motor)

- ❖ Examples
 - Shinetsu Silicon : Silicon undulated solution
 - Hwagye Nonghyup : For preserving green tea
 - Mokpo Suhypu : Pickled fish and huge fish such as a shark
 - Mitsubishi : Cement
- ❖ Options
 - Work table, above and below heating method (vacuum pump, conveyer and the whole machine are made with stainless steel)
 - Possible to order and manufacture over 1200mm of sealing bar



Model name	Sealing length	Sealing Width	Packing capacity	Vacuum Pump	Required Power	Max. Instantly consumed power	Required Pneumatic pressure
AZV-600	600mm	5mm	1 - 4 EA/min (different depending on the size and the property of products to be packed)	Ejector pump, oil pump, oilless pump (Refer to kinds of pump)	3ph, 220V / 380V 50/60 Hz	2.2 KW	5 - 7 kg/cm2
		10mm				3.2 KW	
AZV-800	800mm	5mm				2.6 KW	
		10mm				3.5 KW	
AZV-1100	1100mm	5mm	3 KW				
		10mm	4 KW				

* If you want other specification, please refer to our sales dept.

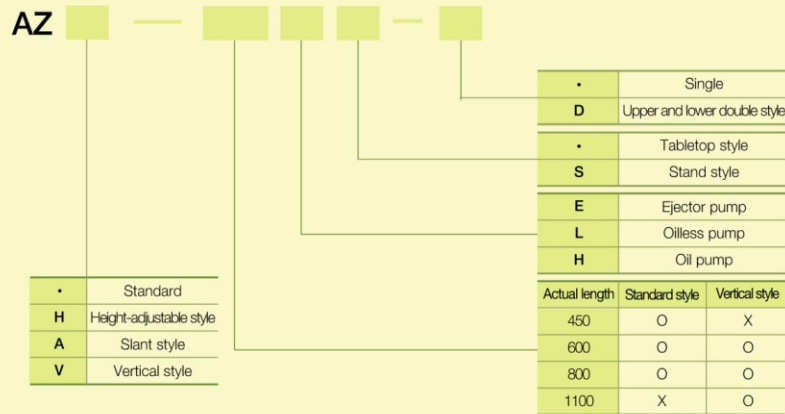


Nozzle Type Vacuum & Gas Flushing Packaging Machine



Method to understand AZ-Series Model name

According to the below procedure, Buyer can select the most suitable one for their production site.



Vacuum pump

Its capacity to take air away is measured when it is not attached to the body.

EJECTOR PUMP				OILLESS PUMP				OIL PUMP			
Model name	Maximum vacuum capacity (Kpa)	Displacement speed (l /min)	Air consumption (l /min)	Model name	Maximum vacuum capacity (Kpa)	Displacement speed (l /min)	consumed power (W)	Model name	Maximum vacuum capacity (Kpa)	Displacement speed (l /min)	consumed power (W)
VTX-20	95	124	86-96	275V	90	75	150	SVO-100	101.3	100	420
VTX-50	92	647	150-200	2120V	89	120	200	MVO-010	101.3	200	250
								MVO-020	101.3	400	950

* Compressor is impossible to be built-in, in the case of sub-stand attached model



Chamber type vs Nozzle type

- ❖ Chamber type
 - This type is suitable to pack several units of goods by just one process when the size of goods is very small compared to the size of chamber.
- ❖ Nozzle type
 1. Nozzle type adopts the method to vacuum-pack directly the inside of envelope by using a nozzle stroke. So, the work is very speedy compared to chamber type, except when the size of packed goods is very small so that you pack several units of goods by just one process by using a chamber type.
 2. Nozzle type is much less restricted to the size of packed goods compared to chamber type, thanks to the method to vacuum-pack directly the inside of envelope by using a nozzle stroke.
 3. Nozzle type has a vacuum sensor in control box. So, nozzle type is very suitable for when user want to vacuum-pack the packed goods at same vacuum degree regardless the size of packed goods. Chamber type is impossible to do this.
 4. Nozzle type can control the volume of gas inserted in the envelope. That is, a user can flush heavily an envelope to swell up or flush just lightly. But, in the case of chamber type, gas cannot be inserted just lightly into an envelope.
 5. In the case of clean room vacuum packaging, only Nozzle type is possible because nozzle type uses ejector-vacuum pump which pushes out very little dust compare to chamber type which uses oil-vacuum pump generating much dust.
 6. In the case of packing for any goods which includes liquid, chamber type is not suitable because chamber type uses oil-vacuum pump which becomes out of order when liquid sinks into it. But, that is possible for Nozzle type using ejector-vacuum pump which is no problem with liquid. (But, even in the case of Nozzle type, any inflow of much liquid to the inside of machine's body may bring about a trouble.)
 7. Nozzle type is suitable when the packed goods is sensitive against any external shock. Chamber type is not suitable because it makes vacuum using momentary atmospheric pressure so that it gives external shock to packed goods.
 8. Especially, AZA-450-ES (Angle controllable type) is suitable for grains or liquid, for it can incline down the angle of machine's body to 45°.



Tailor-made AIRZERO vacuum sealer



SHINETHU SILICON

LG CHEMICAL

SAMSUNG

ARMY OF KOREA