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

VORMEK

Vormek an Innovation-based Machinery Company, an Knowledge & Progress Center 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 and Marketing and Sale Consultant)

Editor and Translator: Dr. Stefanie Kaiser

Editorial Board: Marketing and Sales Unit of Vormek

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Control of Microbial Spoilage in Ready-to-Eat Sandwiches; From HACCP to Modern Packaging

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License Holder and Director-in-Charge :
Simon Füllenbach



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



Editor and Translator :
Dr. Stefanie Kaiser



Graphic Designer and Layout Artist :
Mr. Ben Stevens

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
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SEMI-AUTOMATIC
TRAY SEALER MACHINE

AUTOMATIC TRAY SEALER
PACKAGING MACHINE

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The Role of **Smart Packaging** in the Future of Sandwich Clubs

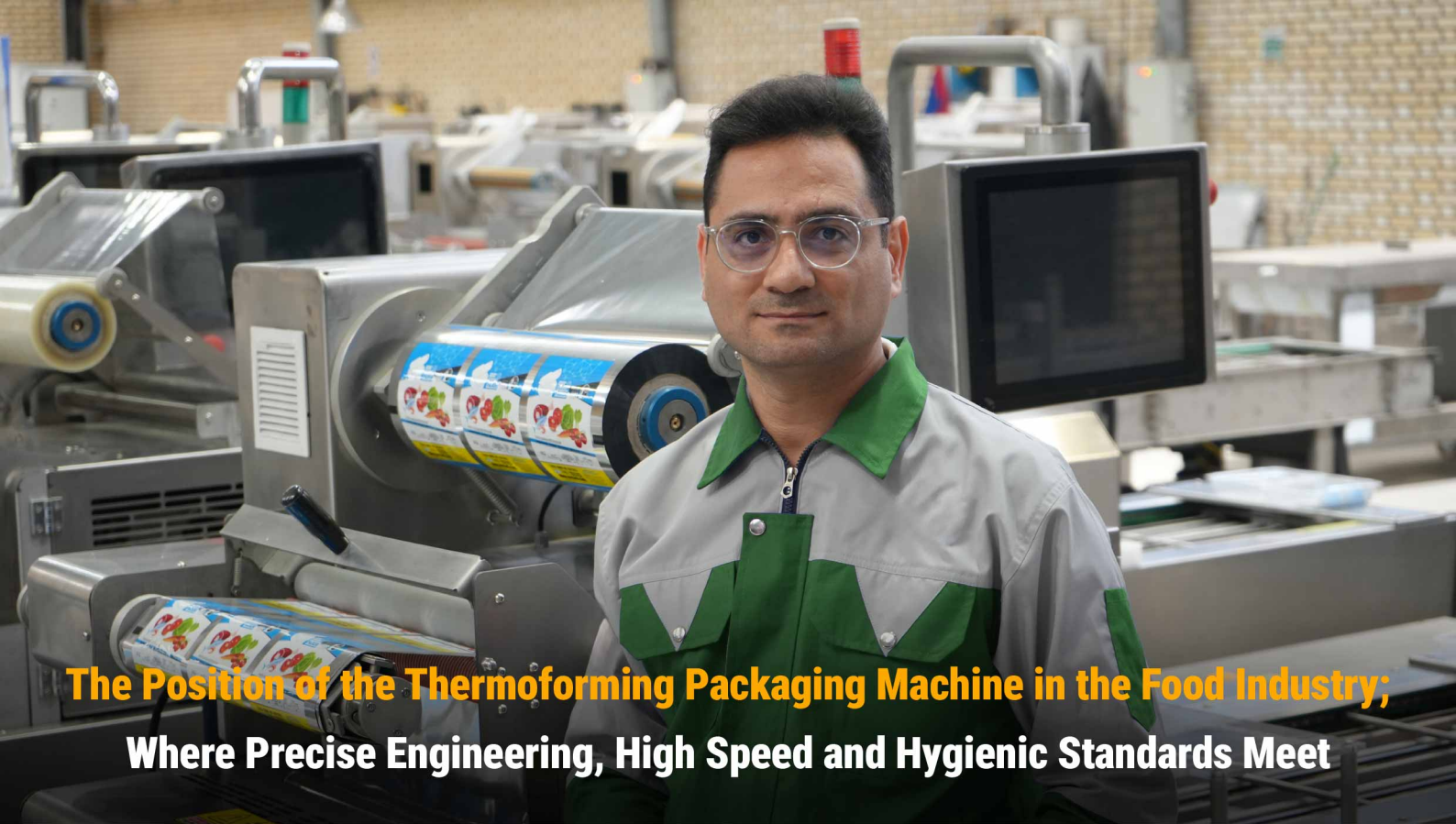
Editorial: Dr. David Sterling

Today, sandwich clubs are no longer merely a fast meal; quality, hygiene, speed, and product shelf life directly affect the brand credibility and sales volume of the sandwich club. In such an environment, smart packaging is not a choice, but a strategic necessity. This is where tray sealer packaging machines clearly demonstrate their role as one of the most effective development tools in this field.

Tray sealer packaging machines, by creating completely hygienic packaging, increasing shelf life, preserving the taste and appearance of the sandwich, and enabling products to be offered as takeaway or in chains, have changed the business equations of sandwich clubs. Using this technology allows producers of this product to move beyond limited on-site sales and enter areas such as online ordering, corporate delivery, sales in chain stores, and even brand expansion on a larger scale. Simply put, the tray sealer packaging machine is a bridge between a tasty sandwich and a professional, reliable brand.

In this issue of the publication, we have tried, with a specialized and practical view, to examine the real position of tray sealer machines in the success of sandwich clubs; from the advantages and criteria for selecting the right machine to its direct impact on profitability and customer satisfaction. We hope the contents of this edition not only increase your technical awareness, but also inspire decisions that shape the future of your business more intelligently and powerfully.





