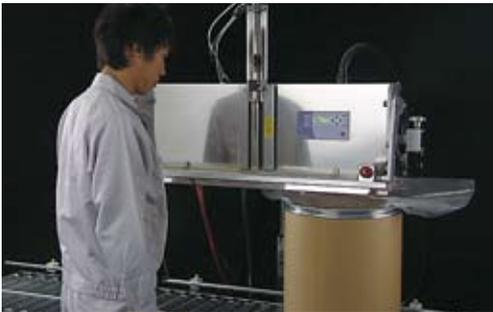


GAS-FLUSHING & VACUUM IMPULSE SEALER

Typical Industries and Applications

- ✓ Light Electrical Appliance
- ✓ Food Product
- ✓ Dairy Farming, Basic Ingredients, Raw Materials
- ✓ Apparel
- ✓ Hospitals



LOS-NT / NTW Series

Vac & Gas

Air Cylinder Driven

ONPUL

Frequency 1,000 bags/day

The LOS-NT/NTW series sealers are long-length sealers capable of creating both vacuum and gas-flush seals. When you want to flush the air inside the bag and reduce the package volume, or when you want to utilize oxygen scavenger to extend product life, you can use the Vacuum Sealing function.

When you want to fill the bag with nitrogen gas to prevent oxidation, or with carbon dioxide to create bacteriostatic or insect-repellent effects or to prevent spoilage and mold growth, you can use the Gas-flush Sealing function.

Switch Among 10 Sealing Methods!

The following sealing methods can be combined to create an optimum sealing method for your application. Select a sealing method to meet your needs, including selecting to best suit the characteristics of the packaged material and to obtain your desired packaging finish.

■ Work Method Options

1. Seal only
2. Vacuum + seal
3. Vacuum + gas flushing + seal
(Single or multiple gas flush cycles)

■ Vacuum Method Options

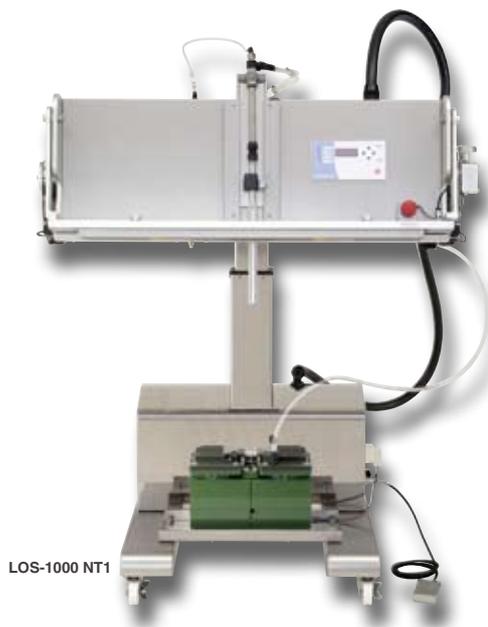
1. Vacuum gauge (0 to -100Kpa)
2. Vacuum timer (0 to 99.9 seconds)
3. Manual operation

■ Gas-Flush Method Options

1. Multiple flush cycles (up to 99 times)
2. Single gas flush

■ 10 Operation Patterns

1. Seal only
2. Vacuum: manual vacuuming + seal
3. Vacuum: timer vacuuming + seal
4. Vacuum: vac gauge vacuuming + seal
5. Single gas: manual vac + single gas + seal
6. Single gas: timer vac + single gas + seal
7. Single gas: vac gauge vac + single gas + seal
8. Multiple gas: manual vac + multiple gas + seal
9. Multiple gas: timer vac + multiple gas + seal
10. Multiple gas: vac gauge vac + multiple gas + seal



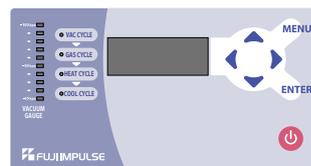
LOS-1000 NT1

Standard-Equipped Heating Temperature Control

ONPUL Featuring the ONPUL System, the heating temperature is controlled by directly detecting the heater temperature using a low-profile temperature sensor that comes in contact with the heating element. The initially set sealing condition will not be affected by the work environment or by extended use.

