

The Sixth Issue

The First Specialized Monthly Magazine of the Tray Sealer Packaging Machinery Industry

VORMEK

VORMEK represents technical expertise, high quality, and advanced technology with a forward-thinking approach to designing and manufacturing packaging machines.

VORMEK steht für technisches Know-how, hohe Qualität und moderne Technologie mit einer zukunftsorientierten Herangehensweise bei der Entwicklung und Herstellung von Verpackungsmaschinen.

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**Design: My Second Language of
Engineering, a Visual Narrator of
a Living Industry**

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SEMI-AUTOMATIC
TRAY SEALER MACHINE

AUTOMATIC TRAY SEALER
PACKAGING MACHINE

Content

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Editor-in-chief of the monthly magazine: Date Packaging and Its Target Market

Editor-in-Chief : **Dr.David Sterling (PHD.Marketing and Sale lecturer)**

Let's talk about (date packaging)

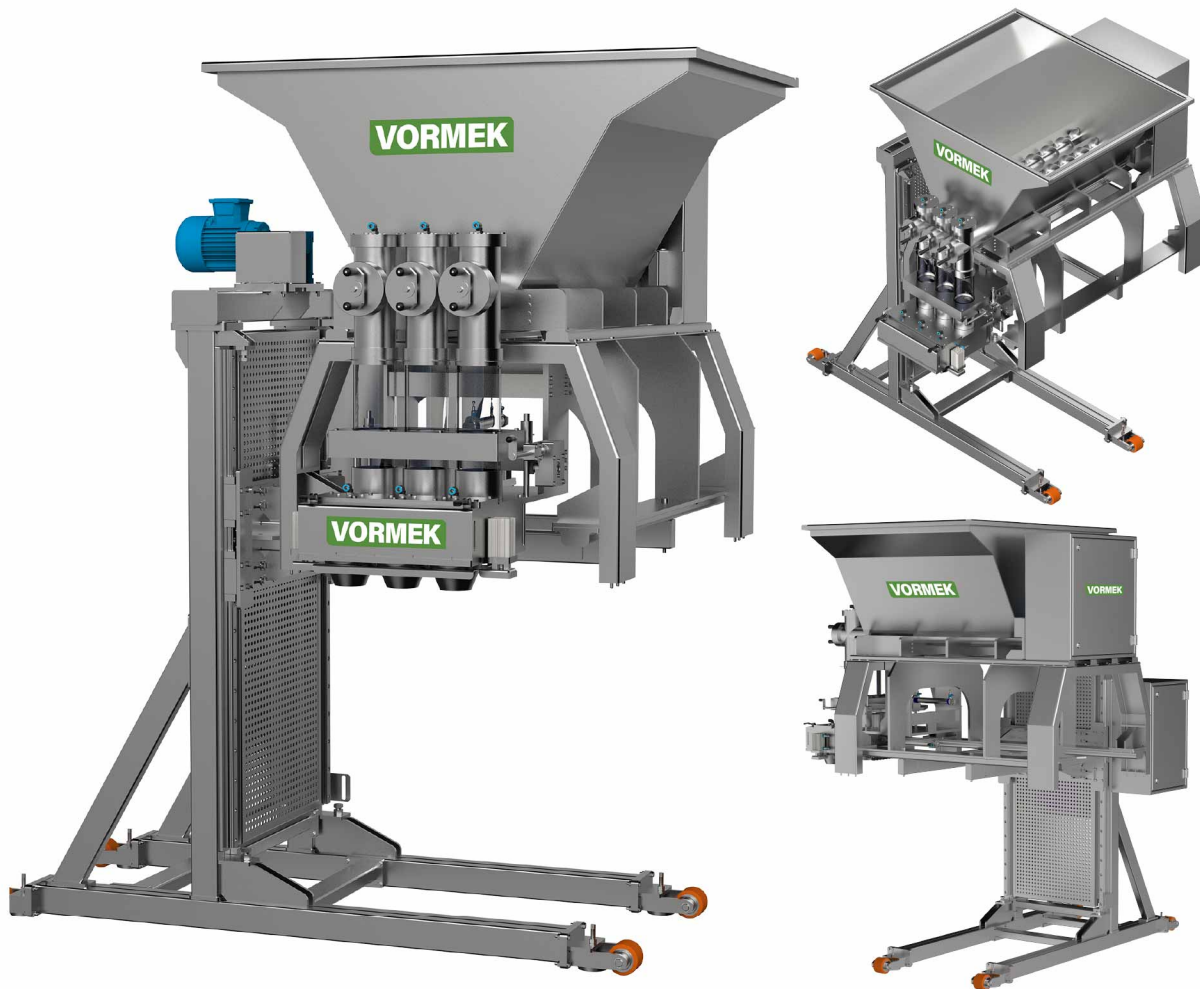
it's way more important than just keeping dates safe! Sure, good packaging keeps these sweet treats fresh, protecting them from moisture, dirt, and getting squashed on their journey to your table. But it's also a powerful salesperson. Think about it: a well-designed package with vibrant colors and clear information can tell a story about where the dates came from, what makes them special, and all the goodness they pack inside. That visual appeal is what often makes someone reach for them on the shelf

