

# VACUUM/GAS BAG SEALERS

**PAC Packaging Aids**

Member of PAC Machinery Group

Bag Sealers • Vacuum Sealers • Vacuum Chambers • Band Sealers  
• Medical Packaging • Flow Wrappers



# ABOUT VACUUM PACKAGING

**Packaging Aids Corporation (PAC) manufactures the most extensive line of vacuum packaging machines in the flexible packaging industry. Specializing in nozzle, or snorkel, style jaw sealers designed to meet the needs of the most demanding industries. PAC also has a full line of Vacuum Chamber machines from tabletop to continuous high production machines. We also custom design and manufacture machines for unique requirements.**

## **NOZZLE MACHINES**

The most versatile method of vacuum packaging is the use of a nozzle style machine. The PAC jaw sealers range in sealing lengths from 12" to over 120" in a variety of configurations from tabletop to floor standing units for horizontal or vertical use. This style machine is ideal for vacuum sealing solid or bulky products from food to medical devices.

A filled bag or pouch is placed between a set of sealing jaws, over stainless steel vacuum nozzles that extend between the jaws. The sealing jaws grip the bag while air is evacuated through the nozzles by means of a vacuum pump. Gas is then flushed, if required, through the same set of nozzles into the bag. At the end of the vacuum or gas cycle the nozzles retract from the bag, and the sealing cycle begins.

Most machines allow for the vacuum sealing of one or two bags per cycle depending upon model and bag specifications. Specialized sealers with multiple nozzles allow for 4 or more bags to be sealed in a single cycle.

## **VACUUM CHAMBER MACHINES**

Vacuum chambers offer a high level of vacuum and consistency with ease of use. This method of vacuum sealing bags is utilized when the highest level of vacuum possible is required or when packaging powders or liquids. Although nozzle machines often have a shorter cycle time, large vacuum chambers are commonly used in applications with high production requirements. Models vary from small tabletop units to large, floor standing single and double chambers as well as conveyor belt fed continuous chambers.

A filled bag or pouch is placed on the bed of a chamber with the open end on top of the sealing bar. The lid or hood of the chamber is closed after product has been loaded and the cycle begins automatically. A vacuum pump removes air from the entire chamber, followed by a gas flush cycle if required. The sealing cycle begins after vacuum or gas has completed. The lid or hood of the chamber opens automatically at the end of the vacuum sealing cycle.

Vacuum chambers provide the ability to run as many bags per cycle as the sealing bar length will accommodate. Bags are lined up, side by side, along the length of the sealing bar. Double chambers and longer seal lengths allow for vacuum sealing greater quantities per cycle, increasing productivity.

Compressed air evacuation sealers are an alternative to vacuum packaging for reduction of product volume. This style sealer squeezes the filled bag between a support table and a pneumatically operated compression plate. The air is forced out of the bag and, the product is compressed at which point the jaws close and the bag is sealed. This method is much faster than utilizing a vacuum and maintains a consistent packaged shape when product is not rigid. Compression machines are ideal for foam products, pillows, blankets and other bulky items to reduce shipping costs and/or storage space.

## **BENEFITS OF VACUUM SEALING**

**Shelf Life Extension** - Reducing oxygen levels from packaged food products limits the growth of bacteria and fungi, thus extending the expected life of the product. Replacing oxygen with the appropriate gas may further extend shelf life.

**Space and Volume Reductions** - Vacuum sealing to remove excess air from a package reduces overall volume, in turn, reducing storage space and shipping costs.

**Product Protection** - Products are often vacuum packaged to prevent them from shifting or moving around causing damage.

**Rust & Corrosion Protection** - Vacuum sealers can help prevent rust and corrosion when also using a desiccant. They remove the oxygen from the bag preventing outside contaminants in addition to moisture, especially in electronic components, precision parts and precious metals.

## METHODS OF SEALING

**Impulse Sealing** - Impulse sealing is the most common method used for sealing most thermoplastic materials. An impulse sealing cycle includes a heat cycle and a cooling cycle. The bag material is gripped by a set of sealing jaws under high pressure. During the heat cycle, a sealing element is energized and heats up rapidly until the melting temperature of the material is reached and it begins to flow. The cooling cycle begins immediately following the heat cycle. The sealing element cools while the material stays gripped between the sealing jaws, under high pressure, creating a bond or seal. The jaws cool down between sealing cycles and no heat is present when the jaws are open.

