

## Specialist article

# The power of packaging

Why flexibility, sustainability and automation are so important to the future of the food and beverage industries

**Political crises, economic instability, lack of specialist workers and an increasing number of regulatory requirements: the beverage and packaging industries are facing massive upheaval. KHS supports its customers worldwide with a holistic line strategy that gives them maximum flexibility, reliability, cost-effectiveness and sustainability.**

It's a familiar scenario: trawling around the supermarket, you're presented with row after row of products of all shapes and colors, all of them full of promise. Your eye roves along the jam-packed shelves and suddenly comes to an abrupt halt. It's already made a decision – while your brain's still thinking about which item is best. In many cases, it's the packaging that triggers your decision to buy. So that it convinces consumers and companies alike, the entire package has to be just right, providing a pleasing design combined with uncompromising product protection and sustainable materials at an attractive price.

KHS meets these high demands with its holistic line strategy. This starts with the packaging design and culminates in the development of perfectly orchestrated line systems and solutions that are ideally tailored to market requirements and the individual needs of the customer. In doing so, the turnkey supplier from Dortmund, Germany, offers its clients processes that boast a maximum of flexibility, reliability and cost-effectiveness.

### **Reliability, flexibility and cost-effectiveness the key to success**

Thanks to this strategic alignment, KHS is able to give its customers key support in overcoming the challenges of our day and age. On the one hand, these include the world's turbulent political situation with its growing number of conflicts and the negative consequences these are having on the economy, such as rising energy costs, higher prices for raw materials and persistent problems with the supply chain. The USA's unpredictable tariffs policy is causing additional instability, creating great uncertainty and compounding the financial burden on companies in general.

On the other hand, lots of producers in the beverage and food sector are battling with an acute lack of specialist workers. The availability of qualified operating personnel has dropped worldwide over the past few years. In return, the demand for fully or partly automatic systems has risen steeply. The manifold legal provisions businesses in the beverage and packaging industries are confronted with on a global scale are also proving to be a considerable challenge. The most recent example of this is the European Union's new *Packaging and Packaging Waste Regulation* (PPWR) that will mean profound change – not all of it foreseeable at present – for the entire sector. Resource-conserving packaging and increased use of recycled materials in particular are therefore very much in demand. The worldwide requirement for low-plastic or plastic-free systems has significantly increased in the last few years, especially with regard to secondary packaging. Here, there's a definite shift towards cardboard, paper and plastic film that contains a high [percentage of recycle](#).

### **KHS provides diverse packaging and machinery portfolio**

As a turnkey supplier with a comprehensive packaging and machinery portfolio, KHS can always expertly provide systems and solutions to cater for changing market conditions. One example of this is the further-developed [KHS Innopack Kisters TSP Advanced](#). The fully automatic machine gives operators a high level of flexibility, packing PET and glass bottles and cans on trays, in film as well as

on trays or pads and film. At interpack, KHS will be presenting this well-established system with its new patented, optional [BottleClip Carrier](#) application for the very first time. The cardboard carrying handle joins PET containers together to form stable packs. It's a resource-conserving alternative to plastic ring systems which are no longer allowed in some countries. The new BottleClip Carrier option is available for all standard KHS Kisters machines in the Advanced series that have been specially developed for the high-performance sector. The KHS Innopack Kisters TSP Advanced, for example, processes up to 7,200 packs per hour. What's more, KHS packaging machines are convincing with their low operating costs, high line availability and fully automatic processes that significantly reduce operating requirements.

Besides the BottleClip Carrier, [secondary packaging made of paper](#) and the [Carton Nature Pack](#) (CNP) from KHS are also currently proving very popular. The CNP bundles cans to form stable packs with the help of a cardboard topper clipped onto the upper rim of the can. No plastic whatsoever is used.

KHS' globally market-proven [Nature MultiPack](#) (NMP) does away with both cardboard and plastic film, turning cans or PET bottles into stable packs using nothing more than a few small dots of adhesive. This sustainable KHS system cuts down on valuable resources and gives consumers maximum pack stability coupled with perfect carrying convenience. Each container can be easily detached from the rest of the pack as and when required.

### **Resource-conserving packaging on the rise**

With its Nature MultiPack, KHS has taken on a pioneering role in establishing plastic-free packaging on an international scale. In many regions of the world, particularly in Asia, Africa and South America, secondary packaging made of film and PET bottles continue to dominate the market. KHS helps companies worldwide to develop and establish sustainable packaging, whether for secondary film, cardboard, paper and adhesive dot applications or for primary

can, carton, glass and PET containers. In doing so, together with its customers KHS strives to meet corporate sustainability targets and fully comply with legal requirements. In its plastic systems and solutions, the Dortmund packaging and line specialist strongly centers on increased use of recycle and [lightweighting](#).

