

The Ninth 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

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Thermoforming Machine: A Turning Point of Innovation in Vormek



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The Future of Catering: From Tradition to Innovation

Editorial: Dr. David Sterling

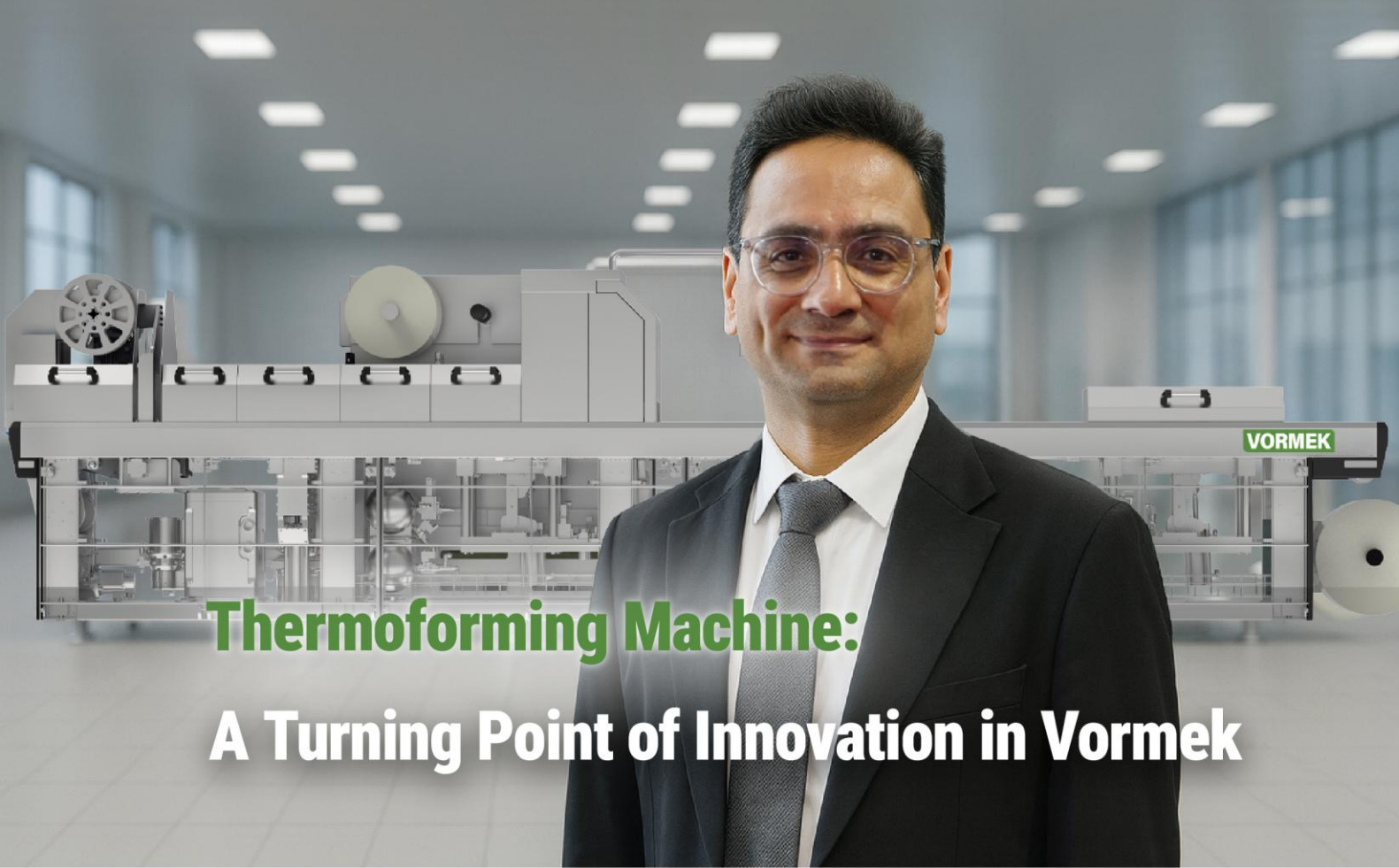
The catering industry is one of the most developed and complex branches of food services, playing a vital role in providing healthy, fresh, and high-quality food for diverse populations.