The Position of the Thermoforming Packaging Machine in the Food Industry; Where Precise Engineering, High Speed and Hygienic Standards Meet

Mr. Simon Füllenbach

In the food industry, packaging is no longer merely the final stage of production; rather, it plays a decisive role in quality, product safety preservation, shelf life, and identity. In the meantime, thermoforming packaging machines, as one of the most advanced technologies, have gained an important place in food and pharmaceutical packaging lines. These machines, by forming film and converting it into a tray, packaging with soft films, rigid films, or in skin form, and the final separation of filled and packaged trays in a continuous process, make it possible to produce precise, hygienic packaging with high durability.

How does thermoforming work?

The thermoforming machine process begins with the entry of the film roll into the machine. The film first enters the pre-heating section and reaches the proper temperature for forming. Then in the forming station, the film is shaped inside the mold and becomes a tray.

In the next stage, the product is placed manually or automatically inside the formed trays. After that, the machine enters the sealing (welding) section or sealing together with vacuum; where air is evacuated from inside the package and, if necessary, in packaging by the modified atmosphere packaging (MAP) method, protective gas is injected. Finally, the packages are separated from each other with high precision in the cutting station and exit the machine in ready form. This integration of the process is the most important advantage of thermoforming technology compared to traditional packaging methods.

Standards of the Thermoforming Packaging Machine and How Close the Vormek Brand Has Been to Them?

The thermoforming packaging machine, based on global standards, must be at the highest level of engineering in terms of mechanical design, thermal stability, vacuum control accuracy, coordination of motion systems, and level of automation.

Achieving these standards requires deep technical knowledge, long-term practical experience, and precise understanding of industrial packaging processes.

The Vormek brand, relying on years of practical experience, development of local knowledge, and careful examination of reputable global machines, has been able to design and manufacture machines that, in terms of performance, accuracy, and stability, are very close to the standards of leading international brands and meet the needs of modern packaging lines.