Two groundbreaking bottle innovations serve as examples of this strategic alignment. KHS Premium LITE, for instance, combines minimal material consumption with a high-quality look. Clocking up just 6.2 grams on the scales, the 0.25-liter PET container is extremely light. Despite its minimal weight, this bottle designed in cooperation with Husky Technologies is ideal for processing at maximum filling speeds.

With KHS SUPREME, the systems supplier has taken the protection of oxygen-sensitive beverages up to the next level. The premium PET bottle combines the protective properties of glass with the weight benefits of plastic. It applies tried-and-tested [Plasmax barrier technology](#) from KHS, a wafer-thin layer of silicon oxide on the inside of the PET bottle that reliably protects highly sensitive products such as juice, CSDs, beer, tea, wine and liquid food from oxidation and the loss of carbon dioxide. This preserves taste, color and quality for long periods of time and considerably lengthens the product's shelf life. Plasmax coating can be used on lightweight containers and on bottles made of virgin PET or up to 100% recycle. It completely dissolves during the standard recycling process. Unlike conventional barrier material systems such as scavengers and multilayers that make recycling more difficult, here, the purity of the separated PET is maintained. This means that Plasmax-coated bottles are fully recyclable and perfect for use in closed-loop PET systems.

### **Competent service for maximum system availability and future-proof packaging systems**

The development of resource-conserving, future-proof packaging is a complex affair. KHS thus offers its clients a holistic consultancy service for container

systems. [Bottles & Shapes](#) strikes a balance between consumer- and environmentally-friendly design, reliable line behavior and the efficient use of resources – for PET/[r]PET as well as glass bottles and cans. Here, KHS experts support customers from their initial design to the launch of a product that's perfectly tailored to the specific requirements of the respective company.

KHS' broad service portfolio is intended to provide long-term line availability at a low TCO. Its success is founded in the intensive support KHS specialists provide their customers with – working in cooperative partnership with them on an equal footing. The company's individual needs and challenges are always in focus, whether this be the design of a turnkey line or the overhaul of an existing machine. This is how KHS gives its clientele constantly high quality, reliable performance and maximum efficiency and flexibility.

KHS' extensive range of services also includes its established [Innoline Basic Line Monitoring](#) software, [3D line design](#), remote diagnostics and maintenance system [ReDiS and its Augmented Reality Service](#). Using [KHS InnoPET iflex](#) automated line changeovers, KHS facilitates customer format changeovers within 30 minutes, with product changeovers performed in just ten minutes. When applying the iflex option on PET lines, up to 80% of all manual line conversion tasks are rendered superfluous. Regarding automation, operators also profit from AI-assisted inspection technology for tethered caps.

### **Holistic packaging and line expertise from a single source**

Outstanding packaging and line expertise paired with a multifaceted service portfolio ensures long-term success for both KHS and its customers – as well as giving them stability in politically and economically challenging times. Thanks to its strategic concentration on processes that provide maximum flexibility, reliability, cost-effectiveness and sustainability, KHS stands firm as one of the world's leading developers of packaging and plant technology for the beverage and liquid food industries.

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## **Pictures and captions**

(Source: Frank Reinhold)

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## **Picture captions**

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### **KHS Innopack Kisters TSP Advanced**

The KHS Innopack Kisters TSP Advanced gives operators maximum flexibility, packing PET and glass bottles and cans on trays, in film as well as on trays or pads and film.

### **BottleClip Carrier**

The BottleClip Carrier from KHS joins PET bottles together to form stable packs. The patented cardboard carrying handle can now also be applied by all KHS Innopack Kisters packaging machines in the Advanced series.

### **Packaging diversity**

KHS helps companies worldwide to develop and establish sustainable packaging systems, whether for secondary film, cardboard, paper and adhesive dot applications or for primary can, carton, glass and PET containers.

### **Nature MultiPack**

Nature MultiPack turns cans and PET bottles into robust packs using small dots of adhesive. It cuts down on valuable resources and gives consumers maximum pack stability coupled with perfect carrying convenience.

**KHS Premium LITE and KHS SUPREME**

KHS Premium LITE (left) and KHS SUPREME are the most recent examples of KHS' outstanding PET expertise.



## About the KHS Group

The KHS Group is one of the world's leading manufacturers of filling and packaging systems for the beverage and liquid food industries. Besides the parent company (KHS GmbH), the group includes various subsidiaries outside Germany, with production sites in Ahmedabad (India), Waukesha (USA), Zinacantepec (Mexico), São Paulo (Brazil) and Kunshan (China). It also operates numerous sales and service centers worldwide. KHS manufactures modern filling and packaging systems for the high-capacity range at its headquarters in Dortmund, Germany, and at its factories in Bad Kreuznach, Kleve, Worms and Hamburg. The KHS Group is a wholly owned subsidiary of the SDAX-listed Salzgitter AG corporation. In 2025 the KHS Group and its 5.769 employees achieved a turnover of around €1.649 billion.

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