In today's world, where the pace of life and the need for hygiene and food safety have become more prominent than ever, modern packaging methods—especially vacuum packaging and Modified Atmosphere Packaging (MAP) technologies—have become one of the main keys to success and advancement in this industry.

These technologies, by eliminating or reducing oxygen inside the packaging, increasing the shelf life of food, preserving freshness, reducing waste, and ensuring food safety have created a major transformation in the process of storing, transporting, and distributing ready meals. Vacuum packaging eliminates air and reduces microbial growth while Modified Atmosphere Packaging, by replacing air with specific gases, provides optimal conditions for preserving the quality, taste, and nutritional value of the product. Alongside these benefits, these modern packaging methods have enabled catering services to be offered with higher quality, more diverse menus, and better responsiveness to customer needs while ensuring the health and freshness of meals.

These technologies also make significant contributions to reducing costs caused by food waste and to improving environmental sustainability.

Given the growing importance of preserving quality, safety, and shelf life of food in the catering industry, focusing on and developing modern packaging methods is one of the undeniable necessities. We hope that in this issue of the monthly magazine we can familiarize you, our dear readers, with the latest achievements, successful experiences, and advanced trends in this field, and keep the engine of progress and innovation in the catering industry running brighter than ever.



Thermofforming Machine: A Turning Point of Innovation in Vormek

Mr. Simon Füllenbach

Greetings. I am Simon Füllenbach, CEO and designer of packaging machines at Vormek. For more than 17 years, we have been active in the design and manufacturing of Tray Sealer machines, vacuum chamber machines, and especially thermofforming machines, and along this path, we have gained valuable experience. Today, one of our greatest achievements is the design and manufacturing of the exclusive thermofforming machine of the Vormek brand; a machine that has not only found a special place inside the country but is also being used by various other countries.

Complexity And Importance of the Thermofforming Machine

Although Tray Sealer machines are complex on their own, thermofforming machines are at least five to six times more complicated. In this system, a film roll is placed inside the machine, then after preheating it is transformed into a tray, the packaging process is carried out, and then the tray is cut and discharged from the machine ready for use.

This process, which seems simple on the surface, in practice requires precision and high standards of design and construction. For this reason, only those manufacturers succeed who pay special attention to the smallest mechanical, electrical, and standard details of this machine.

Our Experience and Technical Knowledge

Over the years, we have worked with various European thermofforming machines; machines that some customers brought to us for servicing and overhauling. This experience gave us a deep understanding of the strengths and weaknesses of foreign machines, and gradually, we began the design and production of our own exclusive thermofforming machine.

For three years, our technical and engineering team—consisting of specialists in mechanics, electronics, automation, and programming—has been focused on developing the exclusive Vormek thermofforming machine. The result is ultimately a

machine whose level of technology and available options are on par with up-to-date European machines.

Features and Distinctions of the Vormek Thermofforming Machine

The thermofforming packaging machine designed by Vormek is capable of packaging with soft film, rigid film, and skin technology. Skin packaging is one of the most difficult processes, and it shows that the applied standards along with the mechanical, electrical, automation systems, and component quality have been designed and selected at the highest level. Therefore, when this machine is able to perform skin packaging fully and precisely, it also has higher accuracy and performance in other types of packaging.

Precise Motion Mechanisms

- Preheating, forming, sealing, and cutting mechanisms are designed to perform operations accurately and without vibration.
- Shafts are made from special anti-corrosion materials, and the bushings are made of phosphor bronze and graphite, ensuring smooth and uniform motion, which significantly increases the machine's lifespan.
- Mold adjustment screws are positioned beside each mold and professionally designed with high accuracy so that when adjustments are needed the mold's position can be set with a precision of one-tenth of a millimeter.

Intelligent Lubrication System

Lubrication of mechanisms is carried out automatically by a grease pump and programmed through the PLC. This prevents premature wear of components and reduces dependency on technical staff.