Vormek Thermoformings; How Close are They to Reputable Global Brands?

The thermoforming machines produced by Vormek are the result of years of practical work, technical experience, and development of local knowledge. The design team of this company, through years of experience working on well-known European machines, has gained an accurate understanding of their strengths and weaknesses, and this experience has become the basis for designing the new generation of Vormek Thermoformings.

In terms of technology level, mechanical precision, control systems, material quality, and variety of options, these machines in many cases stand on the same level as reputable global models. The use of resistant shafts and bushings, automatic lubrication systems, PID temperature control, precise single-stage and two-stage cutting, and an advanced user interface are only part of this technical similarity.

A Competitive Advantage beyond Technology

The important point is that similarity to global brands is not limited to hardware. Vormek thermoforming machines are designed with a precise understanding of the needs of the market; from real customization capability to accessible after-sales service and fast spare parts supply. These features, along with a competitive price, have caused many manufacturers to consider these machines a logical and smart alternative to imported models.

The thermoforming packaging machine is a symbol of technological maturity in the packaging industry, and successful entry into this field requires courage, knowledge, and long-term investment. Vormek's experience shows that by relying on precise engineering and real market understanding, it is possible to produce machines that not only are close to the technology of reputable global brands, but in many aspects provide a better response to the needs of domestic and regional manufacturers.



Control of Microbial Spoilage in Ready-to-Eat Sandwiches; From HACCP to Modern Packaging

Ready-to-eat sandwiches are usually consumed without a final heat treatment and often contain sensitive ingredients such as processed meats, cheese, fresh vegetables, and various sauces. These characteristics make these products susceptible to microbial contamination at different stages of preparation, packaging, transportation, and storage. Therefore, precise control of storage conditions, adherence to staff hygiene, and implementation of food safety systems such as HACCP play a fundamental role in ensuring the quality and safety of these products.

The composition of raw materials plays a decisive role in the microbial stability of ready-to-eat sandwiches. Simpler sandwiches, such as those containing ham and cheese, due to fewer components and lower moisture, were microbiologically more stable and showed less contamination risk. In contrast, multi-component sandwiches containing fresh vegetables, salads, and various sauces – similar to the structure of a club sandwich – due to high moisture, greater contact surface between ingredients, and absence of final heat treatment, are prone to faster growth of microorganisms.

The obtained results show that increasing storage time, especially in these complex sandwiches, leads to a gradual decline in hygienic quality. This issue indicates that conventional cold storage methods alone are not sufficient to increase the shelf life of the club sandwich and the use of complementary technologies seems necessary. In this regard, packaging by the modified atmosphere packaging (MAP) method is mentioned as one of the effective solutions; because by reducing oxygen levels and replacing it with gases such as nitrogen or carbon dioxide, it can reduce the growth rate of aerobic microorganisms and slow down microbial spoilage.

Conclusion

In this regard, the use of modified atmosphere packaging (MAP) technology can play an important role in increasing the shelf life and safety of the club sandwich. Reducing oxygen inside the package and using inert or microbial growth-inhibiting gases, together with the proper selection of packaging materials, can slow the growth of microorganisms and preserve product quality for a longer period. Therefore, it is recommended that for industrial production of the club sandwich, MAP be considered as a complementary solution alongside HACCP, precise temperature control, and workforce training.



Technical Tip of This Monthly Magazine: Advantages of Using Siemens PLC

Mr. Alexander Hoffmann (Deputy CEO of Vormek)



In this article, the advantages of using Siemens PLCs that are practically and operationally used in Vormek are fully explained; advantages that unfortunately have received less comprehensive attention in other companies.

1. Very High Reliability and Stability

Siemens PLCs, due to high manufacturing quality and industrial design, are completely suitable for operation in harsh environmental conditions including temperature fluctuations, electrical noise, and mechanical vibrations. As a result, the probability of system errors is significantly reduced.

