

The Eighth Issue

The First Specialized Monthly Magazine of Tray Sealer, Thermoforming and Vacuum Chamber Packaging Machinery Industry

VORMEK

Vormek – a knowledge-based machinery company, an innovation reference with superior technology and high reputation in its field

Editor-in-Chief: Mr. Simon Füllenbach- Designer of Vormek Packaging Machines and Founder of this Company

Editorialist: Dr. David Sterling (Faculty Member of University, Marketing and Sales Consultant)

Editor and Translator: Dr. Stefanie Kaiser

Editorial Board: Marketing and Sales Unit of Vormek

Monthly Magazine Number Eight / August of 2025



Scan to receive information?



www.VORMEK.de
EN-AR-RU-DE



ISO 9001 Certificate in the Field of
Packaging Machines Manufacturing



Achieving CE Certificate from European
Country in the Field of Packaging
Machines Manufacturing



License Holder and Director-in-Charge :
Simon Füllendach

Editor-in-Chief :
Dr. David Sterling
Faculty Member and Professor of University

Editor and Translator :
Dr. Stefanie Kuhn

Graphic Designer and Layout Artist :
Mr. Gazi Shams

Website: [Vormek.Com/ En-Ar-Ru-De](http://Vormek.Com/En-Ar-Ru-De)

Mobile Phone: +44 7552 732408

Email: info@vormek.co

VORMEK.com
EN-AR-RU-DE



SEMI-AUTOMATIC
TRAY SEALER MACHINE

AUTOMATIC TRAY SEALER
PACKAGING MACHINE

Content

- 4 Vormek, Leading in Designing and Manufacturing of Industrial Equipment with Global Standards
- 5 Servo motors are the Heartbeat of Precise Control in Industrial Automation.
- 6 Semi-automatic TraySealer Packaging Machine for Packaging Medical Devices along with Die-cutting Machine
- 7 Fermentation Process, Biological Composition And Cultural Role
- 8 The Impact of Aesthetic Preferences Influenced by Packaging by Tray Sealer Packaging Machines on Consumer Buying Behavior in Food Retail
- 9 Gut Health and Delicious Pickles
- 10 Pickles Serial
- 11 Secrets of Delicious Pickles: Tradition or Industry?
- 12 Satisfaction Statement on Cooperation with Vormek
- 13 Pickle Packaging: From Clay Jars to Modern Technologies
- 14 Modern Pickles Packaging with Nanotechnology and Natural Compounds
- 15 Safe and Advanced Design of Packaging Machines in the Food Industry
- 16 Less Workforce, More Production: The Secret of Gharyeh Ali's Success
- 17 Vinegar and Alcohol Production – A Practice Rooted in History
- 18 A New Innovation at Vormek –The Future of Packaging Is Right Here



Vormek, Leading in Designing and Manufacturing of Industrial Equipment with Global Standards

Editorial: Dr. David Sterling

Vormek, utilizing advanced technical knowledge, cutting-edge infrastructure, and a specialized team, is recognized as one of the reputable manufacturers of industrial equipment at the national and regional levels. Our focus on the development of precise, safe engineering solutions aligned with the actual needs of the industry has made us a strategic partner for many manufacturers in the food, pharmaceutical, chemical, and hygiene sectors.

In our latest achievement, we have introduced a new generation of filling machines—products that, with optimal design, precise performance, and customization capabilities meet a wide range of needs for modern production lines. These machines, fully complying with international standards, enhance productivity, quality, and safety, providing a different experience in industrial production.

Vormek is more than just a committed manufacturer; we offer comprehensive services from consultation and design to installation, training, and continuous technical support. We believe that quality comes from attention to detail, commitment, and effective communication with our customers, and this belief is reflected in each of our products.





Servo motors are the Heartbeat of Precise Control in Industrial Automation



Mr. Ernst Füllenbach, Chairman of the Directors Board of Vornek

From the perspective of an electrical engineer, servo motors are one of the key factors in closed-loop control systems, enabling precise positioning, speed control, and torque with high accuracy. Unlike induction or universal motors, servo motors, using a momentary encoder feedback, can compare the real-time position of the axis with the reference command and apply necessary corrections. This feature makes them an unmatched option for applications such as CNC machining, robotics, and high-precision packaging lines.