**Impulse: Time Control** - Standard Impulse sealers use a time based control system. Seal controllers consist of an adjustable heat timer and an adjustable cool timer. The longer the duration the higher the temperature. The cooling timer begins immediately following the heat cycle and the jaws remain closed under pressure for the duration set on the timer.

**Impulse: SURETEMP™ Temperature Control** - Temperature control allows for programming the desired sealing temperature. This type of control system uses the same style independent seal and cool timers with increased accuracy to prevent overheating or going beyond the set sealing temperature. When the set sealing temperature is achieved, the controller will hold the set point and hover for the duration set on the heat timer. The cooling begins immediately following the heat cycle. As with time control, this method is very safe as the jaws are only heated when closed.

**Constant Heat** - This type of sealing system is used for materials that do not require cooling under pressure such as foils, laminated paper, and heavy films. A temperature set point is programmed and the jaws maintain a constant temperature during the seal cycle even when open. A single adjustable heat timer allows for setting the duration the jaws will remain closed. With this method the jaws are always heated, including when opened.

## VACUUM/GAS BAG SEALERS

Nozzle type vacuum sealers use nozzles to remove air from bags. PAC offers a wide variety of vacuum sealers from small bio-lab tabletops to bag-in-a-box applications. All sealers are available with gas flush. PAC offers "special" machines for the medical, electronics, food and beverage industries and can customize to your specific application.

### PVG

Combining quality, durability, and economy, the **PVG** comes with a standard gas flush capability, biactive seal bars, and independent vacuum, gas, seal, and cool timers. It can be customized with many options such as a Venturi vacuum system, multi-stage capability, bag stretcher, vacuum sensor, and Suretemp™ Temperature Controller depending on the application.



Seal length 12" - 36", Twin head to 60"  
Seal width 5/16"  
Dimensions 26"-63"W x 58"H x 32" D

The PAC **PVG** has been an industry workhorse for many years. It provides quality seals at an economical price.

### PVK

The heavy duty, high production, **PVK** impulse sealer is used for vacuum/gas applications, including those requiring Modified Atmosphere Packaging (MAP). With its "open head design" for easy bag loading, the PVK provides speed and flexibility for high volume packaging applications.



Seal length 30" - 48"  
Seal width 5/16"  
Dimensions 30"- 63"W x 55"H x 32" D

PAC's **PVK** sealer provide's speed and flexibility for any high volume packaging application.

THE INTEGRITY OF THE SEAL  
PROTECTS THE EQUITY OF THE BRAND

Visit [www.packagingaids.com](http://www.packagingaids.com)

# VACUUM/GAS SPECIALTY BAG SEALERS

PAC has developed from our standard units, unique vacuum/gas sealers to meet the many diversified requirements of specific industries. These machines are manufactured to include the necessary features that are generally required and are specific to each industry.

## TABLETOP PVT

The standard features of the **PVT** include independent seal, cool, and vacuum timers. In addition, a foot switch is provided for hands-free operation. There are a variety of options available for the PVT, including biactive seal, gas flush, temperature controller among others.



Seal length	20", 25", 30"
Seal width	3/16"
Dimensions	23"-33"W x 8"H x 15 <sup>3</sup> / <sub>4</sub> " D

An industry standard, the **PVT Sealer** produces secure, consistent seals time after time.

## PVK BAG-IN-BOX

The **PVK Bag-in-Box** is ideal for applications requiring vacuum or modified atmosphere packaging (MAP). Its floating head design insures that the bag remains in the box as it is vacuumed. Using MAP, the shelf life of a variety of products can be extended.



Seal length	30" - 48"
Seal width	5/16"
Dimensions	30" - 63"W x 75"H x 38" D

The **PVK Bag-in-Box** is designed for bulky bags that need to be sealed vertically or are used as a box liner, where the box comes under the sealer via a conveyor or support.

## FRESH PAC

Our **Fresh PAC** sealer is uniquely suited to the needs of the fresh food industry as it can be used in both wet and dirty environments. This stainless steel vacuum/gas flush sealing machine is designed for vacuum or modified atmosphere packaging (MAP) of fresh foods such as produce, meat, poultry, nuts, baked goods, spices and pasta.



Seal length	18" - 36", Twin head to 60"
Seal width	5/16"
Dimensions	30"-39"W x 58"H x 26" D

Our **Fresh PAC** sealer is uniquely suited to the needs of the fresh produce packager. The optional wet-vac allows for easy cleanup and sanitizing of the vacuum/gas lines and nozzles.