So, who are we hoping to reach with these perfectly packaged dates? Our (target market) is pretty broad, really. We're looking at (health-conscious individuals) who want natural, nutritious snacks. We're also thinking about anyone who needs a (quick and convenient energy boost) – dates are fantastic for that. Then there are those who simply prefer (natural sweeteners) in their cooking or daily diet. Beyond that, dates hold significant cultural and traditional value in many parts of the world, often playing a role in holidays and celebrations or given as thoughtful gifts. And thanks to online shopping, beautifully packaged dates can now travel from local farms to kitchens all over the globe, making them accessible to an even wider audience.



Volumetric Filler

An Economical Solution for Optimal Packaging



Volumetric filler is one of the practical equipment in packaging lines, designed for accurate filling of products which cannot be used with weighing fillers due to their shape, stickiness or special texture.

Main Application of Volumetric Filler

This machine is used to fill trays with a fixed and specific volume of semi-solid or granular materials. Products such as

Cultivated olives

Cooked rice

Cooked mushrooms

Fruit salad or similar mixtures

Due to their mixed, sticky or moist texture, they cannot be filled well by standard weighing machines. In these cases, a volumetric filler is the best choice.

Machine Operation

A volumetric filler uses a combination of

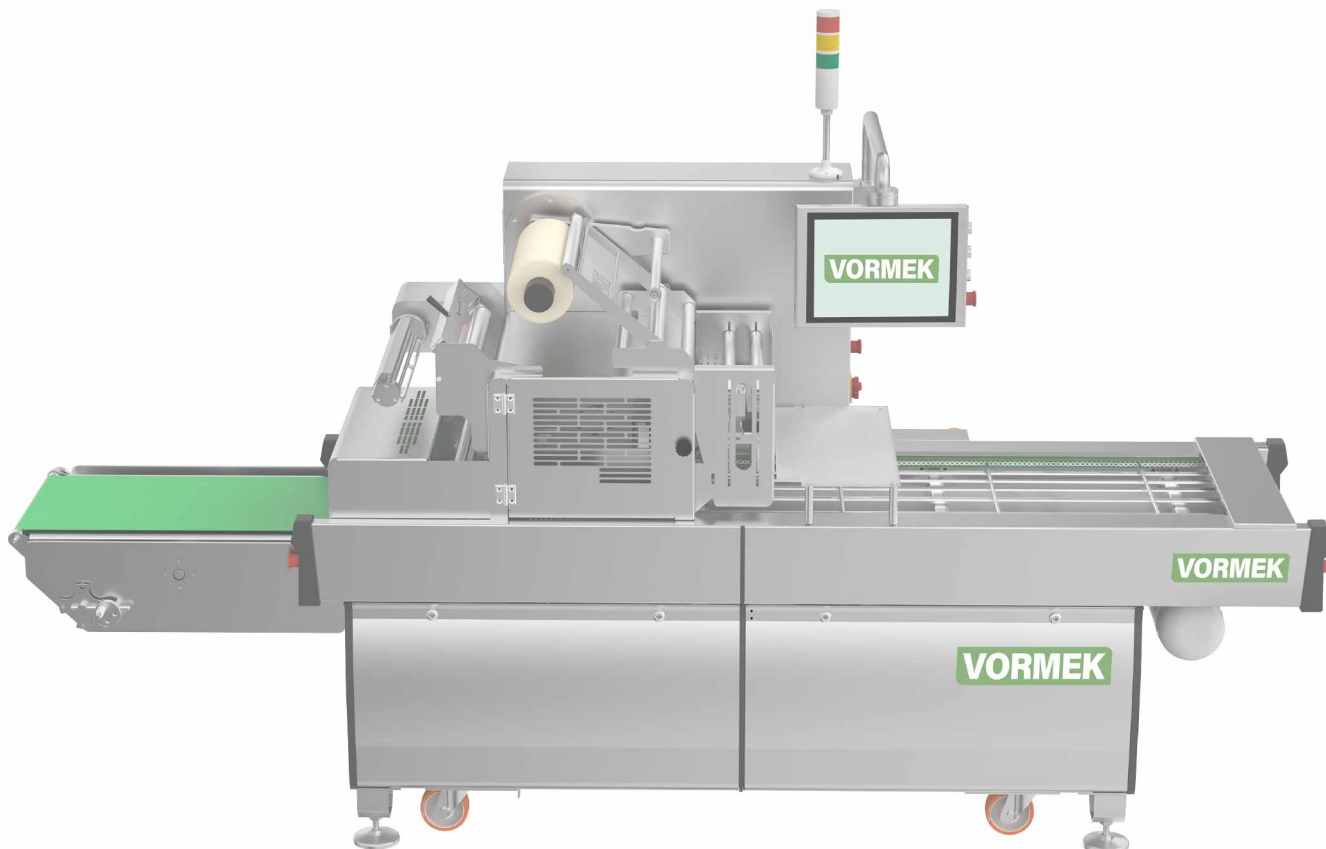
- Mechanical or electronic volume meters
- Precise valve systems
- Control sensors for high accuracy