From a technical standpoint, servo motors are usually available in two types: DC and AC, with the AC type being preferred in industrial applications due to its higher efficiency, more stable performance, and longer lifespan. The servo driver adjusts current and voltage using control algorithms like PID and more modern techniques, such as Field-Oriented Control, to optimize the system's dynamic response. Incremental or absolute encoders with high resolution send position data digitally to the driver, and this communication typically occurs through protocols like EtherCAT, CANopen, or Modbus.

In automation system design, selecting the appropriate servo motor requires a detailed analysis of mechanical load, torque-speed curve, load inertia, and control requirements. For example, in applications with sudden load changes or the need for rapid stops and starts, servo motors with high peak torque and short response times are preferred. Additionally, matching the inertia between the motor and load is crucial for preventing oscillations and improving system stability. Overall, servo motors are not only control tools but also vital elements in achieving precision, speed, and reliability in modern industrial processes.





Semi-automatic TraySealer Packaging Machine for Packaging Medical Devices along with Die-cutting Machine

Mr. Simon Füllenbach

A Very Suitable Solution for Beautiful and Practical Packaging of Medical Devices

In the process of packaging medical devices, it is crucial to follow sterilization principles, protect against environmental contamination, and present a beautiful and safe appearance for the product. The semi-automatic tray sealer packaging machine is considered one of the ideal solutions for this purpose, especially for packaging products with low production capacities and limited sizes.

Performance of the Semi-Automatic Tray Sealer Packaging Machine

In this process, packaging trays, primarily made of PVC, containing the product, are placed into the machine. After the rotary table rotates, the sealing operation is performed. The lids of these trays are covered with medical papers such as Medical Paper or Tyvek.

Tyvek paper is a unique material made from very thin, high-density polyethylene (HDPE) fibers produced by a non-woven method. These fibers are randomly intertwined and connected under pressure and heat to create a material with unique properties. It has gas permeability, allowing sterilizing gases like ethylene oxide or gamma rays to pass through for sterilization but preventing microorganisms from entering after sterilization.

Tyvek is exclusively produced by DuPont, USA.

Technical Features and Properties of Tyvek:

- **Air and gas permeability but not to microbes**

Allows the passage of sterilizing gases like ethylene oxide (ETO) or steam while preventing the entry of airborne microorganisms and bacteria. This property makes it ideal for medical equipment sterilization packaging.

- **Resistance to water and chemicals**

Breathable but impermeable to water and many chemicals

- **Thermal stability**

Does not deform at high temperatures and is resistant to the necessary sealing heat

Easy to work with, can be folded, sewn, or pressed

- **Lightweight and flexible**

Working With Tyvek Is Easy; It Can Be Bent, Sewn, Or Pressed.

Key Features of the Semi-Automatic Tray Sealer Machine:

- Precise adjustment of temperature and pneumatic pressure for uniform and reliable sealing
- Rotary table status display with a green light indicating readiness for sealing
- Ease of use and training for operators
- Quick and optimized working cycle to increase productivity

Quality of Cutting and Final Aesthetics of the Die-Cutting Machine

After the sealing operation, the precise and clean cutting of the packaging edges is of special importance, especially for the visual appearance and preparation for final product presentation. The die-cutting press machine performs this task with high precision. It uses specially serrated blades and applies uniform pressure to ensure the edges of the container and medical paper are cut smoothly and evenly.

Features of the Die-Cutting Machine:

- Hydraulic and pneumatic operation with adjustable, uniform pressure
- Clean and uniform cutting without damaging the packaging structure
- Creates a professional, beautiful appearance suitable for market-ready presentation

These two machines, working together, provide a complete, efficient, and cost-effective solution for medical devices production units that do not require large expensive packaging lines but still adhere to qualified and product safety standards



Fermentation Process Biological Composition, And Cultural Role

Pickles are one of the fermented food products that hold a special place in many cultures, within traditional meals. This product results from the fermentation of fruits and vegetables such as cucumbers, cauliflower, carrots, garlic, and peppers in an acidic environment containing vinegar and salt. The final combination, in addition to its desirable taste, has significant biological and nutritional properties.