Build Quality and Materials

- Processes such as grinding, milling, and plating are carried out with the highest precision.
- Mechanical parts and the body are made of stainless steel, while





molds and some other parts are made of high-grade aluminum to ensure durability and top-level hygiene of the machine.

- The pneumatic system and circuits are precisely calculated and designed, with components mostly chosen from the reputable FESTO brand.

Other Key Parts

- High-power vacuum pump and standard valves for precise vacuuming and gas injection.
- Bottom film roll guiding system that prevents film deviation and keeps it on its correct path at all times. It includes a powder brake system and a calibrated pneumatic airshaft, controlled by the machine's PLC.
- Top film roll guiding system that works continuously and precisely with rollers ensuring flawless movement. Its accuracy allows packaging with printed films to align exactly with the trays being formed. This section also has a powder brake and calibrated pneumatic airshaft, controlled by the PLC.
- Two-stage cutting (longitudinal and transverse) with high precision and without vibration, using blades with high cutting ability and long lifespan designed to be fully adjustable for trays of different dimensions.
- High-efficiency preheating and sealing elements with optimized energy consumption due to the design of the heating element layout and uniform heat transfer to molds, with temperature control performed via PID.
- Mold cooling system with precise water circulation channels and optimal flow, increasing speed and quality of work, with chiller and circulation

system to control water temperature and prevent water waste.

- Stainless steel chain system with durable clips for accurate film movement throughout the machine, ensuring long life and error-free operation.
- Two-part output conveyor that is easily detachable and washable designed for easy operation, hygienic use, and fast servicing.

Control System and User Interface

- The machine is equipped with a 14-inch touch HMI, with a user-friendly interface and menus in Persian, English, Russian, Arabic, and German.
- Electrical diagrams and maintenance instructions are embedded inside the machine, giving technicians access to necessary information at any time
- All parts of the machine are designed modular and standardized making maintenance, servicing, and repairs simple and quick.

Conclusion

The **Vormek** thermoforming machine is the result of years of experience, research investment, and effort by this company's R&D unit in acquiring technical knowledge. We have exercised the utmost care in choosing each component, mechanism, and material to present a product worthy of food industry producers; a product that not only replaces imports but can also compete on a global scale.

This machine is the outcome of a motivated and expert team that supports customers from the very beginning to the end of the design and production journey. For this reason, we are confident that the Vormek thermoforming machine is a reliable choice and a valuable investment for every producer.





The Successful Experience of Diplomat Hotel with the Packaging Machine of Vormek

Diplomat Hotel, one of the large and well-known groups in the field of ready meals decided to use modern packaging solutions in the course of expanding its activities. For packaging its products, this group turned to the automatic machine of Vormek and today, by having several molds in various sizes, it has been able to offer a wide range of meals in different portions. This flexibility in mold design by Vormek has made it possible to meet their customers' diverse needs.

One of the key projects of Diplomat is its cooperation with the municipality of this city in the supply and packaging of ready meals. The entire packaging line is managed by only two operators; a matter that, in addition to saving on manpower has noticeably increased production efficiency and productivity. According to Mr. T. Farzaneh, the production capacity of this group changes according to the volume of orders, and the machine is designed in such a way that even at peak orders, the packaging process continues without any interruptions in two full shifts.

Positive customer feedback has been one of the important achievements of this change. The new packaging is not only more attractive in appearance but has also improved the hygiene level of the product. In addition, the safe packaging system of the machine has solved the constant concern of producers regarding the transportation and handling of meals; so that there is no longer any worry about food spilling or being damaged during transfer.

Mr. Farzaneh further refers to his past experience: previously, they used another machine that had many problems and even caused physical injuries to operators several times. But the Vormek machine, thanks to its advanced safety system, has not caused such problems for them. This very feature has allowed their production line to operate with greater peace of mind and confidence.

After-sales service is also another strength of this cooperation. He emphasized that whenever support or consultation was needed, the Vormek team responded in the shortest possible time. The result of this effective support has been remarkable satisfaction for Diplomat; because using these machines has not only increased the volume of orders but also reduced product returns to zero. This achievement, in the field of ready meals, is a highly valuable and competitive advantage for this group. Today, the successful experience of Diplomat shows that choosing modern packaging solutions is not merely a technical decision, but a strategic action to improve quality, increase customer satisfaction, and strengthen one's position in the competitive ready meal market.