performs the filling process accurately and quickly, without damaging the texture or appearance of the product.

Advantages of using a volumetric filler

- High accuracy in filling trays
- Suitable speed for semi-automatic and automatic lines
- Easy cleaning and sanitation
- Reliable performance for mixed or wet products

If you are working in the field of special food packaging and are looking for a reliable



The Accuracy of MAP and Vacuum and Gas Injection System in Automatic Tray Sealer Packaging Machine

License Holder and Director-in-Charge : Simon Füllenbach

Accuracy of MAP method implementation and vacuum and gas injection system in automatic tray sealer machine
Standard design for accuracy, speed and stable performance

One of the key and updated parts of our company's professional-grade automatic tray sealer machines is the vacuum system and valves connected to the vacuum pump. Significant changes have been made to the new design of this part to improve performance and prevent any vacuum leakage.

It is very important to note that an effective vacuum only works properly when it is applied in a real closed cycle. Any leaks in the fittings, packing, O-rings or the mold cavity will cause a severe drop in vacuum quality and consequently disrupt the packaging process.

Accordingly, in the design of this machine:

We have used industrial vacuum valves that open and close the vacuum path with high precision and speed in the shortest possible time.

We have used leak-free connection mechanisms and high-precision sealing parts throughout the vacuum path.

The material of the parts, packings, and vacuum path design are selected in such a way that leakage is practically zero.

This high precision in design ensures that the operating speed of the machine is not affected by the vacuum process at any stage, while at the same time providing complete assurance of creating an effective vacuum.

In addition, the combination of pneumatic and vacuum systems in this machine is designed to fully comply with current industrial standards and the needs of modern production lines. After the vacuum process, the desired gas is injected into the chamber with high precision.

Based on comparative studies with similar machines on the market and feedback received from major customers, especially regarding the VORMEK Company's tray sealer machines, these machines have demonstrated very accurate, principled, and stable performance in terms of implementing the MAP modified atmosphere packaging system compared to similar machines on the market.

This precise and engineered design has made our tray sealer machine suitable for use even in quality control laboratories. The reason for this choice is its performance with high accuracy, elimination of vacuum waste, and flawless execution of the MAP process.



Dates and Their Products: A New Shelf Life for a Sweet Treasure

Dates are one of the most valuable agricultural products in Iran, which, in addition to direct consumption, includes products such as date paste, syrup, vinegar, nectar, date chocolate, and nutty energy blends. This diversity has made dates a strategic ingredient in the food industry.