Fermentation Process and the Role of Microorganisms

Pickles are mainly produced through lactic fermentation. In this process, lactic acid bacteria (LAB) such as *Lactobacillus plantarum* and *Leuconostoc mesenteroides* convert the sugars present in raw materials into lactic acid. This acid lowers the pH of the environment and creates unfavorable conditions for the growth of pathogenic microorganisms. As a result, the final product becomes more stable in terms of food safety and has a longer shelf life.

Chemical Composition and Nutritional Properties

Pickles contain active biological compounds such as antioxidants, dietary fiber, and phenolic compounds. These substances can play a role in reducing inflammation

improving digestive performance, and strengthening the immune system. Moreover, some studies have shown that moderate consumption of fermented pickles may help regulate gut microbiota and enhance metabolic health.

Cultural and Social Aspects

In Iranian culture, preparing pickles is not only a cooking activity but also a kind of family ritual. This process is often carried out in autumn and involves family members participating in preparation, mixing, and storage of the ingredients. Such activities, while preserving food traditions, lead to the transmission of experiential knowledge and strengthen social bonds between generations.

Consumption Considerations

Despite their nutritional benefits, excessive consumption of pickles, due to their high salt and acid content, may be harmful for individuals with high blood pressure, stomach ulcers, or kidney diseases. Therefore, it is recommended that pickles be consumed in moderation within a diet, alongside other healthy foods.



The Impact of Aesthetic Preferences Influenced by Packaging by Tray Sealer Packaging Machines on Consumer Buying Behavior in Food Retail

Dr. David Sterling

In the highly competitive food retail space, many purchase decisions are made within seconds and are based on the appearance of the packaging.

Vacuum seal packaging technology, implemented by tray sealer, thermoforming and vacuum chamber machines, provides an organized, transparent, and safe appearance for food products such as chicken, meat, dates, olives, and salad.

This beautiful and consistent appearance targets customer aesthetic preferences and influences their buying behavior.

Consumer Aesthetics and Perception of Quality

Consumers often perceive vacuum-packed products as cleaner, more professional and higher in quality.

The transparency of the lid and the orderly arrangement of the content, especially in fresh foods, reinforce the sense of "Freshness" and "Visual Honesty."

This increases the willingness to purchase products in such packaging compared to traditional packaging.

Consumer Trust and Psychological Safety

Products in vacuum seal packaging give consumers a sense of safety and assure them that the product has no direct contact with environmental contamination.

This trust arises not only from physical hygiene but also from aesthetic responses to order, symmetry, and package design.

Direct Impact on Product Choice in Retail (Impulse Buying)

In chain stores and supermarkets, where brand and product variety is vast, vacuum seal packaging with a beautiful and uniform design can strongly influence consumers' momentary choices.

For example:

- Packs of chicken and meat with transparent vacuum and clean labels convey professionalism and freshness.
- Olives or dates in packs done by tray sealer packaging machines create a sense of luxury and high quality.

- Vacuumed salads in transparent trays with attractive color combinations draw attention on the shelves.

Impact on Consumer Loyalty

Food producers who use tray sealer or vacuum chamber machines for distinctive packaging of their products are often associated with quality and innovation in consumers' minds.

Aesthetic packaging becomes a part of brand identity and, in the long run, builds loyalty.

Final Word

Vacuum seal packaging with tray sealer machines is not only effective in terms of hygiene and preservation but also enhances the customer's visual experience through aesthetics.

This visual experience increases perceived quality, builds trust, and ultimately drives brand preference and higher sales.

Paying attention to aesthetics in packaging design, especially in the competitive market of fresh foods, is considered a fundamental competitive advantage.

My recommendation to food industry managers, especially producers of cut chicken and meat, semi-prepared foods, olives, dates, salads and vegetables, spices, confectioneries, pickles, condiments, legumes, and dried fruits, is to trust **VORMEK**, a specialized manufacturer of tray sealer, thermoforming, and vacuum chamber machines, and shift from traditional packaging in retail toward vacuum seal packaging.

Very soon you will benefit from the numerous advantages of this packaging in growing your business.

In this exciting journey, you respected producers are not alone—senior food industry and sales of the company stand by you empathetically from the very beginning of the decision-making process until purchase, providing you with specialized consultation. Just one call is enough...



Gut Health and Delicious Pickles

Fermented pickles, especially traditional types such as sauerkraut and cucumber pickles, play an important role in improving gut health. These products contain live beneficial bacteria known as probiotics, which help maintain bacterial balance, reduce inflammation, and prevent the growth of pathogenic microorganisms by strengthening the gut microbiome.