2. Wide Scalability

Siemens offers a wide range of PLCs; from small S7-1200 series PLCs to large and professional S7-1500, ET 200 and S7-300/400 series PLCs. This diversity makes it possible to implement projects from small scale to very large scale with a single brand and without changing the platform.

3. Powerful and Integrated Software

The TIA Portal (Totally Integrated Automation) software provides the ability to design, program, simulate, and troubleshoot in a centralized environment.

This software supports IEC 61131-3 standard programming languages including Ladder, FBD, SCL and other languages and provides powerful tools for simulation and testing before execution.

4. Excellent Communications and Networking

Siemens PLCs support various communication protocols, including:

PROFINET / PROFIBUS,

Ethernet / TCP/IP,

Modbus.

There is also easy communication with systems such as SCADA, HMI, drives, and other equipment, which reduces network complexity and increases communication integration between equipment.

5. Integrated Automation Ecosystem

Siemens provides direct connection of the PLC to various equipment including HMI (touch panels), SINAMICS drives, distributed I/Os, SCADA systems, and reporting software without the need for additional converters or interfaces.

6. Easy Development and Proper Support

The existence of complete documentation and guides, global support, a large user community, and ready-made examples and projects allows projects to be implemented faster and with a lower probability of error.

7. Advanced Troubleshooting and Reporting

Using the tools available in TIA Portal and internal monitoring capabilities, errors can be viewed visually, the program execution process can be monitored, and inputs and outputs can be observed live. These capabilities play an important role in fast system maintenance and repair.

8. Compatibility with Industrial Standards

Siemens products are designed according to global industrial standards including IEC and ISO. Therefore, they are fully reliable for sensitive industries such as medical, food, oil and gas, and automotive, and they properly support safety and quality requirements.

9. Modular Hardware

The modular structure of Siemens PLCs makes it possible to easily add I/O cards or special modules including analog, digital, communication, and security to the system without changing the entire system.

10. High Performance and Speed

New Siemens PLC series have fast response time, high processing power, and proper performance in real-time projects and complex controls, and they effectively cover advanced industrial needs.





Ready sandwiches, Ready and Fast Life

Discovering beauty in everyday simplicity
and not wasting time



VORMEK



Innovation in Packaging and Preserving Flavor:

Today's ready sandwiches, with advanced packaging techniques, preserve the taste and freshness of the ingredients for a longer period and offer an experience close to homemade sandwiches.



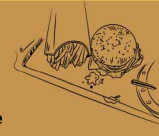
An Intelligent Response to a Fast-paced Lifestyle

In today's world where time is gold, ready sandwiches are a practical solution for providing energy and relieving hunger without wasting much time and energy.




A Diverse Source of Nutrients

With smart choices, ready sandwiches can contain protein, fiber, and essential vitamins and form part of a balanced diet

Helping Reduce Food Waste

Single-portion packaging and standard sizes of ready sandwiches help better manage consumption and reduce food waste.





An Opportunity for Creative Cooking at Home

Ready sandwiches can be inspiring to personalize them by adding condiments and fresh ingredients and create new flavors.



A Hassle-free Companion for Unexpected Plans

Whether on sudden trips or outdoor activities, ready sandwiches are an easy option that does not require equipment.




A Transformation in the Ready Food Industry

With diversity in processing, ingredients, and raw materials, ready sandwiches open a window to trying different flavors and food cultures





An Opportunity to Discover New Flavors

With increasing variety in ingredients and raw materials, ready sandwiches; a window toward trying flavors



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.



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+44 7552 7324 08
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Sustainability; The Central Core of Quality Management in the Production and Packaging of Club Sandwich

Dr. David Sterling

In recent years, the concept of quality in the food industry has shifted from merely focusing on product compliance with technical specifications toward creating sustainable value for the consumer, society, and the environment. This transformation is especially important in the production of ready-to-eat foods such as the club sandwich, which is directly connected with consumer health and daily dietary patterns. The aim of this article is to show how sustainability, as the main core of quality management and organizational excellence, can simultaneously improve consumer health, market trust, and the long-term performance of club sandwich producers.