Despite their high properties, microbial spoilage, discoloration, sugar crystallization, contamination, and drying are among the most important challenges in storing dates and their products. These problems are caused by high humidity, natural sugars, unsaturated fats, and the product's high sensitivity to light, temperature, and oxygen.

Professional packaging solution

To maintain the quality and increase the shelf life of date products, it is essential to use modern packaging

- Vacuum and sealed packaging: removing oxygen and preventing microbial growth
- MAP packaging: controlled combination of gases for long shelf life
- Using multilayer films and resistant polymer containers
- Fully automatic thermoforming machines, tray sealers, vacuum chambers

Smart packaging design = increased shelf life + preserved flavor + export potential

Vormek Company use modern packaging equipment, which not only maintains the quality of their products, but also gains market trust and increases sales.



Design: My Second Language of Engineering, a Visual Narrator of a Living Industry

Note from the designer and media expert: **Mr. Ben Stevens**

In the era of global competition, industries cannot survive in the market with technical and engineering power alone. Products and technologies need a narrative in a language that conveys emotion, trust, and distinction. I, Mohammad Reza Mashatan, am a designer, graphic artist, videographer, and editor at Vormek Company. A specialist with an academic background in graphics, a bachelor's degree in architecture, and a master's degree in interior architecture, which I have consciously abandoned in order to pursue my professional path in industrial content creation.

My role at this company is not just about producing content. I am the visual interpreter of the complex world that engineers design. Every packaging machine although a mechanical piece, carries dozens of key concepts in the fields of technology, health and safety, and productivity. These concepts, if not conveyed in a scientific and visual way, will not stick in the customer's mind. This is where graphic design, video, visual identity, and digital storytelling come into play.

Examples of the Importance of Design in Industry

Studies conducted by the Design Council in the UK have found which companies that invest in design grow up to twice as fast as their competitors. This growth is not simply due to visual beauty, but rather to design's ability to build better understanding, greater trust, and a more professional image in the mind of the audience. In the food packaging industry, research from MIT university found that the way a machine is presented and its visual documentation can influence up to 40% of industrial buyers' decisions. In other words, even the best technology, if not properly seen and understood, will be left behind by the competition. I have a responsibility to make this understanding possible.

Content Production, the Invisible Arm of Industrial Development

At Vormek, visual content production is not just a promotional tool. We

view it as an integral part of the product development process. For each machine, I design content that

1. Presents the technical structure in simple, understandable language
2. Highlights the key features of the machine in the form of infographics videos or animations
3. Presents a professional, up-to-date and international image of our brand

My close collaboration with engineers, industrial designers, and sales managers has resulted in content that is both technically accurate and visually compelling.

When Architecture Serves Technology

My education in architecture and interior design has given me a structural, spatial and geometric perspective. This perspective has made my designs not only beautiful, but also orderly, purposeful, and with a three-dimensional understanding of the product and its space of use. I look at every catalog like an architectural plan every industrial teaser like a spatial scenario.

Looking to the Future

Today's industries are moving towards artificial intelligence, digital user interfaces interactive design and augmented reality. My role is not limited to 2D design; it has expanded to creating multimedia experiences to better introduce devices educational guides and even after-sales service.

I believe that design is a bridge between the engineer and the customer. And I, as a Designer in Vormek, am proud to build this bridge by combining science, art, and experience; every day for every machine, with every new challenge.





Date Paste; Fresh, Nutritious, Long-lasting with MAP Technology

Date paste is one of the most widely used date products, which is used in products such as desserts, pastries, smoothies, and breakfast due to its sweet taste and high nutritional value. But it is difficult to preserve because it is highly susceptible to microbial spoilage, discoloration, moisture loss, and oxidative deterioration.

The Main Challenges

- High humidity Bacteria and mold growth
- Oxygen and light Discoloration and unpleasant odor
- Poor packaging Sugar crystallization and drying of the tissue
- Temperature and pollution Accelerate spoilage and pest attack

New Solution: Modified Atmosphere Packaging

MAP technology creates a controlled environment by reducing oxygen and injecting nitrogen N₂ and carbon dioxide CO₂, which limits the growth of microorganisms and

prevents physical and chemical changes

Benefits of Packaging by MAP

- Increase shelf life by up to 60%
- Preserve flavor, color, and texture
- Reduce the need for chemical preservatives
- Improve the hygienic and export-friendly appearance of the product

Complete Solution: MAP in Seal and Vacuum Machines

Using advanced machines such as:

- Thermoforming
- Automatic/Semi-automatic tray sealer packaging machine
- Vacuum Chamber

Manufacturers can offer professional-looking, completely hygienic, and long-lasting packages for date paste.