Easy-to-Operate Microcomputer Controller

The selection and setting of work method and vacuum method, as well as of gas-flush method and its frequency, are all controlled at the microcomputer controller. Simply press the touch panel buttons for the settings. Maximum 10 operation patterns can be stored in the microcomputer.



Adjustable Head Height

The height of the head of the sealer can be adjusted to suit the package content by operating the buttons on the side of the machine.

When the bag is set vertically to the head: 800 to 1370mm.

When the bag is set horizontally to the head: 1020 to 1590mm.



Tilting the Head Angle

By turning the adjuster knob, the tilt angle of the head can be variably adjusted between 0 and 90 degrees to suit the package content. For example, when packaging powders, tilting down the sealer head will allow the sealing to complete without powder spilling from the bag opening.



Model Variation Features

LOS-NT series (Vacuum pump)

LOS-NT series (vacuum pump) conducts vacuuming through the use of a vacuum pump. These sealers are effective for increased vacuum when the package content is solid.

Choose the Vacuum Pump (for Vacuum)

You can choose the various exhaust-velocity vacuum pump, which serves as the vacuum generator, based on your specific needs, usage environment and package content.

Model	Exhaust Velocity	Ultimate Vacuum	Description
NT1 Series	120L/min	-88Kpa	Standard specification equipped with a diaphragm type dry vacuum pump to be used in the clean environment.
NT2 Series	80L/min x 2	-95.9Kpa	Equipped with two relatively small rocking piston type dry vacuum pumps for the better performance than that of N1 series.
NT3 Series	120L/min	-98Kpa	Equipped with a diaphragm type dry vacuum pump similar to N1 series, the highest vacuuming level can be achieved.
NT4 Series	230L/min	-93.9Kpa	The highest exhaust velocity with a rotary vane vacuum pump to enhance the vacuuming speed.

Compressor Required Separately
Compatible compressor
=0.75KW 75L/min 490kPa or greater

Applications
Semiconductors, precision parts, containers, cushioning material, futon, blankets, clothes, food ingredients, dried vegetables, instant foods, beans, etc.



LOS-1000 NT1



Type NT: Rear view
Filter installed.

LOS-NTW series (Ejector)

In this series of sealers, vacuuming is conducted through the use of an ejector, powered by the compressor air. These sealers are effective for vacuum-packaging liquid and powder contents, and for shortening the time required for vacuuming. (Although time required is shorter than for vacuum pumping, using the ejector for vacuuming results in a lower ultimate vacuum.)

Ejector capacity
Exhaust velocity:1650L/min
Ultimate vacuum -56.9kPa
Compressor Required Separately
Compatible compressor
=1.5KW 165L/min 540kPa or greater

Applications
Candy, paste products, juice, powder, seafood, pickles, sauce, boil-in-bag food, delicatessen, food ingredients, chemical agents, fertilizer, animal feed, etc.



LOS-1000 NTW



Type NTW: Rear view
Ejector installed.