1. The Quality Paradigm Shift in the Food Industry

In the traditional view, quality in the food industry was mainly defined by characteristics such as food safety, compliance with hygiene standards, and uniformity of taste and appearance. However, with increased consumer awareness, the rise of nutrition-related non-communicable diseases, and environmental pressures, this definition is no longer sufficient.

Today, real quality in the food industry answers this important question: what effect does this product have on human health, society, and the environment? This change in perspective is precisely the point where sustainability transforms from a secondary requirement into the core of quality management.

2. Club Sandwich; A Simple Product with Complex Impact

The club sandwich appears to be a simple product, but from the perspective of sustainability and quality, it is considered a complex system including raw materials (bread, protein, vegetables, sauce), a cold and fresh supply chain, rapid preparation processes, packaging, and immediate consumption. Each of these components can either support a health-oriented lifestyle or become a factor weakening it.

3. Fresh Consumption; The Connection Point of Quality, Health, and Sustainability

Fresh Consumption is no longer an individual preference but has become one of the indicators of sustainable quality. In club sandwich production, fresh consumption requires minimal processing of raw materials, elimination or reduction of preservative additives, precise management of time from production to consumption, and the design of flexible and fast processes. These requirements shift quality from "final product control" to the intelligent design of the entire production system.

4. Sustainability in Production; From Damage Reduction to Value Creation

In modern quality management and excellence approaches, sustainability does not mean "causing less harm," but rather "creating positive value" for the consumer and society. In club sandwich production, this approach can appear in the following ways:

- Use of local and fresh raw materials (reduction of carbon footprint)
- Selection of healthier and balanced proteins
- Reduction of preparation waste
- Optimization of energy consumption in cold storage

5. Packaging; From Product Protection to Lifestyle Messenger

Packaging in fresh consumption products is not merely a physical tool but a communication medium. Sustainable packaging in a club sandwich must preserve product health without chemical additives, have minimal environmental impact, inform the consumer toward healthier choices, and provide recyclability or biodegradability. Within this framework, packaging has become part of the quality experience and a tool for promoting a health-oriented lifestyle.

In conclusion, the experience of leading food industries shows that sustainability is no longer a choice or a temporary competitive advantage but a condition for survival and organizational excellence. In the production and packaging of club sandwiches, attention to sustainability as the core of quality management increases consumer trust, reduces hidden costs, aligns the brand with a health-oriented lifestyle, and provides the foundation for sustainable long-term organizational performance.

With the tray sealer packaging machines of Vormek, the real quality of the club sandwich is achieved, so that the product is both healthy and fresh and also promotes a healthier life.



Smart Packaging, Lasting Freshness; Advantages of Using a **Tray Sealer Packaging Machine** in the Food Industry

Mr. Marvatpour

In the food production industry, packaging is recognized as one of the most important stages in preserving product quality and safety. The use of a tray sealer packaging machine in the packaging of various ready-made salads and raw materials sent to stores is an effective solution for increasing shelf life, maintaining freshness, and ensuring the hygiene of food products. These machines, by creating a complete and uniform seal (seaming), prevent the penetration of air, moisture, and environmental contamination and preserve product quality until consumption. Among the most important advantages of using a tray sealer machine are increasing the useful life of products, reducing waste, preserving the natural taste and appearance of food, and creating professional and standard packaging. Uniform and reliable packaging, in addition to attracting consumer trust, plays an important role in strengthening the brand and improving customers' perception of product quality. Also, the use of a tray sealer machine makes the process of sending raw materials to different stores safer, faster, and more organized and prevents product damage or contamination during transportation. Increasing production speed, reducing dependence on human labor, improving the efficiency of packaging lines, and complying with hygiene requirements are other notable advantages of these machines. Although there are challenges such as the initial purchase cost, the need for precise adjustments, and the correct selection of packaging materials, with proper operator training and correct maintenance, the tray sealer machine becomes an efficient and profitable tool in the food industry that plays an effective role in increasing customer satisfaction and the sustainable development of the business.