Let's check it out today...

Challenges and Conditions for Increasing the Shelf Life of Dates and Their Products



Way to supply to world markets

Increasing beauty in date packaging

Hygienic packaging of dates

Using the Modified

Atmosphere Packaging (MAP) method

The atmosphere (air) surrounding the product is removed or reduced by vormeking machines before the tray or pouch is sealed with a mixture of inert gases such as CO_2 , N_2 which protect it from harmful agents

VORMEK



Iran is known as the second largest producer of **dates** in the world



producing **1.3** million tons of dates per year

Fatty acids and sugars (carbohydrates) are a suitable environment for the growth of microorganisms. Due to the moisture and sap contained in them, dates are quickly exposed to sugaring, spoilage, fermentation and mold and their taste and smell become sour. They are also exposed to larvae and insects



So what is the solution?

Suitable packaging

in plastic trays



VORMEK

pouches using

the MAP method

(Modified Atmosphere Packaging)



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Pyram, Shahani, Zahedi dates Bam and Dashtistan dates, Majul dates Mazafati dates, Mazafati Barhi dates Estamran dates, Safavi, Dajlat Noor Khakham, Khodari, Deri, Tori, Halavi Khasouyi, Kabkab, Rabi, Kalutah, Al Mahtari With this amount of capacity we can export to the best markets in the world

They are also exposed to larvae and insects

- Product beauty
- Maintains standard humidity
- Prevents contamination
- Increases shelf life
- Easy to carry and transport



Proper packaging
in plastic trays and pouches



VORMEK

The only knowledge-based and manufacturer of **tray sealer packaging machines**, by real **MAP** system in country which is active in this field about 15 years professionally.



samshahd
NAKHLESTAN



Interview with One of Vormek's Loyal Customers

Ms. Farzaneh Ashari – CEO of Samshahd Nakhlestan Company

Please Introduce Yourself and Your Company's Field of Activity?

I am Farzaneh Ashari, CEO of Samshahd Nakhlestan Company. Our company is a producer of date products and currently we have more than 24 different types of products, all of which are processed from pure dates.

When Did You Start Working with Vormek Company?

About a year ago, we purchased a tray sealer from Vormek Company to upgrade our product packaging.

Why Did You Choose This Machine and Did It Meet Your Needs?

Our initial goal was to package dates, but after a while we realized that this machine performed beyond expectations and we were able to package products such as rangigank, date rolls, and catering truffles with it. This flexibility was very valuable to us.

How Was Your Experience in terms of Performance and Packaging Quality?

We are really satisfied with the performance of the machine. Both the quality of the

packaging is good and the machine has become easy for our team to use. In fact, the machine was effective in increasing the shelf life of the products and the appearance of the packaging.

What Do You Think about the Company's After-Sale Services?

One of the most important strengths of Vormek is its after-sale services.

Whenever we had a question, we got a very quick response. They are even always present at exhibitions, follow up on customer feedback and stay in touch with us to make sure the machine is working. Fortunately, we have not encountered any specific problems so far, we only had a few specialized questions, which were answered accurately.

If You Had to Summarize Your Collaboration with Vormek in One Sentence, What Would You Say?

The collaboration has been very successful and satisfying for us and I hope it will continue in the future.



Content Creation Strategy Framework for Food Companies

Dr. David Sterling (PHD. Marketing and Sales lecturer)

In the competitive world of the food industry, success depends not only on the quality of the product, but also on the effectiveness of the communication and content that is conveyed to the audience. Content creation strategies for food companies should be designed based on marketing objectives, time investment level, and effectiveness in increasing credibility or sales. A useful framework for categorizing content types is based on two main axes: "time required to produce" and "content purpose (credential or sales-oriented)."

Content such as "Industry Reports," "Resource Lists," "Top Ten Buyers," and "Industry Trend Analysis" are among the types of content that build expert brand credibility with a high time investment. This type of content is very suitable for food companies looking to establish their expert position in the market. On the other hand, at the same time level but with a sales orientation, content such as "step-by-step guide", "customer interview", "case study", and "special offer" can effectively encourage the audience to take action (Call to Action).