Regular consumption of natural pickles can strengthen the intestinal mucosal barrier, increase the production of beneficial metabolites, and improve nutrient absorption. They are also effective in reducing digestive symptoms such as bloating, constipation, and irritable bowel syndrome.

However, due to their high salt and acid content, they should be consumed in moderation and preferably along with a fiber-rich diet to fully enhance their probiotic effects. Unpasteurized fermented pickles without preservatives are considered the best option for digestive benefits and strengthening the immune system.



From Your Dining Table to Boosting Your Health- A Story You Should Know

Discover the Untold Secrets of Pickles

Pickles can be a source of probiotics, which are useful for gut health. These live microorganisms help balance the gut flora and improve digestion.

Vitamin C is a Powerful Antioxidant

Some pickles such as sauerkraut are rich in vitamin C. Vitamin C is a powerful antioxidant which helps strengthen the immune system.

Stimulating Appetite with Colorful Dining Tables

In some cultures, consuming pickles aids in digestion. The acids present in pickles can help break down food and improve nutrient absorption.

Specific Varieties

The variety of pickles around the world is vast with each country having its unique types. From the spicy Asian pickles to sweet European varieties, the diversity in flavors and ingredients is remarkable.

What is Vinegar for?

Preserving vegetables in vinegar is one of the oldest methods of preservation, leading to the production of pickles. The acid in vinegar inhibits the growth of bacteria, thereby extending the shelf life of vegetables.

Therapeutic Additives

Adding various spices to pickles not only enhances their flavor but also can impart therapeutic properties. Spices such as turmeric or ginger can provide anti-inflammatory or antioxidant benefits to the pickles.

Better Digestion with a Weak Acid

Pickles can stimulate the appetite and make the dining table more colorful. The spicy and sour flavor of pickles can stimulate the salivary glands and increase a person's appetite.

Salt or Blood Pressure

The amount of salt in pickles should be controlled to prevent excessive sodium intake. High salt consumption can be harmful to health, so it is important to be mindful when consuming pickles.

Homemade Delicacies or Industrial Ones?

The shelf life of pickles packaged using the MAP method is extended, while their organoleptic properties are preserved.

VORMEK

Vormek is a knowledge-based company and manufacturer of **tray sealer packaging machines** with a real MAP system, which has been operating specifically in this field for about 15 years.



www.vormek.co

VORMEK

+447552732408



Secrets of Delicious Pickles: Tradition or Industry?

Pickle Making – One of the Authentic Culinary Arts in Iranian Food Culture – is carried out in two ways: traditional and industrial. Each of these methods, with its own features and steps, produces a product with different taste and quality.

Traditional Method

In the traditional method, pickling is mainly done at home or in small workshops and is based on experience, personal taste, and the use of natural ingredients. First vegetables and fruits such as cucumber, cauliflower, carrot, eggplant, garlic, and pepper are selected and carefully washed and disinfected. Then, the ingredients are chopped manually and arranged in glass or earthenware jars. The pickle solution, a mixture of vinegar, salt, spices, and sometimes lemon juice or verjuice, is added to the jar. This mixture is kept in a cool and dark environment so that over several weeks, the natural fermentation process and full flavor development take place. The final product has a homemade, well-matured, and unique taste that is the result of patience, care, and personal creativity.

Industrial Method

In contrast, the industrial method of pickle production is carried out in factories and large workshops using advanced equipment and hygienic standards. The production steps include automatic washing of raw materials, slicing with specialized machines, sorting and preparing vegetables, adding the pickle solution with filling machines, and packaging in plastic or glass containers using cappers

labelers, and shrink wrap. To increase shelf life and prevent mold and harmful bacterial growth, the final product undergoes pasteurization. In addition, production date, expiration date, and product specifications are printed on the package with a jet printer. This method allows mass production, uniform quality control, and wide distribution in the market.

Advantages and Disadvantages

Traditional pickle making, usually done at home, provides full control over the ingredients, personalized flavoring, and the use of natural components. Since no preservatives are used, this method is more suitable for people interested in healthy eating. However, the traditional process is time-consuming, and if hygienic measures are not strictly followed, spoilage or mold growth may occur. Moreover, the taste and quality of the pickle may vary with each preparation.