Satisfaction of a Producer; Shelf-Life and Productivity Leap with Our Packaging Machines

Shelf-Life Engineering — A Big Leap in Ready Products

In a world where ready products must be produced quickly and also reach the customer safely and with quality, "Sadaf Sandwich," the factory of Mr. Salari, is one of the successful examples of the intelligent use of packaging technology. As the production manager, he emphasizes that the arrival of our machines into their production line was a turning point in their work. Ready sandwiches usually do not have acceptable durability for more than 3 days; however, the simultaneous use of vacuum and nitrogen gas injection has caused the shelf life of this factory's product to reach a real 7 days — without quality loss, taste change, or hygiene problems. Mr. Salari even mentioned that "if it were not only the bread issue, this product would preserve its quality even for one month." This means the machine has been able to create a real competitive advantage beyond the usual market standard.

In the production section, the factory has been able to significantly increase its capacity by using two molds. As a result, in each working shift and depending on orders, they prepare between 1,000 and 1,500 packages in only three hours — with only one operator. This production volume in a short time demonstrates the machine's speed, stability, and intelligent design. According to Mr. Salari, all of this happened because, in terms of seal (seaming) quality, stability, hygiene, and usability, the machine was exactly what the production line needed.

He emphasized at the end: "We are truly satisfied. Both the work speed has improved and the product shelf life has multiplied; we never thought we could achieve this level of shelf life with this quality."





The Selection of **Mr. Simon Füllenbach, CEO of Vormek,** as a Board Member of the Food Machinery Manufacturers Association

Continuing his professional path and years of specialized activity in the field of food industry machinery, on the date 7.2.2026, Mr. Simon Füllenbach, CEO of the knowledge-based company Vormek, was elected as a member of the board of directors of the Food Machinery Manufacturers Association and began his activities in this responsibility; an event considered the result of his experience, perseverance, and effective presence in this industry. This event can be regarded as an important point in the continuation of his specialized activities, because being in this position has provided an opportunity for broader participation in the connection between the machinery manufacturing industry and food industry producers. It is expected that with the transfer of Mr. Simon Füllenbach's experiences and technical perspective, the path of synergy and progress in this field will be strengthened more than before.

At the same time, this event is considered a turning point for the large Vormek family. A stage which, relying on technical knowledge, field experience, and closer connection with the body of the industry, can provide the basis for development programs and a stronger movement of this company on the path ahead.





Charkhesh Machine Industrial Group

Hello, I am Zeinoddini, CEO of Charkhesh Machine Industrial Group. Since 1370, with a specialized team, we have been active in the localization of food industry machinery. Our main focus is the design and construction of strategic equipment such as double-Z mixers (Z-Mixer) for gum and chocolate production and refiner machines (Refiner) in three-roll and five-roll models.

Also, by offering pillow pack packaging machines in both manual and automatic types, we have completed the production-to-packaging chain for factories. The wide capacity range of our products, from laboratory scale to capacities higher than 1.5 tons, demonstrates the engineering capability and flexibility of our team in responding to different market needs.