At a lower level of time investment, content such as "Expert Quotes," "Useful Tips," "Industry News," and "Short Podcasts" help build brand credibility. This type of content is useful for building ongoing, rapid engagement with your audience and establishing your company as a food industry information authority.

At the same time level, but with a sales approach, content such as "personal opinion," "founder's story," "customer testimonials," and "result announcements" are effective tools for emotional impact and purchase decision-making.

As a result, companies operating in the food industry must strike a balance between content types in terms of production time and expected output, taking into account their strategic goals. Smartly combining low-cost but impactful content with high-profile, professional content can dramatically increase the effectiveness of content marketing. This strategic framework can serve as the basis for designing a targeted content calendar in manufacturing, service, and food packaging companies.



New Applications of Modified Atmosphere Packaging (MAP) in the Food Industry

Ms. Bayat, **Master of Science in Food Technology (Dairy and powdered ingredients manufacturer)**

Modified atmosphere packaging, as one of the advanced technologies in the field of food preservation, has been able to play an important role in increasing shelf life maintaining sensory and nutritional quality, and improving product safety. This technology controls biological and chemical degradation processes by changing the ratio of gases within the packaging. In this article, we examine traditional and modern applications, as well as its role in new technological and health-oriented products.

Introduction

Today, consumers are looking for foods that are not only healthy and safe, but also have minimal additives, good shelf life, and good sensory quality. This need has led the packaging industry to use new technologies such as: In this technology, the air inside the package is replaced with a controlled mixture of carbon dioxide, nitrogen and oxygen gases to create optimal conditions for preserving the product.

Traditional Uses

In the past, it was mainly used in the packaging of red meat, poultry, fish, cheese bread and fresh vegetables. For example, in the packaging of red meat, the use of the combination was. Also in breads, the removal of oxygen and replacement with nitrogen effectively reduced the growth of mold.

Purpose: To prevent the growth of aerobic microorganisms and maintain the desired red color (oxymyoglobin).

- Meat and meat products

Suggested gas combinations: Fresh red meat O₂ (60-80%) + CO₂ (20-40%)

Cooked and processed meats: CO₂+N₂

(Without O₂ to prevent fat oxidation)

Result: Increased shelf life by 2 to 3 times compared to conventional packaging

- Fish and seafood

The main challenge: Rapid spoilage due to natural enzymes and spoilage bacteria

Composition of gases: CO₂ (60-80%) to prevent package inflation

Benefits: Maintains freshness, reduces unpleasant odors, reduces microbial load

- Fresh fruits and vegetables

Goal: Reduce breathing rate and control sweating

Type 0: Mostly passive or self-regulating type using semi-permeable films

Gases: O₂ and Co₂ in dynamic equilibrium by the aid of films

Useful items: strawberries, spinach, lettuce, avocado, broccoli, mushrooms, grapes

Advantages: Longer shelf life without the use of preservatives, preservation of color taste and texture.

- Bread, pastries and flour products

Goal: Prevent mold growth

Suggested gas: High CO₂ + N₂ (replacing O₂)

Applications: Industrial bread, cakes, biscuits

Note: The presence of moisture may cause mold, so a combination with moisture control is recommended.

- Dairy products (cheese, yogurt)

Challenge: Growth of fungi, molds, and aerobic bacteria

Gas mixture: High CO₂ (25-50%) + N₂

HPP	Vacuum	MAP	Characteristics
****	**	****	Maintaining Natural Appearance and Color
****	**	****	Preserve the Taste and Texture
*****	***	***	Increase Microbial Immunity
**	*	****	Suitable for Sensitive Products
Very high	Low	Medium to high	Equipment Cost
No	Yes	Yes (relatively)	Suitable for Small Industries

Results: Increased shelf life, cheeses (such as mature cheeses) need to breathe, so packaging with breathable film is essential.

- **Prepared and processed foods**

Including: Semi-prepared meals, sandwich packages, frozen or ready-to-eat pizzas

Goal: Reduce oxidation, bacterial growth, and preserve flavor and texture.

In this case, it is usually combined with multi-layer packaging, which both protects the gas and has an attractive appearance.