The right work is only possible with the right tools; a successful producer is someone who, instead of fighting problems, chooses the proper tool to solve them – A saying by Henry Ford



The Prominent Role of Packaging in the DNA of Food Industry Brands

Editorial: Dr. David Sterling

Strong Connection Between Packaging and Brand DNA

Just as every human has a unique DNA that defines their biological identity, brands must also have a unique DNA that determines their identity—including personality values, and the brand's reason for existence in the mind of the consumer. Brand DNA is the cornerstone of emotional and cognitive connection with customers.

In this framework, packaging, as the first sensory and visual point of contact with the brand, plays a key role in expressing and transferring this DNA. This connection is manifested not only in design and color but also in the feeling, functionality, and message of the packaging.

Key Functions of Packaging in Strengthening Brand DNA

A) Transferring Brand Values to the Consumer

- The type of packaging can convey values such as sustainability luxury, or simplicity.
- Research has shown that consumers perceive distinctive and unique packaging as a sign of high quality.

B) Brand Experience and Decision-Making

- A visually appealing design aligned with the brand's personality creates a positive feeling in the consumer and makes them choose a product with stylish packaging. According to consumer neurophysiology, attractive packaging, by creating a pleasant sensory experience, stimulates activity in the prefrontal cortex and facilitates decision-making.
- It has been found that between 73% to 85% of purchase decisions at the point of sale are related to the appearance of the packaging.

C) Long-Term Relationship and Trust

- Packaging is not only for initial attraction; even after consumption, packaging maintains the brand's relationship with the consumer.

D) Differentiation in a Competitive Environment

- In the food industry, where product variety is high, distinctive packaging with a clear message reflecting the brand DNA is one of the most important factors in visibility.

The Role of MAP Technology in Strengthening Brand DNA

1. Conveying "Health-Oriented" Values in Brand DNA

Modified Atmosphere Packaging (MAP), by reducing the need for chemical preservatives and increasing freshness without additives, presents the brand as healthy and natural. For example, brands with a DNA of "clean, healthy additive-free" can tangibly fulfill this promise using MAP and highlight it in packaging design (e.g., "Kept Fresh Without Preservatives").

2. Strengthening the Perception of "Innovation" in the Consumer's Mind

Brands whose DNA includes innovation can reinforce their innovative positioning by using technologies like MAP.

MAP allows brands to say: "We don't just package; we engineer the environment for the product."

3. Reflecting Environmental Responsibility

If your brand DNA is sustainable or "ethics-driven," MAP—because it extends shelf life and reduces food waste—truly reflects the brand's environmental responsibility. In many European brands like Too Good To Go or Eosta, the use of technologies like MAP, along with eco-friendly packaging, is understood as part of the brand's social responsibility.

4. Creating Differentiation in Customer Experience and Connection

MAP technology, combined with the pleasant sensory experience of product freshness, helps create a "brand memory," which becomes part of the brand DNA in the consumer's mind.



NIYAMASHINPEGAH



Niamashin Pegah; 4 Decades of Experience Innovation, and Trust

Niamashin Pegah Engineering & Design Company, under the management of Mr Khalighi, began its activities in 1986 in the field of manufacturing machinery for the food industry. This journey started with the collaboration of staff in domestic factories and later continued with the establishment of the "Niamashin Workshop" in 1993. In 1997, with the official registration of Niamashin Pegah, the company reached a new milestone of development and credibility.

From the very beginning, our mission has been to create transformation in the food pharmaceutical, and chemical industries, relying on precise engineering and technological innovation. Today, Niamashin Pegah, backed by decades of experience and technical knowledge, is recognized as one of the leading and specialized companies in designing and manufacturing food industry machinery.