## FRESH PAC EXPRESS

The stainless steel **Fresh PAC Express** is designed for both vacuum and modified atmosphere packaging. With its rugged construction, and "open head design" for ease of bag positioning, the Fresh PAC Express will provide many years of high production output. Standard features include independent seal, cool, and vacuum timers. and large, high flow nozzles.



Seal length	30" - 48"
Seal width	5/16"
Dimensions	30"- 63"W x 65"H x 32" D

Our **Fresh PAC Express** is ideally suited for the the food industry where speed, wipe-down capability, and economy of operation are required.

## COFFEE PAC

The **Coffee PAC** provides roasters and packagers an efficient, economical method of preserving the freshness and quality of their product. It is provided with four nozzles for production efficiency.



Seal length	18" - 24"
Seal width	5/16"
Dimensions	26"W x 63"H x 30" D

The **Coffee PAC** comes standard with a vacuum system purge to flush the vacuum lines of any coffee debris after every vacuum cycle.

## COFFEE PAC EXPRESS

The **Coffee PAC Express** high production floor model vacuum sealer which is larger than our standard Coffee PAC and has six nozzles for high production efficiency. A particle ejection cycle system purges nozzles after every cycle to reduce coffee debris contamination of vacuum system.



Seal length 30" - 36"  
Seal width 5/16"  
Dimensions 30"W x 55"H x 32" D

The **Coffee PAC Express** provides high volume roasters with the ability to vacuum pack up to six 1 - 2 lb. or three 5 lb. bags of whole bean or ground coffee in a single cycle.

## COFFEE PAC LITE

Our tabletop **Coffee PAC Lite** is a rugged, compact vacuum impulse sealer for flat, gusseted, PE, PP, foil and most modern bag materials. Provided with two stainless steel nozzles, this machine has electronic controls to vacuum, gas flush, and seal smaller packs.



Seal length 20", 25"  
Seal width 3/16"  
Dimensions 23"W x 8"H x 15<sup>3</sup>/<sub>4</sub>" D

Biactive seal, gas flush, independent vacuum, and a particle ejection system for cleaning the vacuum nozzles are standard on all **Coffee PAC Lites**.

## ELECTRO PAC

We designed the **Electro PAC** for applications in the electronics industry where seal integrity and consistent vacuum level are critical. Its Suretemp™ temperature controller, high pressure seal bars and vacuum level switch provide a consistent vacuum and seal with any size bag.



Seal length 18" - 30", Twin head to 60"  
Seal width 5/16"  
Dimensions 26"-33"W x 58"H x 30" D

The **Electro PAC** is designed for the most critical electronic packaging needs with all seal parameters controlled for a perfect seal - every time!

## ELECTRO PAC LITE

The tabletop **Electro PAC Lite** gives electronic equipment packagers, in a reduced working space, the security of knowing their sensitive product is packaged securely and safely time after time.



Seal length 20", 25", 30"  
Seal width 5/16"  
Dimensions 23"-33"W x 8"H x 15<sup>3</sup>/<sub>4</sub>" D

Seal only switch, Suretemp™ temperature controller, biactive seal jaws, and a ported exhaust are standard on all **Electro PAC Lites**.

## MED VAC

The **MED VAC** is the sealer of choice for high volume medical vacuum sealing applications when validation is required, with its standard independent vacuum, gas, seal and cool timers, electric vacuum pump and ported exhaust for clean room use.



Seal length 18", 24", 30", 36", Twin head to 48"  
Seal width 5/16"  
Dimensions 28"-51"W x 58"H x 32" D

The **MED VAC** is designed for ease of use with a wide variety of pouch materials in cleanroom or general medical pouch sealing applications.

## PVT MED

The **PVT MED** validatable tabletop vacuum pouch sealer is ideal for those medical packagers with limited space, budget or production requirements, or where the security of a medical vacuum sealer is needed.



Seal length 20", 25", 30"  
Seal width 5/16"  
Dimensions 23"-33"W x 8"H x 15<sup>3</sup>/<sub>4</sub>" D

Available in three sealbar lengths, the **PVT MED** comes with a number of features including a temperature controller with digital display.

# MEDICAL SEALERS

PAC, the leader in medical validation sealers, offers nozzle vacuum/gas sealers, and vacuum chambers for the packaging of medical products. These machines meet the requirements for clean room and regular production environments for both sterile and non-sterile applications. Using specially designed controls permit the user to program set points for the sealing parameters of time, temperature and pressure. Please visit our website at [www.packagingaids.com](http://www.packagingaids.com) to find out more information on PAC's complete line of medical validatable machines.