On the other hand, the industrial method, using advanced equipment and hygienic standards, enables mass production, consistency in quality, and longer shelf life. Industrial pickles are easily available and require no preparation before consumption. However, the use of preservatives and standardized flavoring may not appeal to some, and the quality of raw materials can vary across weaker brands.

In conclusion, the choice between these two methods depends on personal preferences, lifestyle, and nutritional priorities.



Satisfaction Statement on Cooperation with Vormek:



Mr. Rahmani, CEO of Arkanfelez

With pride, Arkanfelez, a knowledge-based industrial and production group, as one of the pioneers in the design and manufacturing of machinery for the food, chemical, and cosmetics industries, has been taking steady and specialized steps in the path of elevating Iran's industry for over 40 years.

This company, managed by Mr. Rahmani, relying on domestic technical expertise and more than 1,500 active dossiers, has not only played a significant role in meeting the needs of domestic producers but has also successfully exported its products to neighboring countries, highlighting Iran's name in the industrial production sector.

The company's outstanding productions – including fully automatic metal capping machines, industrial vinegar production equipment, specialized homogenizers, and various machines for producing sauces (mayonnaise, ketchup, etc.) – demonstrate its commitment to innovation, quality, and responsiveness to the evolving needs of the industry.

Our collaboration with Arkanfelez is a golden page of constructive interaction between media and industry; an interaction formed with the aim of reflecting national achievements, promoting the culture of self-reliance, and supporting domestic producers. It is a sign of our alignment with the growing movement of knowledge-based companies and industrial innovators in the country.

This solidarity marks the intersection of media awareness and the continuous efforts of production pioneers; a path that unites us in realizing an independent and flourishing economic vision.



Pickle Packaging: From Clay Jars to Modern Technologies

Traditional Packaging

In traditional packaging methods, glass, earthenware, or plastic containers are often used, covered with simple or fabric lids. These methods are more common in homemade or small workshop productions and, due to the lack of precise control over environmental factors such as oxygen, humidity, and temperature, the shelf life of the product is limited. In the traditional pickle industry, vinegar, salt, and spices are commonly used as natural preservatives, but the packaging usually lacks isolating features and is vulnerable to environmental contamination. Although these methods carry a nostalgic feel and cultural authenticity, they do not meet hygienic and export requirements on an industrial scale.

Industrial Packaging

In the modern industry, packaging is done with advanced technologies such as vacuum and modified atmosphere packaging (MAP). In vacuum packaging, air is completely removed from the package and then sealed to prevent microbial growth and spoilage. This method is also used in the pickle industry, especially for products that need long shelf life without chemical preservatives. In modified atmosphere

packaging, the composition of gases inside the package (such as nitrogen and carbon dioxide) is adjusted to create optimal conditions for maintaining the product's quality and freshness. These technologies not only extend shelf life but also make the packaging more professional, enabling exports and distribution in chain stores.

Industrial Packaging Has a Significant Impact on Pickle Quality

By using modern technologies such as vacuum and modified atmosphere packaging (MAP), optimal storage conditions are provided for these sensitive products. In the vacuum method, by completely removing air from the package, bacterial and mold growth is minimized and oxidation of the ingredients is prevented, which helps preserve the taste, color, and texture of pickles. In MAP packaging, gases such as nitrogen and carbon dioxide are used instead of oxygen, creating a controlled environment that prevents spoilage and chemical changes in the product. These methods not only extend the shelf life of pickles but also make it possible to offer them in domestic and export markets with hygienic standards and attractive appearance.





Modern Pickles Packaging with Nanotechnology and Natural Compounds

Dr. Stefanie Kaiser

In the design and manufacturing of advanced packaging machines – including tray sealer, thermoforming, skin pack, and vacuum chamber machines equipped with the modified atmosphere packaging (MAP) option – we constantly seek solutions that significantly increase the shelf life and quality of your food products.