In recent years, the company has focused on building complete production lines for

high-demand and strategic products, including:

- Complete French fries production line
- Complete potato chips production line
- Complete pellet and snack production line
- Complete Olivier salad production line
- Complete vegetable and fresh salad production line
- Complete dried fruit chips production line
- Complete almond and corn frying line
- Complete ready meal production line and sterilizing autoclaves

Niamashin Pegah is a symbol of the combination of experience, technical expertise and innovation—a place where customers' needs for high-quality products and sustainable production lines are met in the best possible way.



Vormek

From an Idea to a Leading Brand in Packaging Industry

Mr. Simon Füllenbach

When Vormek began its work, everything was only an idea. I, Simon Füllenbach, as the founder and CEO of this company, started with a simple belief: we can own technology and products at a global level.

In those years, tray sealer, thermoforming, and vacuum chamber machines were entirely imported from abroad. This dependency created many problems for domestic producers:

- Extremely high and non-competitive prices of European machines,
- Low quality and short lifespan of Chinese machines,
- Lack of technical support and real after-sales service,
- No purchase conditions, understanding, or cooperation from the selling companies,
- And difficulties of direct communication with foreign companies.

I looked at this gap and told myself: why can't we build a machine that is priced like Chinese models but has the quality of European brands? That was how Vormek was born

Our Vision: Technology + Tailored Solution

From the beginning, our path was different. We did not just build machines; we offered solutions. Meaning each machine had to be designed and built exactly according to the needs of that customer. Why? Because no product is the same as another, and the requirements of food producers differ!

Some products are dry, some have high moisture, some are sensitive to microbial flora, some require elegant packaging, and some are extremely sticky or fragile.

If packaging is to be truly effective, the machine must be designed according to these differences.

That is why even our simplest projects usually require at least 20% changes compared to the base model. In many cases, the changes are far more extensive to precisely solve the production line problems of the customer.

Beyond Machines: Real Added Value for Customers

Customer goals are different:

- Some seek to increase hygiene and reduce microbial load to ensure shelf life and safety
- Some seek to enhance the visual quality of packaging so their product appears more elegant, standardized, and valuable in the market.

- And some focus on upgrading their brand and boosting their sales.

We have tried to provide solutions for all these needs. That is why Vormek is not merely a machine manufacturer but a strategic partner and experienced consultant for food industries.

From One Machine to Twenty Specialized Products

Our beginning was with the design of an automatic tray sealer packaging machine. But today, after years of effort and experience, our product portfolio includes more than 20 specialized models of tray sealers, thermoforming, and vacuum chamber machines.

Each of these machines is custom-built with modifications tailored to the customer's needs. This flexibility has allowed us to provide dozens of dedicated solutions and minimize the concerns of producers.

A National Brand with a Global Outlook

Today, Vormek has reached a position where it can confidently be called the most reputable brand in this field. We have managed to make our country independent from importing these machines and have gone even further:

- For years we have been exporting to Russian-speaking and Arabic-speaking countries,
- We have established sales representatives and after-sales services in foreign markets,
- And we have succeeded in establishing our brand as a trusted name in international markets.

The Future Path

At Vormek, we believe this is only the beginning. In the next issues of this magazine I intend to go into more detail about the secret of our success:

- Why our machines have been able to solve many challenges of the food industries
- What features of our tray sealer, thermoforming, and vacuum chamber machines set us apart from competitors,
- And how our machines have become one of the most valuable assets of our customers.

Stay with us in the upcoming issues of this magazine.



The Art of Carefree Hosting with the Magic of Caterings

VORMEK

1



The Magic of Flavor and Aroma

Caterings are magicians who, with delightful taste and aroma, turn every event into an unforgettable feast

VORMEK

2



The Joy of Carefree Hosting

Imagine you are hosting a party and, without any worries, you enjoy being with your guests; this is the very art that caterings bring

3



Creating a Flawless Experience

A professional catering not only serves extraordinary dishes but also creates a flawless experience that engraves a sweet memory of your event in minds