## GLOSSARY OF TERMS

**Crank Adjustable Frame:** A hand crank is installed on the machine frame for adjustment in sealing height to meet the application requirements. This allows for integration with conveying systems, variable product height, and/or ergonomic requirements.

**Bag Cassette:** A fixture for speed and ease of loading and positioning multiple bags along the sealing jaws and aligning with vacuum nozzles. The bag cassette also helps maintain bag shape during the vacuum cycle.

**Bag Stretcher:** Pneumatically activated fingers extend into the crease of the bag prior to the sealing cycle to prevent wrinkles in the seal area. This reduces the opportunity for vacuum leaks and produces cosmetically attractive, retail quality seals.

**Biactive Seal:** Both sealing jaws are heated. This feature is beneficial when sealing thick or high temperature material while reducing the overall sealing cycle.

**Dual Palm Switches:** Anti-tie down palm buttons used in place of a foot switch to activate the vacuum and sealing cycle, preventing operator contact with the sealing jaws during closure.

**Foot Switch Vacuum Control:** This allows for controlling the duration of the vacuum cycle by depressing a foot switch.

**Gas Flush:** This feature allows for the ability to purge the bag with gas before or after the vacuum cycle. Gas is flushed through the vacuum nozzles.

**Jaw Selector Switch:** Allows for selection between biactive heat (both jaws) or single sided heat with top or bottom jaw only.

**Locking Control Box Cover:** A clear, key-locking, cover on the control cabinet to prevent unauthorized access and changes to the machine.

**Multi-Stage:** This feature allows for setting multiple vacuum and gas cycles, continuously, prior to the sealing cycle. This helps achieve lower residual oxygen and moisture levels faster than single, long duration, cycles.

**NEMA Enclosure:** Special enclosures used to contain electrical and pneumatic components to isolate them from environmental conditions.

**Nozzle Extend Control:** The vacuum nozzles remain retracted from the sealing area for ease of bag positioning. A foot switch is used to extend the nozzles into position prior to cycle initiation.

**Open Head Design:** This feature allows for easy bag positioning and access to vacuum nozzles, as there are no obstructions behind the sealing jaws.

**Particle Ejection System:** The vacuum lines and nozzles are back flushed with high pressure air at the end of each cycle to remove particulates and prevent contamination of the vacuum system.

**Ported Exhaust:** All pneumatic systems are combined to a single output port for plumbing exhaust outside of a clean room environment, preventing pneumatics from exhausting to atmosphere and causing contamination.

**Seal Only Switch:** Retracts the nozzles from the sealing area and disables vacuum/gas timers to allow for bag sealing purposes only.

**SureTemp™ Temperature Controller:** Allows for precise control of the sealing temperature to ensure consistent seal quality, and prevent variations related to ambient temperature or heat build-up in the sealing jaws.

**Two Stage Cycle Engagement:** Jaws close by foot switch under low pressure. Vacuum and sealing cycle are initiated by dual palm controls.

**Vacuum Level Sensor:** A nozzle probe detects vacuum levels in each bag and controls the duration of the cycle ensuring consistent levels are achieved, regardless of product volume.

**Venturi Vacuum:** A compressed air operated vacuum pump that only runs during the vacuum cycle. Venturi type pumps create less noise and require less maintenance than standard electric pumps.

**Wet Vac System:** This system consists of removable vacuum lines for easy cleaning and a liquid trap, with automatic draining, to contain moisture and prevent contamination of the vacuum system.

**Work Shelf / Bag Support:** A stainless steel, adjustable shelf mounted in front of the sealing jaws to support the product during the vacuum sealing cycle. The adjustable bag support is used in conjunction with the work shelf to further support the bottom of the bag.