Specification Sheet for NT/NTW Series

Model Name	LOS-600NT1	LOS-600NT1-10D	LOS-800NT1	LOS-800NT1-10D	LOS-1000NT1	LOS-1000NT1-10D	LOS-1200NT1	LOS-1200NT1-10D
	LOS-600NT2	LOS-600NT2-10D	LOS-800NT2	LOS-800NT2-10D	LOS-1000NT2	LOS-1000NT2-10D	LOS-1200NT2	LOS-1200NT2-10D
	LOS-600NT3	LOS-600NT3-10D	LOS-800NT3	LOS-800NT3-10D	LOS-1000NT3	LOS-1000NT3-10D	LOS-1200NT3	LOS-1200NT3-10D
	LOS-600NT4	LOS-600NT4-10D	LOS-800NT4	LOS-800NT4-10D	LOS-1000NT4	LOS-1000NT4-10D	LOS-1200NT4	LOS-1200NT4-10D
	LOS-600NTW	LOS-600NTW-10D	LOS-800NTW	LOS-800NTW-10D	LOS-1000NTW	LOS-1000NTW-10D	LOS-1200NTW	LOS-1200NTW-10D
Power V *1	220	220	220	220	220	220	220	220
Power Consumption W	2500	2500	3000	3000	4000	4000	4500	4500
Heating Method *2	Single	Double	Single	Double	Single	Double	Single	Double
Seal Length mm	600	600	800	800	1000	1000	1200	1200
Seal Width mm	10 or 5	10	10 or 5	10	10 or 5	10	10 or 5	10
Machine Dimension W x D x H mm *3	935 x 835 x 2100 /1370		950 x 835 x 2100 /1370		1160 x 835 x 2100 /1370		1360 x 865 x 2100 /1370	
Machine Weight kg	153	153	160	160	165	165	170	170
Lever Drive	2-Step Special Air Cylinder (2 pcs on right and left)							
Control	Microcomputer Controlled							
Heating Time	0.0 – 2.0 seconds (Set the heating time at minimum required to make a sufficient sealing.)							
Heating Temperature	60 – 250 °C							
Cooling Temperature	40 °C – Heating Temp (Set the cooling temperature lower than the heating temperature.)							
Vac Timer	0.1 – 99.9 seconds							
Gas Timer	0.1 – 99.9 seconds							
Vac Degree	From –1 to –100 kpa Structurally, the nozzle vacuum system will cause attainable vacuum level to be erratic when operating the machine in low vacuum of between -1 to -10 Kpa. The button on the control unit allows you to set the vacuum level from -1 to -100 kPa, but the actual vacuum level will depend on the ability of the pump mounted.							

*1 Other voltages available on request.

*2 Single: heating element mounted on the lower side. Double: Heating element mounted on both upper and lower sides.

*3 The height indicated is the height when the sealer head is set vertically, with figures for both the sealer head in maximum height position and in minimum height position.

Specification Sheet for Vacuum/ Air Source

Model	Air Source	Vacuum Source: Exhaust Speed *4	Vacuum Source: Ultimate Vacuum *5	Vacuum Source: Weight	Compatible Compressor	Air Source: Optimum Air Pressure
LOS-NT1 Series	Vacuum pump DA-120S	120 L/min	-88 kPa	19 kg	0.75 KW (75 L/min) or greater	490 kPa (5Kgf/cm ²)
LOS-NT2 Series	Vacuum pump DOP-80S x 2 units	80 L/min x 2	-95.9 kPa	7 kg x 2	0.75 KW (75 L/min) or greater	490 kPa (5Kgf/cm ²)
LOS-NT3 Series	Vacuum pump DA-121D	120 L/min	-98 kPa	26 kg	0.75 KW (75 L/min) or greater	490 kPa (5Kgf/cm ²)
LOS-NT4 Series	Vacuum pump KHF-14-V02	230 L/min	-93.9 kPa	24 kg	0.75 KW (75 L/min) or greater	490 kPa (5Kgf/cm ²)
LOS-NTW Series	Built-in ejector	1650 L/min	-56.9 kPa	—	1.5 KW (165 L/min) or greater	540 kPa (5.5Kgf/cm ²)

*4 The exhaust speed and ultimate vacuum represent stand-alone values, before installation to the machines.

*5 The 0 torr of the ultimate vacuum is -101.3Kpa.

Safety Measures

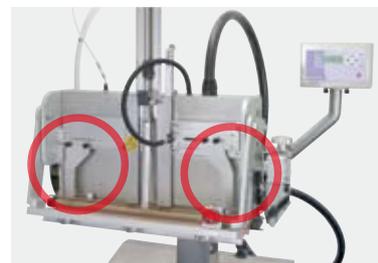
Anti-Overheating Mechanism	When overheating occurs (i.e., when power continues to be distributed to the heating element for longer than 4 seconds), the breaker turns off and the power is shutoff.
Lever Drive	The lever uses spring action to clamp down on the bag so that no forcible pressure is applied when finger or other foreign objects get caught. Pressure of 63-diameter cylinder output force is applied when sealing.
Emergency Reset Mechanism	When the lever is being lowered, removing foot from the footswitch will raise the lever from its lowered position.
Automatic Reset upon Anomaly Detection	When the lever is being pressed down, if a foreign object (e.g., a finger) is caught in the sealing area and is preventing the sealing process from proceeding to the next step, the lever will return to its initial position after one second.
Emergency Stop Switch	In an emergency, press the Emergency Stop Switch to turn off the breaker and shut off the power. This will return the lever to its initial position.