- **Nuts, dried fruits and coffee**

Gas composition: Oxygen sending out (vacuuming) + Nitrogen injection (as inert gas)

Benefits: Prevents oxidation of natural oils, preserves odor and taste, increases shelf life by up to one year.

Innovative and Technological Applications of MAP

- **Plant-based foods and alternative proteins**

The increasing trend towards plant-based products such as veggie burgers, tofu and soy products requires methods to preserve texture and prevent spoilage. In this area regulating the concentration reduces the oxidation of vegetable fats and prevents the growth of microorganisms.

- **Ready-to-use products (RTE)**

Products such as packaged salads, semi-cooked meals and dairy desserts require freshness without chemical additives. By creating a controlled environment, without the use of preservatives, the shelf life of these products is significantly increased.

- **Smart and active packaging**

The combination with new technologies such as active packaging (oxygen or moisture absorbers) and smart packaging (with sensors that indicate spoilage) has opened up new horizons in improving safety and transparency for the consumer. This combination not only slows down spoilage, but also informs the consumer whether the product is still edible or not.

- **Food supplements and oxygen-sensitive powders**

In the production of nutritional supplements, probiotics, powders containing omega-3 or vitamins, the presence of oxygen can cause the destruction of active ingredients. The use of, especially with nitrogen gas to remove oxygen, is very effective in these cases. One of the most important global concerns today is reducing food waste and environmental sustainability. By increasing the useful life of products, it plays a significant role in reducing waste, resource consumption, and production energy. The widespread use of MAP in the supply chain not only reduces food waste by up to 30%, but also it reduces greenhouse gas emissions from the production and re-transportation of the product.

Technological Innovations in Combining MAP with Smart Packaging

Combining MAP with sensors to detect spoilage, temperature control, or color change has turned packaging into an interactive tool. These packages can indicate to the consumer whether the product is still edible or not.

Example: Packaging equipped with color-changing sensors that change color in the presence of amines from fish spoilage are entering advanced markets.

The Effect of MAP on the Sensory (Organoleptic) Properties of the Product

Not only does it increase safety and shelf life, but with MAP reducing the oxidation of fats and browning enzymes, it also preserves the natural flavor, color, and texture. This is very important for premium products.

MAP Economic Analysis for Small Businesses and Startups

Many people think that MAP is only for large companies. But in recent years, small affordable MAP machines have become available for local businesses, such as restaurants or health-focused manufacturers.

Practical suggestion: The use of MAP can create significant value added for healthy or organic household products and help differentiate the brand.

Comparing MAP with Other Food Preservation Technologies

Advantages and Limitations

Advantages

- Increased shelf life without the need for preservatives
- Preserving color, flavor, texture, and nutritional value
- Reducing waste and increasing economic return

Limitations

- Need for special equipment for gas injection
- Higher cost than traditional packaging
- Need to be careful in gas ratios and packaging film type

Conclusion

Modified atmosphere packaging technology has gone beyond a simple method of food preservation today and it has become an advanced tool to meet the needs of the modern market. The integration of MAP with other technologies such as smart packaging, health-focused products, and nutritional supplements shows that the future of the food industry is moving towards maintaining quality along with transparency and innovation. Although each technology has its own application MAP is a suitable option for many food products, especially in emerging health-oriented and natural industries, due to its high flexibility and ability to be combined with modern packaging.



VORMEK

It is Our Honor to be With the Elders of Date

In the path of developing new packaging technologies and providing specialized solutions in the food industry, Vormek Company, has been honored to be trusted by the top Iranian date production and export brands as the only knowledge-based company in the field of designing and manufacturing tray sealer packaging machines

On this page of the monthly magazine, we proudly mention a selection of respected companies that we have had the honor of working with in the field of dates. Brands that have accompanied us on the path of excellence in quality and innovation in packaging by choosing Vormek

Borna

Takarom

Tapoo dates

Shayana

Tavata

The trust of these reputable companies has doubled our responsibility to always be a pioneer in providing durable, export-oriented, precise sanitary machinery.