4

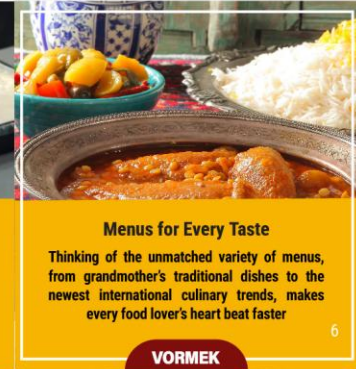


Making Delicious Dreams Come True

From dreamy weddings to grand corporate conferences, or even on trains and airplanes while traveling, caterings are specialists in turning dreams into delicious realities

VORMEK

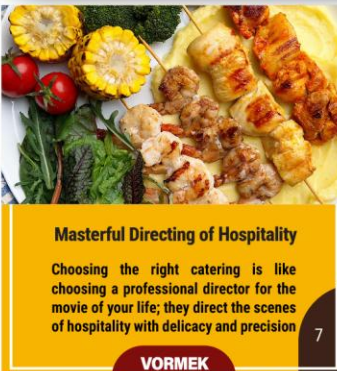
5



Menus for Every Taste

Thinking of the unmatched variety of menus, from grandmother's traditional dishes to the newest international culinary trends, makes every food lover's heart beat faster

6



Masterful Directing of Hospitality

Choosing the right catering is like choosing a professional director for the movie of your life; they direct the scenes of hospitality with delicacy and precision

VORMEK

7



The Art of Storytelling with Flavor

Did you know some caterings even narrate the story of your event through flavors and decorations? This is art in cooking

8



Beyond Filling Stomachs

When it comes to catering don't just think of food; think of the smiles of satisfied guests your own peace of mind, and a wonderful night

9



Farewell to Kitchen Stress

With caterings, you no longer worry about dirty dishes or the stress of managing the kitchen; everything is delivered to you ready and flawless

10

VORMEK



Nourishing the Soul of the Event

In the end, a great catering not only fills stomachs but also nourishes the soul of your event, keeping it alive in memories forever

11

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VORMEK

Vormek is the knowledge-based company and manufacturer of Tray Sealer packaging machines with a true MAP system in the country, which has been specializing in this field for about 15 years.





One of the Most Important Challenges in the Catering Industry

Mr. Nikjou (Ph.D. of Food Industry)

is maintaining the safety and quality of food in the post-cooking stage, especially precise control of the cooling process.

The growth of pathogenic microorganisms within the temperature range of 4 to 60 degrees Celsius—known as the “danger zone”—can drastically accelerate food spoilage and endanger consumer health.

Therefore, strict adherence to cooling and storage standards for catering products, especially ready-to-eat meals, is vital.

Using modern packaging technologies such as vacuum and modified atmosphere not only prevents the entry of oxygen but also reduces environmental conditions favorable to spoilage agents, significantly extending product shelf life.

The active and modified packaging process, by removing or replacing the packaging air with inert gases such as nitrogen or carbon dioxide, makes it possible to preserve the freshness and high quality of food even during long transports.

However, the key point in the catering industry is the precise design of the cooling chain and simultaneous packaging, since any delay in cooling or improper packaging can lead to sudden microbial surges that are extremely difficult and costly to control.

As a result, synchronizing cooking, cooling, and packaging operations with the use of smart technologies and workforce training is the most essential prerequisite for maintaining health and quality in the food industry.



The Impact of Packaging

Alexander Hoffmann

Since packaging is one of the most important and influential stages in the production of a final product, the thermoforming machine has the capability to meet customer needs in the best possible way by offering beautiful and high-quality packaging in trays and plastic coverings, and even providing unique packaging tailored to the type of product.

Thermoforming Machine

This is one of the advanced pieces of equipment in the packaging industry that plays a key role in enhancing the final quality of the product. Using thermoforming technology it can transform plastic sheets under heat and pressure into desired shapes, offering customized packaging designs suited to the product type.

This machine, with the ability to form trays from plastic rolls, fill the product, seal with plastic film, and perform the final cutting, delivers a complete and professional packaging solution.

It also has the capability of protective gas injection, which increases the shelf life of the product.