Error Detection and Display Function

Heater Disconnection	When the heater is disconnected during the heating process, initial condition is restored and an error message will appear on the control panel screen.
Heat Control Error (1)	When there is no heat during the heating process, initial condition is restored and an error message will appear on the control panel screen.
Heat Control Error (2)	When the set temperature is not reached within 3.5 seconds, the lever will return to its initial position and an error message will appear.
Cooling Control Abnormality	When heating is detected during the cooling process, the lever returns to its initial position and the circuit breaker will switch the power off.
Abnormality during Operation	When any of the sensors fail to confirm input during operation, the lever will return to its initial position and an error message will appear.

Option Tension Arm

Tension arms can be set at both sides of the bag. The tension arms spread open going into the sealing process to hold the bag straight and pulled tightly. Because the sealing is conducted with the bag pulled straight, the sealed finish is clean with fewer chances of failure.



VG-602 /VG-602 Series



The VG-602/VG-402 Series is a nozzle-equipped, electric/air-cylinder-operated vacuum and gas-flushing sealer, designed for slightly smaller bag sizes (400-600mm). Customers can choose the air compressor and vacuuming pump to best suit their specific needs, usage environments and package contents.

When you want to vacuum the air inside the bag and reduce the package volume, or when you want to utilize oxygen scavenger to extend product life, you can use the Vacuum Sealing function.

When you want to fill the bag with nitrogen gas to prevent oxidation, or with carbon dioxide to create bacteriostatic or insect-repellent effects or to prevent spoilage and mold growth, you can use the Gas-flush Sealing function. The world is full of different things that beg to be packaged. Go ahead and package to suit your needs with the VG-602 and VG-402 Series!



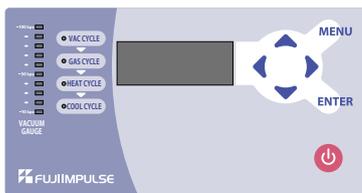
VG-602

Standard-Equipped Heating Temperature Control

ONPUL Featuring the ONPUL System, the heating temperature is controlled by directly detecting the heater temperature using a low-profile temperature sensor that comes in contact with the heating element. The initially set sealing condition will not be affected by the work environment or by extended use.

Easy-to-Operate Microcomputer Controller

The selection and setting of work method and vacuum method, as well as of gas-flush method and its frequency, are all controlled at the microcomputer controller. Simply press the touch panel buttons for the settings. Maximum 10 operation patterns can be stored in the microcomputer controller.



■ Work Method Options

1. Seal only
2. Vacuum + seal
3. Vacuum + gas-flushing + seal
(Single, multiple, or circulating gas flush cycles)

■ Vacuum Method Options

1. Vacuum gauge
2. Vacuum timer
3. Manual operation

■ Gas-Flush Method Options

1. Multiple flush cycles (up to 99 times)
2. Single gas flush
3. Circulating gas-flush (Please refer to page 26 for the detail.)

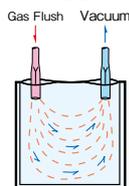
■ 13 Operation Patterns

1. Seal only
2. Vacuum : manual vacuuming + seal
3. Vacuum : timer vacuuming + seal
4. Vacuum : vac gauge vacuuming + seal
5. Single gas : manual vac + single gas + seal
6. Single gas : timer vac + single gas + seal
7. Single gas : vac gauge vac + single gas + seal
8. Multiple gas : manual vac + multiple gas + seal
9. Multiple gas : timer vac + multiple gas + seal
10. Multiple gas : vac gauge vac + multiple gas + seal
11. Circulating gas : manual vac + circulating gas + seal
12. Circulating gas : timer vac + circulating gas + seal
13. Circulating gas : vac gauge vac + circulating gas + seal