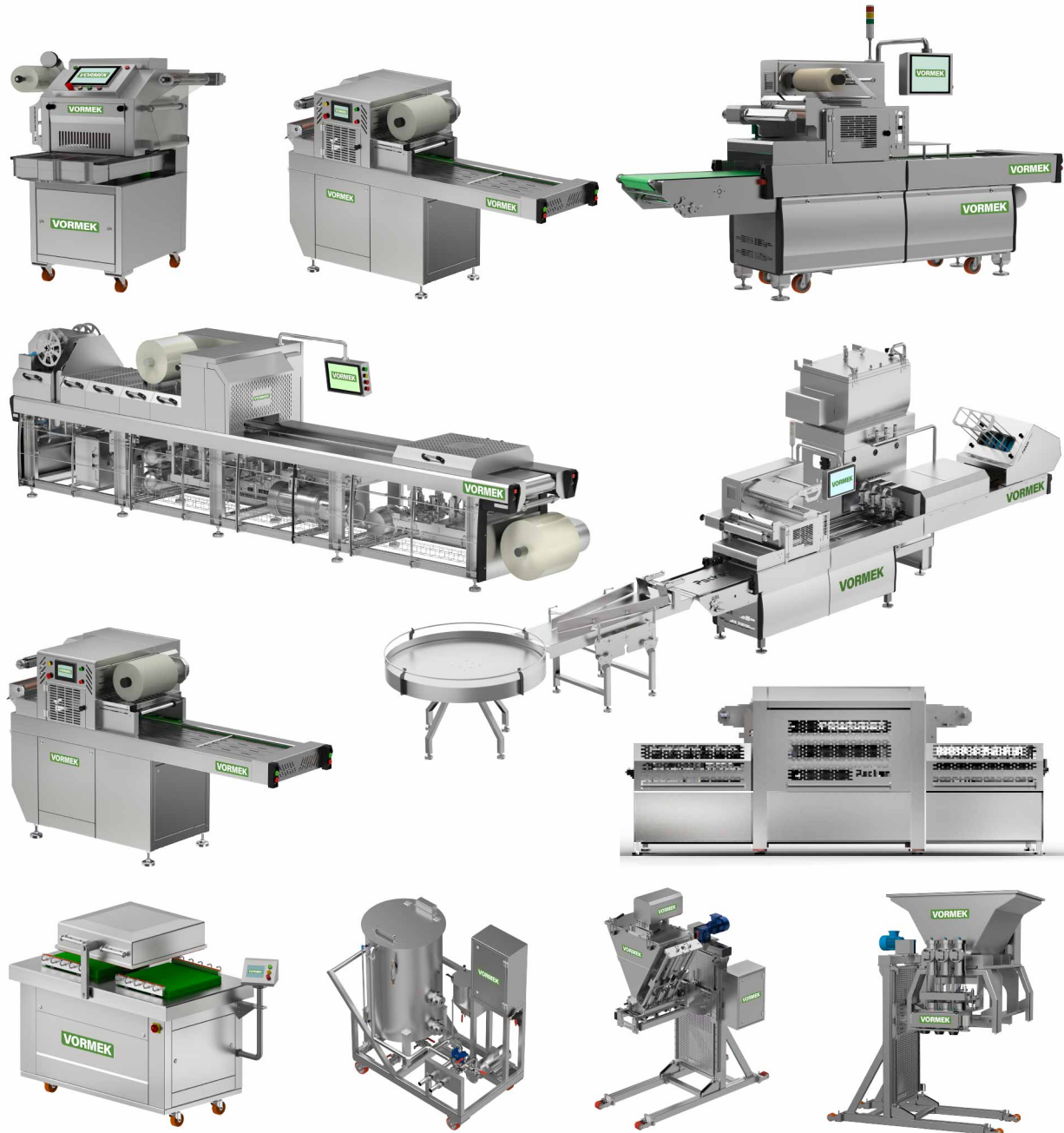
We are also pleased to have become acquainted with the reputable company Vormek and a professional personality such as Mr. Füllenbach. Their cooperation and trust in our organization have created greater encouragement and motivation for our team.

Our goal at Charkhesh Machine Industrial Group is to replace technologies with high-quality domestic technology, reduce production costs, and bring the quality of confectionery and chocolate products closer to global standards. The success of our customers has always been our main motivation, and every day we stand beside them with the same vision.



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.