One of the most valuable innovations in this field is the use of nanoparticles and natural antibacterial compounds in pickle packaging. These compounds, with strong antimicrobial properties, are incorporated as coatings or active layers in the packaging to inhibit the growth of bacteria and molds. Examples include:

1. **Metal nanoparticles (such as silver and zinc oxide):** With strong antimicrobial effects, they can inhibit the growth of spoilage-causing bacteria.
2. **Natural plant compounds (thyme, cinnamon, garlic, and rosemary):** Rich in phenols and bioactive terpenes with antibacterial and antioxidant properties.
3. **Nanoencapsulation of plant essential oils:** This method allows the gradual release of active compounds, resulting in longer-lasting antimicrobial effects inside the package.

The effectiveness of active films/coatings using silver nanoparticles (Ag), zinc oxide (ZnO), chitosan, natural essential oils, or a combination of these, along with modified atmosphere packaging, has been proven not only at the laboratory scale

but also in various patents currently applied by some companies.

For example, edible chitosan films reinforced with ZnO nanoparticles exhibited several key features:

- Improved mechanical strength and resistance to moisture penetration
- Strong antibacterial activity against spoilage bacteria.
- Thanks to their natural base (chitosan), they are particularly suitable for acidic foods such as pickles, making them closer to practical application. This combination is both environmentally friendly and safe for direct food contact.

Conclusion

The results of this technology show that combining it with advanced packaging systems such as vacuum or modified atmosphere packaging can:

- Multiply the shelf life of pickles compared to conventional methods.
- Reduce the use of chemical preservatives and deliver a healthier product.
- Preserve organoleptic and nutritional properties throughout storage.
- Ultimately improve consumer safety and health.

This technology represents an emerging approach in the packaging industry that still holds great potential for research and development, and in the future, it may become one of the strategic technologies in the food and packaging industries.

Safe and Advanced Design of Packaging Machines in the Food Industry

A Specialized Perspective from Mechanical, Electrical & Automation, Food Industry and Industrial Safety Experts

In the food packaging industry, machine safety not only means protecting the operator but also directly impacts product quality, production line efficiency, and compliance with hygienic and industrial standards. At Vormek, we approach the design and manufacturing of packaging machines with a comprehensive multidisciplinary perspective. Machines such as tray sealers, thermofforming systems, vacuum chambers, and auxiliary equipment are built from the ground up with safety, hygiene, operational precision, and ease of use in mind.

Mechanical Design with a Safety Approach

From the viewpoint of a mechanical design engineer, the first step in ensuring machine safety is fundamental, hazard-free design. All body parts and moving components are made of hygienic stainless steels (304 or 316), which are not only highly durable but also safe for direct food contact.

We specifically avoid creating sharp edges, instead designing all corners rounded and safe so that in the event of accidental contact, operators are not cut or injured. Moreover, the machines are engineered to minimize the operator's need for direct involvement in high-risk zones.

Smart Control and Error Prevention

In the field of industrial automation, our focus is on preventing errors before they occur. By using advanced PLCs and precise programming, the machine's control system is designed to automatically stop and issue alerts at the slightest sign of

technical malfunction or hazard.

Sensors monitoring air pressure, temperature, cylinder positions, mold status, and even door conditions feed into the control system. This ensures the chance of accidents is reduced to a minimum. In special situations – such as loss of pneumatic pressure or when a machine door is opened – the system immediately switches to Safe Mode.

Safety Requirements and Operator Protection

From an industrial safety perspective, protecting operators in emergencies is of vital importance. Emergency Stop buttons are installed at multiple points on the machines, including operator stations and entry/exit points. They are positioned so that operators can react instantly from any working position.

In addition, safety covers, emergency stop sensors, interlocks, and physical guards have been integrated to prevent accidents. When the emergency stop button is pressed, the machine halts immediately and cannot be restarted until proper inspection has been carried out.

Conclusion

At Vormek, we believe safety is an inseparable part of machine quality. A machine designed without safety considerations, no matter how technically advanced, holds no true operational value. That's why, by leveraging specialized expertise in mechanical design, automation, food technology, and industrial safety, we have developed a new generation of packaging machines that meet global standards not only in performance but also in safety and hygiene.



Dr. Gharyeh Ali

Dr. Gharyeh Ali



Less Workforce, More Production: The Secret of Gharyeh Ali's Success

Dr. Zakizadeh, Owner the Brand of Dr Gharyeh Ali

As part of the field visits by our after-sales service team, this time we had the pleasure of meeting Mr. Zakizadeh, the manager of the well-known Gharyeh Ali brand. This reputable brand specializes in the production and packaging of pickles and cucumber pickles and today manages its production line with just two operators using two of our packaging machines – one dedicated to cucumber pickles and the other to assorted pickles.