Switch to Circulating Gas Flush Method

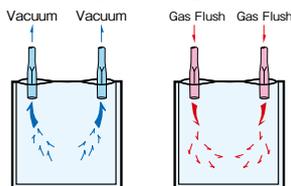
By modifying the piping, it is possible to switch to the circulating gas-flush method. With one nozzle set for gas flushing and the other for vacuuming, the circulating gas-flush method increases gas-replacement rate by de-airing the bag even as it is being filled with gas. Especially effective with soft contents.

Circulating gas flush



Vacuuming and gas flushing are conducted simultaneously.

Ordinary vacuum gas-flush

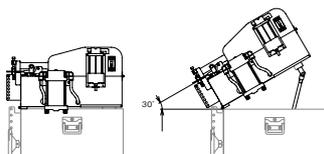


Vacuuming and gas flushing are two separate processes.

Adjustable Sealer Head Angle

The head of the sealer can be adjusted at between 0 and 30 degree angles to suit the package content. For example, when packaging powders, tilting down the sealer head will allow the sealing to complete without powder spilling from the bag opening.

Adjustments can be made using the hand wheel located on the front panel of the machine.



Standard Equipped Dry Filter

The compressed air generated by the built-in compressor sometimes may contain drops of water from condensation, which can enter the machine through the piping and cause damage. To counter this problem, the VG-602/402 series comes standard-equipped with dry filter, which removes drops of water from the compressed air to prevent them from entering into the cylinder and piping inside the machine.

Standard-Equipped with Air Filter and Automatic Water-Drain Device

A nozzle-equipped vacuum sealer sometimes may inadvertently take in the bag's contents via the nozzle during the vacuum process. To counter this problem, the VG-602/402 series comes standard-equipped with air filter to collect foreign objects (liquid, powder, etc.) that were inadvertently taken in during the vacuum process, and prevents the objects from entering into and damaging the vacuum pump.

In addition, by turning on the automatic water-drain device, the foreign objects collected in the air filter can be automatically discharged from the machine after each sealing process.



Safety Measures

Anti-Overheating Mechanism	When overheating occurs (i.e., when power continues to be distributed to the heating element for longer than 4 seconds), the breaker turns off and the power is shutoff.
Emergency Stop Switch	In an emergency, press the Emergency Stop Switch to turn off the breaker and shut off the power. This will return the lever to its initial position.
Automatic Reset upon Anomaly Detection	When the lever is being pressed down, if a foreign object (e.g., a finger) is caught in the sealing area and is preventing the sealing process from proceeding to the next step, the lever will return to its initial position after one second.
Emergency Reset Operation	When the lever is being pressed down, removing your foot from the footswitch will raise the clamping lever to help prevent fingers and other objects from being caught.

Specification Sheet for VG-602 / VG-402 Series

Model Name	VG-402-xx	VG-402-xx-10D	VG-602-xx	VG-602-xx-10D
Power V *1	110 / 220	220	220	220
Power Consumption W	1800	2700	3000	3100
Heating Method *2	Single	Double	Single	Double
Seal Length mm	400	400	600	600
Seal Width mm	10 or 5	10	10 or 5	10
Vacuum Method	Nozzle Type (vac gauge/ manual/ timer)			
Vacuum Degree	From -1 to -100 kPa	Structurally, the nozzle vacuum system will cause attainable vacuum level to be erratic when operating the machine in low vacuum of between -1 to -10 Kpa. The button on the control unit allows you to set the vacuum level from -1 to -100 kPa, but the actual vacuum level will depend on the ability of the pump mounted.		
Vacuum Timer sec.	0.1 - 99.9			
Machine Drive	Air Cylinder			
Seal Height mm	932 from the floor			
Head Angle °	0 - 30			
Heating Temperature °C	60 - 250			
Heating Time sec.	0 - 2.0 seconds			
Cooling Temperature °C	40 - Set heating temperature			
Film Thickness (total) mm *3	Less than 0.3	Less than 0.4	Less than 0.3	Less than 0.4
Machine Weight kg	93	98	100	105
Machine Dimension W x D x H mm	595 x 555x 1052	595 x 555x 1052	675 x 555x 1052	675 x 555x 1052
Table Dimension W x D mm	400 x 350	400 x 350	600 x 450	600 x 450

