PRESS RELEASE

Stretch blow molding technology

KHS stretch blow molding technology: established on the market. Continuously optimized.

- Holistic approach to PET bottle production
- Airback 7 PRO compressed air recovery system generates additional savings potential
- KHS UltraLite: 1.5-liter PET bottle weighing just 15.5 grams

Dortmund/Nuremberg, November 11, 2026 – With its proven NIR heating technology and market-established Double Gate concept, KHS provides stable processes and effective energy consumption in PET bottle production. Further savings potential is generated by Airback 7 PRO: the latest generation of the KHS compressed air recovery system cuts the high-pressure air requirement during stretch blow molding by up to 60% over systems without Airback. The potential this interplay of various factors holds for lightweighting is illustrated by KHS UltraLite: the new 1.5-liter PET bottle for still water weighs just 15.5 grams.

“Our customers are extremely keen to lower their operating costs along the entire line and produce reliably over the long term. As their strategic partner, we support them from planning through operation to continuous optimization,” says Arne Andersen, stretch blow molding product manager at KHS. With its lifetime solutions, KHS provides holistic services to this end throughout a machine’s full life cycle. Further technological developments enable existing lines to be tailored to new requirements.

For PET bottle production, KHS extensively coordinates the stretch blow molding process, machine technology and bottle design with one another. Here, targeted savings in energy and material consumption are given the same weight as bottle quality, line availability and productivity. “Only when we consider these factors as well can we unlock additional potential across the entire system,” Andersen explains.

Double Gate for lower energy and space requirements

The Double Gate heating concept (DoGa) gives customers an option designed to reduce their energy and space requirements. It’s used on the InnoPET Blomax Series V stretch blow molder and is thus also included in combined KHS block systems. Based on proven near-infrared radiation or NIR heating technology, the preforms are transported through the heater in two parallel lanes for effective heating.

Here, KHS’ compact Double Gate heating concept permits energy consumption to be reduced by up to 40% compared to similar single-lane stretch blow molders. “Our technology has established itself as a benchmark in our customers’ daily production operations. International users thereof include Coca-Cola Europacific Partners (CCEP) and Suntory PepsiCo Vietnam Beverage, for instance,” states Andersen.

Latest Airback generation provides additional savings potential

With Airback 7 PRO, the latest generation of the KHS compressed air recovery system, the Dortmund engineering company generates additional savings potential in the stretch blow molding process. Before the bottle is demolded, the high-pressure air is recovered and reused to stretch subsequent preforms. Additional compressed air only has to be supplied by the compressor for the final blow molding process. As opposed to the previous model, the new generation has an extra recovery stage, thus increasing the possible reduction in compressed air consumption from 40% maximum to up to 60%.

“The lower compressed air requirement cuts the amount of energy required by the compressor and thus also operating costs. Accordingly, the smaller compressor size also potentially lowers the cost of investment,” Andersen claims. The first PET lines featuring this setup have been successfully installed for several customers. The consumption figures logged during production there confirm the values given for the system. Airback 7 PRO will initially be installed on new KHS PET lines only. In the near future, however, the compressed air recovery module will also be available as a retrofit for modernizing existing plant machinery.

KHS UltraLite proves convincing with very low material consumption

With its especially light 1.5-liter bottle for still water, KHS UltraLite, the systems supplier illustrates which potential stretch blow molding technology holds regarding particularly low consumption of PET material. The container clocks up a mere 15.5 grams on the scales. The lower weight of the neck area and specific design of the body and base geometries give it the necessary stability without the need for additional nitrogen dosing. According to Andersen, the interaction between the bottle design and system is key to its optimization. With its holistic container consultancy program Bottles & Shapes, KHS supports its customers throughout the entire PET bottle development process – from preform through design to final coordination with the production process.

“We’ve precisely aligned material distribution, the heating profile and blow molding pressure with our KHS process technology. Our new concept bottle shows which benchmark we can achieve in material consumption while retaining the container quality when packaging development and systems engineering dovetail with one another,” says Felix Kösters, the man responsible for packaging development in the Bottles & Shapes program.

For more information go to:
https://www.khs.com/en/company/news/press-releases

Why not subscribe to our newsletter so that you don’t miss any of the latest news? https://www.khs.com/en/company/news/khs-competence-web-magazine

Pictures and captions

(Sources: Frank Reinhold, Joerg Schwalfenberg and Bodo Warden)

Image download: https://KHS.dphoto.com/album/dqk2ntjk

Picture captions

Arne Andersen (source: Joerg Schwalfenberg)

“As their strategic partner, we support our customers from line planning through operation to continuous optimization,” says Arne Andersen, stretch blow molding product manager at KHS.

Felix Kösters (source: Frank Reinhold)

“Our new concept bottle shows which benchmark we can achieve in material consumption while retaining the container quality when packaging development and systems engineering dovetail with one another,” says Felix Kösters from KHS packaging development, Bottles & Shapes.

DoGa in practical operation (source: Joerg Schwalfenberg)

The Double Gate heating concept (DoGa) gives customers PET lines designed to reduce their energy and space requirements.

The new KHS UltraLite (source: Bodo Warden)

The new 1.5-liter PET bottle for still water weighs just 15.5 grams.

Six-pack (source: Bodo Warden)

Holistic design through to the pack: the 1.5-liter KHS UltraLite six-pack combines low bottle weight with container stability and product protection.

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.

PR contact

Alisa Altrock
PR consultant
Sputnik GmbH
Phone: +49 251 6255 6123
Fax: +49 251 6255 6119
Email: altrock@sputnik-agentur.de
Website: https://www.sputnik-agentur.de

Media contact

Eileen Rossmann
Media planning team leader
mmb mediaagentur gmbh
Phone: +49 711 26877 656
Fax: +49 711 26877 699
Email: eileen.rossmann@mmb-media.de
Website: https://mmb-media.de