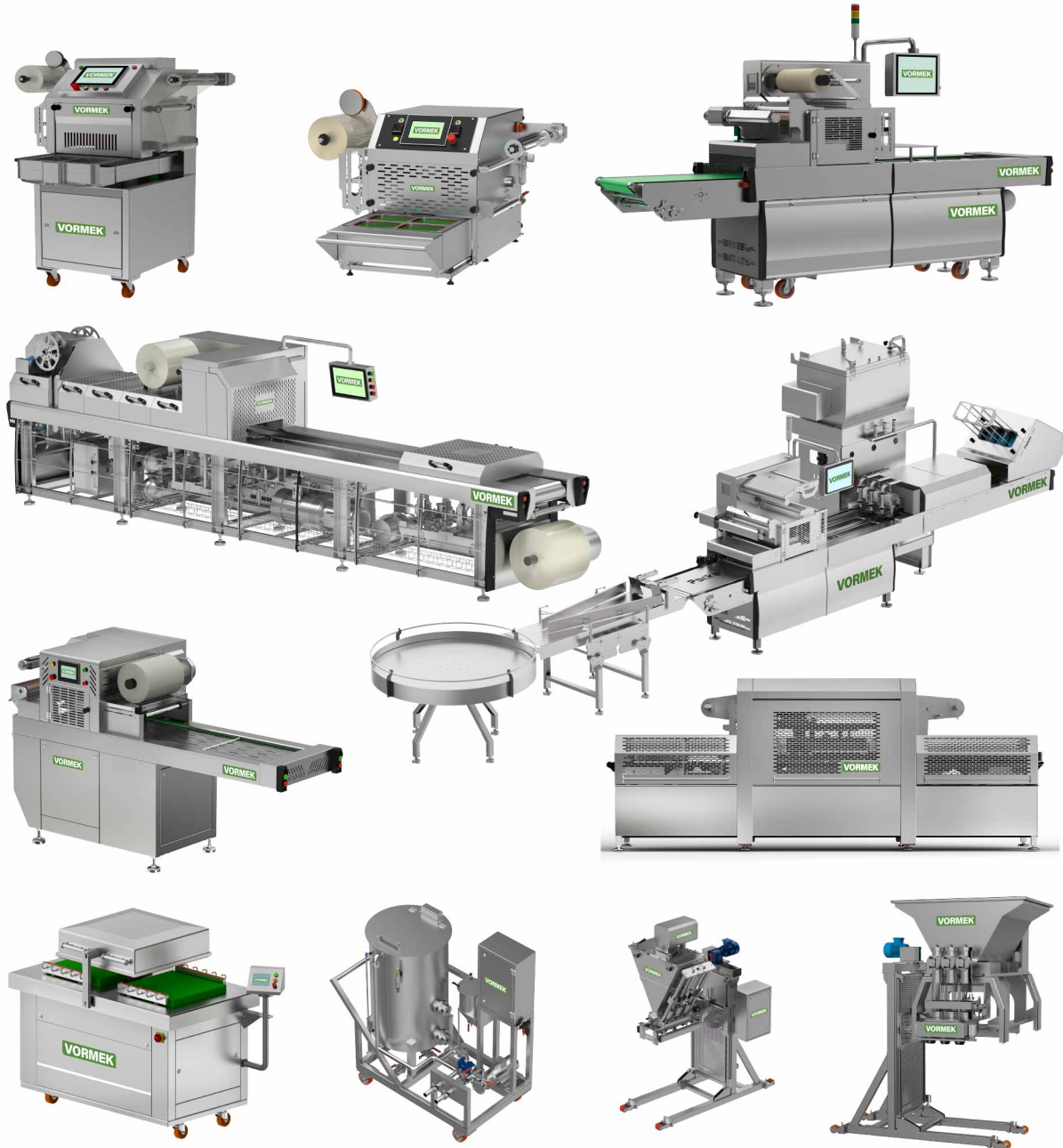
We are proud of you

Vormek

Expertise in Tray Sealer, Commitment to Quality

Advancements and Importance of Tray Sealer Packaging Machines in Modern Packaging Industries

Tray sealer packaging machines have become an essential tool in packaging lines due to their crucial role in preserving product quality, optimizing production processes, and reducing costs. By integrating advanced technologies and precise engineering design, these machines have significantly elevated packaging standards to a new level



We invite you, our valued audience, to share your topics of interest with us. Your feedback and suggestions not only enrich our content but also help us provide more practical insights tailored to your needs. Would you like to read a report on a specific industry or a particular packaging technology? Share your thoughts with us, and we will cover them in our upcoming editions.