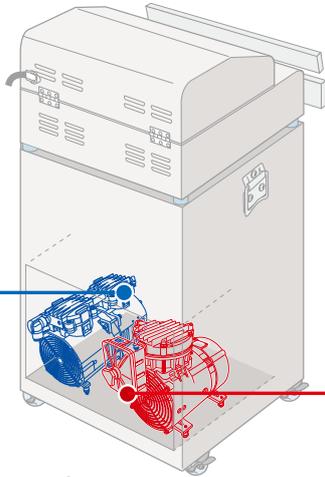
*1 Other voltages available on request.

*2 Single: heating element mounted on the lower side. Double: Heating element mounted on both upper and lower sides.

*3 Total thickness of overlapping films. The value may vary depending on the voltage or type of films.

Choose the Vacuum Pump (for Vacuum) and Air Compressor (for Drive)

You can choose the compressor, which serves as the drive, and the various exhaust-velocity vacuum pump, which serves as the vacuum generator, based on your specific needs, usage environment and package content.



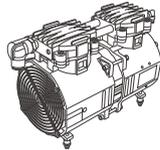
VG-series sealer is named by the combination of vacuum pump and air compressor.

ex.

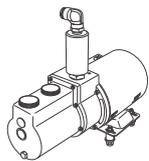
Compressor: MP-40(called A)
 Vacuum pump:DOP-80(called H)
 602 series dual heating type
VG-602-AH-10D

Vacuum pump / 4 types

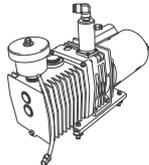
H.
 DOP-80S : piston type
 For standard
 Pumping speed : 80L/min
 Ultimate pressure : -96kPa
 Pump weight : 7kg



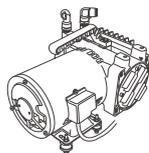
D.
 G-50SA : Oil rotation type
 For high vacuum degree (small size pouch)
 Pumping speed : 50L/min
 Ultimate pressure : -101.3kPa
 Pump weight : 11kg



E.
 G-100S : Oil rotation type
 For high vacuum degree (large size pouch)
 Pumping speed : 100L/min
 Ultimate pressure : -101.3kPa
 Pump weight : 22kg

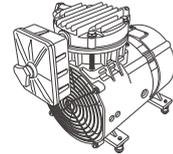


G.
 DA-60S : Diaphragm type
 For Clean room (clean degree :about 10,000)
 Pumping speed : 60L/min
 Ultimate pressure : -80kPa
 Pump weight : 12kg

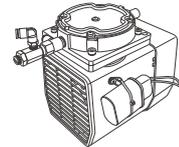


Air Compressor / 3 types

A.
 MP-40 : piston type
 For standard
 Pumping speed : 28L/min
 Usual pressere : 310 - 330kPa
 Relief valve set-up pressure
 Weight : 8kg



B.
 DOP-P108-DB : Diaphragm type
 For Clean room (clean degree :about 10,000)
 Pumping speed : 31L/min
 Usual pressere : 310 - 330kPa
 Relief valve set-up pressure
 Weight : 7kg



C.
 Air is provided by the out side compressor
 Suitable compressor specification : 0.75kw(80L/min) above 480kPa

Option Seal Area Cover

The sealing area may be covered using transparent resin (polycarbonate) to help prevent fingers and other objects from getting caught.



2-Line Printing Device: FEP-V-N2

Exterior 2-line printing device FEP-V-N2 can be installed as a manufacturer option. This allows the printing of texts and dates such as "Best before MMDDYY" and "Sell by MMDDYY." FEP-V-N2 is a hot-print-type printer that utilizes heated types to print carbon.