# VACUUM/GAS BAG SEALERS - OPTIONS

## SPECIFICATIONS

FEATURES/OPTIONS	PVG	PVK	PVT	FRESH		COFFEE		ELECTRO PAC	BAG-IN-BOX	ELECTRO PAC LITE	COFFEE PAC LITE	MED VAC	PVT MED
				PAC	EXPRESS	PAC	EXPRESS						
Crank Adjustable Frame	opt	opt	-	opt	opt	opt	opt	opt	std	-	-	-	-
Bag Stretcher	opt	opt	-	opt	opt	-	-	std	std	-	-	opt	-
Biactive Seal	std	std	opt	std	std	std	std	std	std	std	std	std	opt
Casters	opt	opt	-	opt	opt	opt	opt	opt	opt	-	-	opt	-
Dual Palm Switch	opt	opt	-	opt	opt	opt	opt	opt	opt	-	-	opt	opt
Dual Stainless Steel Nozzles	std	std	opt	std	std	-	-	opt	std	opt	std	std	-
Electric Vacuum Pump	std	std	-	-	std	-	std	-	std	-	-	std	-
Nozzle Extend Control	opt	opt	-	opt	opt	opt	opt	opt	std	-	-	opt	-
Gas Flush	std	std	opt	std	std	std	std	std	std	std	std	std	std
Integrated Compressor	opt	opt	-	-	opt	-	opt	opt	opt	-	-	opt	-
Jaw Selector Switch	opt	opt	-	opt	opt	opt	opt	opt	opt	-	-	std	std
Larger Nozzles	opt	std	-	std	std	-	-	opt	std	-	-	opt	-
Locking Control Box Cover	opt	opt	-	-	-	-	-	std	opt	-	-	std	-
Multi-Stage	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt
NEMA Enclosure	opt	opt	-	std	std	opt	opt	-	opt	-	-	opt	-
Open Head Design	-	std	-	-	std	-	std	-	std	-	-	-	-
Particle Ejection System	-	-	-	-	-	std	std	-	-	-	std	opt	opt
Ported Exhaust	opt	opt	opt	opt	opt	opt	opt	std	opt	std	opt	std	std
Seal Only Switch	opt	opt	opt	opt	opt	opt	opt	std	opt	std	opt	std	std
Stainless Steel	opt	opt	opt	std	std	opt	opt	opt	opt	opt	opt	opt	std
Stand	-	-	opt	-	-	-	-	-	-	opt	opt	std	opt
SureTemp™ Temperature Control	opt	opt	opt	opt	opt	opt	opt	std	opt	std	-	std	std
Vacuum Level Sensor	opt	opt	opt	opt	opt	-	-	std	opt	opt	opt	opt	opt
Venturi Vacuum	opt	opt	std	std	opt	std	opt	std	opt	std	std	opt	std
Wet Vac System	-	-	-	opt	opt	-	-	-	-	-	-	opt	-
Workshelf/Bag Support	opt	opt	opt	opt	opt	std	std	std	-	opt	opt	opt	opt

## VACUUM CHAMBERS



Vacuum chamber machines are ideal where high vacuum levels are required. They are designed to meet the most demanding requirements in a variety of industries including food processing, medical, hardware and electronics. They are used to package products with modified atmosphere packaging (MAP). PAC offers a wide variety of chamber sizes, from tabletop to floor standing models. This line of machines is excellent for applications requiring maximum air removal and faster production speeds. Please visit our website at [www.packagingaids.com](http://www.packagingaids.com) to find more information on PAC's complete line of vacuum chambers.

THE INTEGRITY OF THE SEAL  
PROTECTS THE EQUITY OF THE BRAND

Visit [www.packagingaids.com](http://www.packagingaids.com)

# PAC Machinery Group

Packaging Aids • Clamco • Vertrod  
Converting Technology • Dem • AirPillow

---

## THE PAC MACHINERY FAMILY OF COMPANIES:

---

**CLAMCO**



**dem**

**PAC Packaging Aids**



**PAC Machinery Group**, with over 60 years of experience, offers one of the most comprehensive lines of packaging equipment in the flexible packaging machinery industry. We provide a total “systems approach” by providing a wide variety of packaging machinery, packaging materials, and a knowledgeable and experienced engineering and technical support staff. We manufacture and sell many of the packaging equipment brands you recognize, such as **Vertrod**, **Clamco**, **Packaging Aids**, **DEM** and **Converting Technology**. **PMG’s** packaging equipment includes automatic baggers, shrink wrap sealers and heat tunnels, vacuum sealers in snorkel and chamber models, modified atmosphere machines with gas flush, medical sealers, flow wrappers for standard and high speed applications, skin packaging equipment, **AirPillow™** systems for void fill, as well as a variety of heavy duty packaging and heat sealing machines for fabrication applications. Please visit our website at [www.pacmachinery.com](http://www.pacmachinery.com) or call **1-800-985-9570** to contact one of our packaging experts who will assist you with your selection.

Visit our website at [www.pacmachinery.com](http://www.pacmachinery.com)

25 Tiburon Street, San Rafael CA 94901 (T)415.454.4868 (F)415.454-6853