

PRESS RELEASE

Bottle washer

Innoclean Cascade-D: New KHS bottle washer

- Total operating costs and space requirements reduced; OEE improved
- Substantial savings on resources as regards energy, water and media
- Sales launch of the bottle washer planned for mid-2026

Dortmund, September 18, 2025 – KHS is getting ready to launch a new generation of double-end bottle washers. The Innoclean Cascade-D combines economic efficiency with ecological responsibility in a compact system.

In doing so, KHS is catering for the most pressing requirements of the beverage industry. First and foremost of these is the total cost of ownership (TCO), an observation of the total operating costs. The Innoclean Cascade-D primarily scores here with significantly lower energy, media and water consumption.

Less space required and greater efficiency

Given the large volume of the system, the second key criterion is the physical footprint. “By making the new machine 50 centimeters taller than its [predecessor](#), we can cut the amount of space needed by about 10%,” explains Knut Soltau, product manager for bottle washers and pasteurizers at KHS. “This means that the same caustic submersion time can be implemented in a smaller base area.”

Finally, the third aspect concerns the overall equipment effectiveness (OEE). With respect to availability, performance and quality, the Innoclean Cascade-D is very impressive with its high process reliability and optimum accessibility,

making both maintenance and servicing much simpler. “One example of this are the heat exchangers that used to be housed at the top of the machine in the caustic bath across a length of several meters,” says Soltau. “We’ve now extracted this function from the machine body and positioned it in a small area next to the machine where it’s perfectly reachable – with an upright heat exchanger that’s much easier to maintain and clean.” Another example is the orderly side wall of the machine with its clearly structured piping array and perfectly placed, readily accessible components.

ECO carrier 2.0

A further innovation from KHS is the ECO carrier 2.0 bottle pocket that now weighs less in total than before thanks to larger cutouts on the sides. This reduces both heat and liquid carryover. Both together make for huge savings in water. In addition, the optimized geometry of the bottle pocket carrier ensures a more targeted flow through the pockets and thus improves label discharge.

Improved spraying system

The newly designed spraying system is much more compact and easier to service than it used to be. Soltau describes its task and function: “Sprays are used during pre-washing and pre-heating at the beginning and – more importantly – end of the machine, where they rinse the bottle interior clear and cool the bottle body back down.” Instead of two spray pipes, each module now only needs one. Regarding maintenance, operators benefit from the fact that the new system has fewer parts that can be easily pulled out of the side of the machine.

Optimized chain wheel

“Even if chain wheels don’t need to be serviced very often, to date this was an elaborate process,” emphasizes Soltau. “They weigh over 80 kilograms and to replace them, all of the drives had to be removed and the shafts lifted out of the machine at a working height of up to five meters with the help of a crane.” On the Innoclean Cascade-D, the wear section is replaced by changing

subsegments of the chain wheels that at just 13 kilograms clock up about 84% less on the scales.

According to Soltau, beverage producers won't have to wait much longer for this new benchmark in TCO, machine footprint and OEE: the first new-generation KHS bottle washers are expected to be available on the market from mid-2026.

For more information go to:

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Pictures and captions

(Sources: Carsten Brand and Christian Sperling)

Image download: <https://KHS.dphoto.com/album/cbw9d6ov>

Picture captions:

Knut Soltau (source: Carsten Brand)

“By making the new machine 50 centimeters taller than its predecessor, we can cut the amount of space needed by about 10%,” says Knut Soltau, product manager for bottle washers and pasteurizers at KHS Group.

Innoclean Cascade-D (source: Christian Sperling)

The Innoclean Cascade-D sets new benchmarks in efficiency, resource savings and compactness.

Overall Equipment Effectiveness (OEE) (source: Christian Sperling)

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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) and 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 2024 the KHS Group and its 5,626 employees achieved a turnover of around €1.654 billion.

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