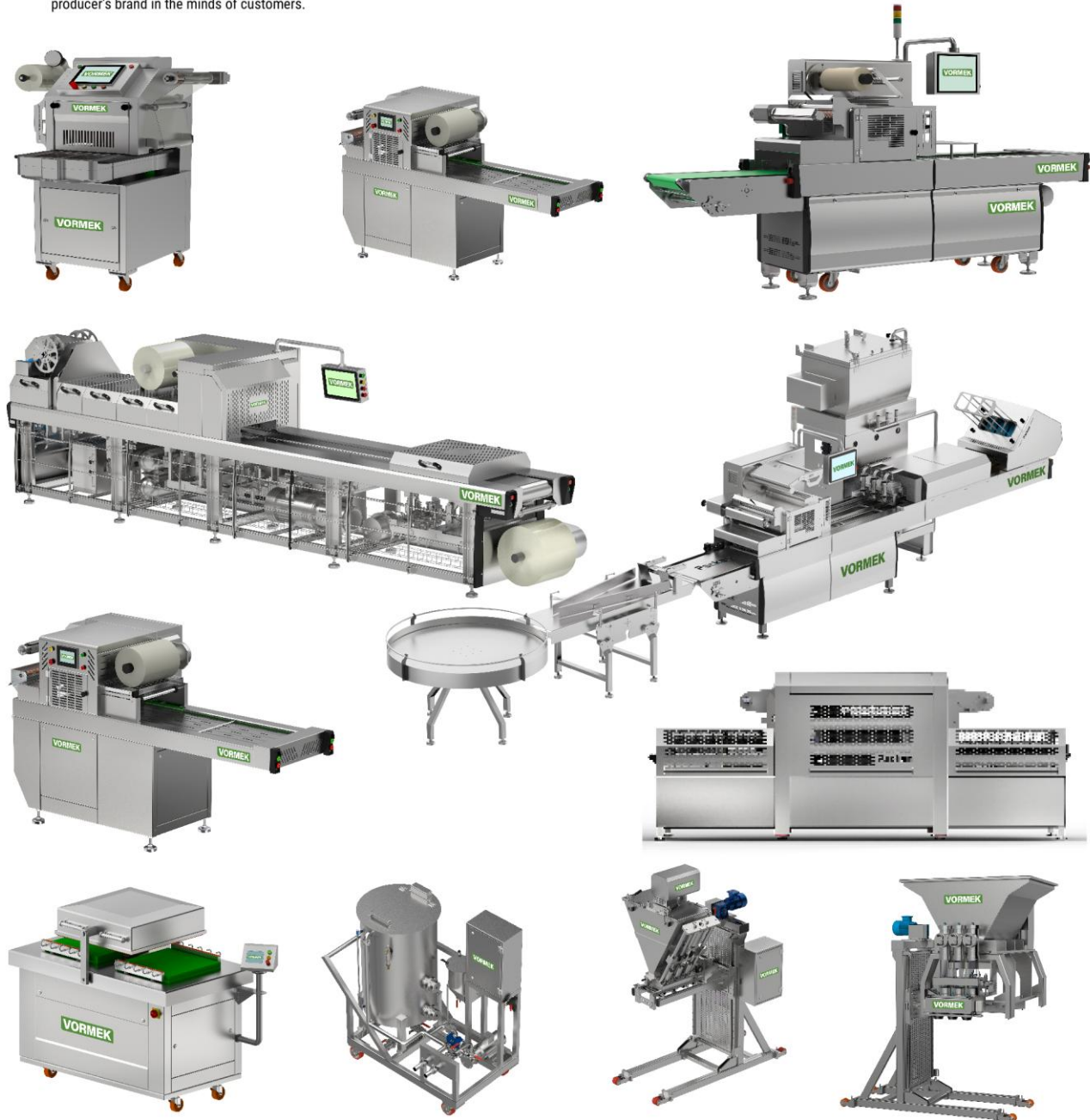
Among the notable features of thermoforming is its ability to form and produce various types of rigid and flexible plastic trays or films, as well as trays made of polystyrene (PS), polyvinyl chloride (PVC), and polyethylene (PE) up to a maximum thickness of 1.5 mm, from single-layer to multi-layer, in a variety of colors.

For the production of open-mouth trays with thicknesses greater than 1.5 mm, injection molding machines are used.



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.