With a smile, Mr. Zakizadeh explained that they prepare up to 4,000 packages daily and up to 45,000 packages weekly. Without gas injection and only using 40% vacuum, the machines provide a shelf life of one year for pickles and nine months for cucumber pickles – a result that has been completely satisfactory for them. He also mentioned that with gas injection, this shelf life could increase even further. From a technical perspective, the speed and power consumption of the machines were evaluated very positively. Considering the seasonal nature of production and

the possibility of power outages, these machines are designed so that production planning remains fully controllable, ensuring the packaging line continues without interruption. This feature guarantees consistent, economical, and high-quality production even under the toughest conditions.

Strict compliance with hygiene standards and product quality were also highlighted by him as among the most important advantages of machines from Vormeik.

In conclusion, Mr. Zakizadeh expressed his satisfaction:

"Since we purchased your machines, our work speed has multiplied, and without any extra effort, the shelf life of our products has significantly increased. Packaging is done completely automatically and simply, and we feel much more confident about hygiene and quality. We are truly happy that all our products are packaged mechanically and in line with modern technologies using your company's machines."





Vinegar and Alcohol Production A Practice Rooted in History

Dr. Ahmadi, Ph.D. in Food Science, Faculty Member of University

Vinegar, which was used more than 10,000 years ago as a sour liquid for food preservation and flavor enhancement in products such as sauces and ketchup, is produced from sugar- or alcohol-containing materials.

There are different types of vinegar worldwide, each with distinct taste and properties depending on the raw material – such as grapes, apples, rice, or honey.

Two main commercial methods exist for vinegar production:

- **Traditional method:** where oxygen is available only on the surface.
- **Immersion method:** where sufficient oxygen is supplied for bacterial growth making the process faster.

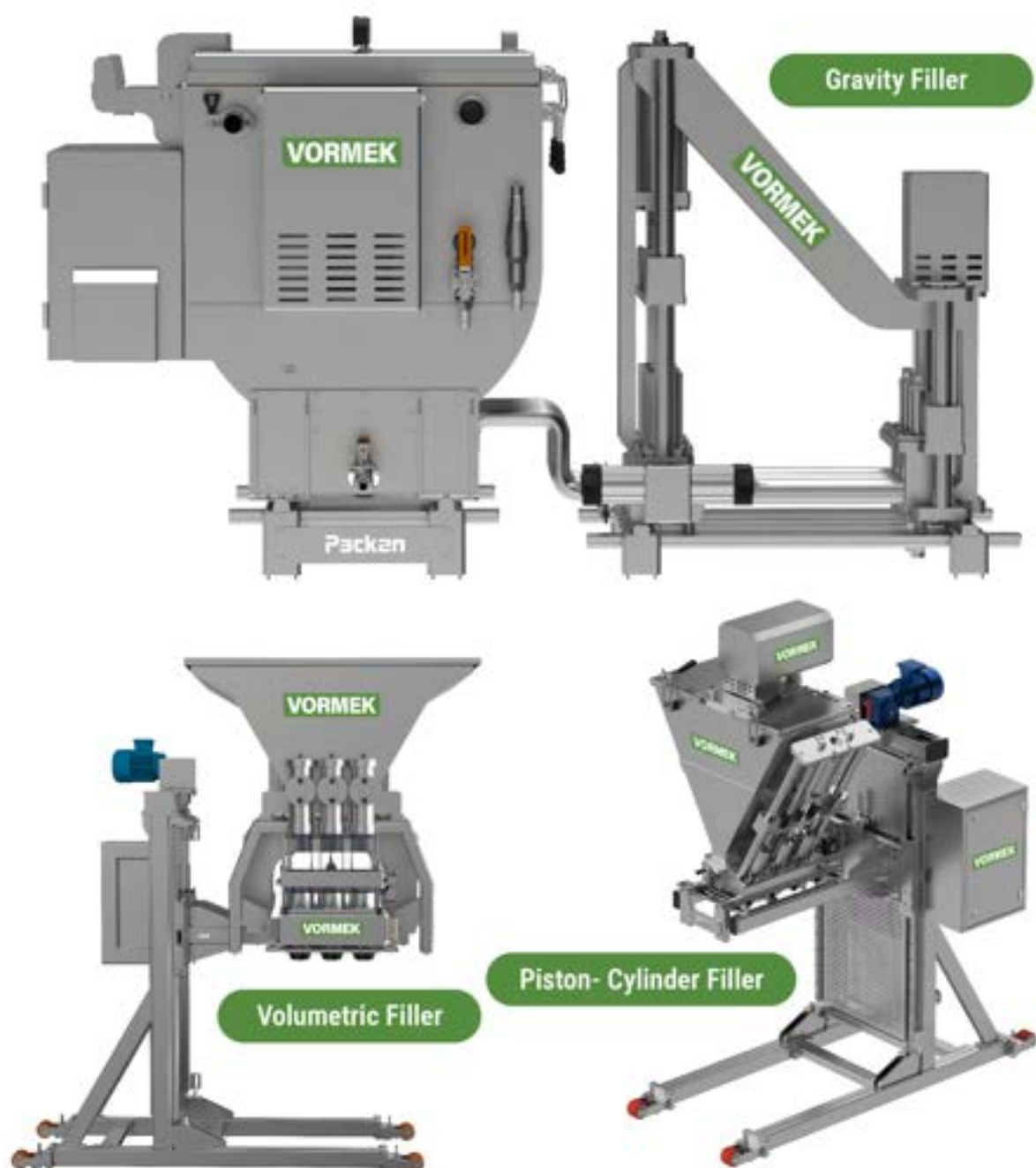
Vinegar is generally obtained from the natural fermentation of fruit juices or fruits. In this process, sugars are first converted into alcohol by yeasts, and then, under aerobic conditions, alcohol is converted into acetic acid – the main component of vinegar.

Natural vinegars, due to their phenolic compounds, provide strong antioxidant properties that can help combat oxidative stress in the body and reduce the risk of diseases such as cancer.

Moreover, studies have shown that vinegar consumption can improve cardiovascular performance, reduce appetite, aid digestion, and lower blood cholesterol levels. Specifically, balsamic vinegar has been found to help improve pancreatic cell function in diabetic animals.

Different vinegars, depending on their raw material and production conditions, possess varying characteristics that affect the final product quality. Research indicates that among various vinegars, grape vinegar and vinegars made from fruits such as pomegranate and sour cherry contain the highest levels of phenolic compounds and antioxidant activity.





A New Innovation at Vormek

The Future of Packaging Is Right Here

With more than a decade of experience in designing and manufacturing packaging machinery, Vormek has once again shifted the boundaries of technology by introducing a new generation of gravity, piston-cylinder and volumetric fillers.

This latest series, with high precision, smooth performance, and customization capabilities, provides an intelligent response to the needs of modern production lines in the food, pharmaceutical, and hygiene industries.

Alongside the production of powerful tray sealers and vacuum chambers, this new innovation reflects our commitment to quality, innovation, and sustainable development.

If you are looking to increase efficiency, reduce waste, and achieve professional packaging – your solution is right here.

Vormek: Where Technology Walks Hand in Hand with Industry



The Importance of Using Tray Sealer, Thermoforming, and Vacuum Chamber Machines in Today's Packaging Industries

- Tray Sealer packaging machines, with easy operation and simple maintenance, make it possible to package a wide variety of food products. In addition to extending shelf life, they give the product a stylish and professional appearance.
- Thermoforming packaging machines, in addition to producing trays, also carry out the filling and packaging process. These machines, in different types such as soft film, hard film, and skin pack, can package food products in a highly professional and attractive way with complete precision.
- Vacuum Chamber machines, by completely removing the air (vacuum) from inside the filled pouches, can ensure freshness, safety, and long-term preservation of food products. Furthermore, the installation of various fillers and dedicated options on these machines makes the packaging process more automated, hygienic, and faster.
- This technological combination elevates packaging standards and, while modernizing the production process, creates trust and a modern image of the producer's brand in the minds of customers.



We warmly invite you, our dear audience, to share your topics of interest with us. Your opinions and suggestions not only help enrich our content but also guide us in providing more practical material to meet your needs.

Would you like to read a report about a specific industry or a special technology in the field of packaging?

Share your thoughts with us so we can cover them in upcoming editions.



VORMEK.com
EN-AR-RU-DE