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END-OF-LINE PARTNERSHIP WITH GEBO CERMEX FOR UNILEVER'S NEW STATE-OF-THE-ART FACILITY IN DUBAI



Two comprehensive end-of-lines for production of shampoo and conditioner in shaped bottles have been successfully implemented by Gebo Cermex at Unilever's site in Dubai, which is the largest personal care factory in the Middle East and Africa. With this large installation, the global player in the consumer goods market was looking to use state-of-the-art technology that, combined with a modular design, ensures faster, shorter, and highly responsive production lines that cut lead-time to market. With eight formats to handle at 350 products/min per line and multiple changeovers per day in maximum ten minutes, the entire set of Gebo Cermex competences was needed, from robotic product collation to shrink-wrapping and palletising.

Over the next five years, the Middle East-African market is expected to be the fastest growing region in the world for beauty and personal care products. Young populations and rising levels of spending in many of the countries in the region offer growth opportunities that global consumer goods companies are trying to address via investments of billions of dollars into the Middle East.

The British-Dutch consumer goods company, Unilever, has also taken action along these lines, choosing the slogan 'Made in the UAE', thus acknowledging that the United Arab Emirates is a strong trade corridor that connects the East and West with significant growth potential and a

¹ Euromonitor



world-class infrastructure. Annually, the Unilever factory produces a notable 500 million items (or 100,000 tons of liquid product), dealing with hair and skincare products under the Dove, Fair & Lovely, Lifebuoy, Vaseline, Clear, TRESemme and Sunsilk brands.

Gebo Cermex has supplied 19 machines across the different production lines of the 100,000 square meter Unilever facility, including packers and shrink-wrappers for premium pots of skin cream or tubs of facial cream in cartons. To secure the end-of-line performance of their two packaging lines bottling shampoo and conditioner products, Unilever relied on the engineering and robotic expertise of Gebo Cermex, alongside with its capacity to combine and customise existing solutions to fully comply with any customer's specifications.

Unique capabilities to solve complex end-of-line challenges

In general, when it comes to shaped-bottle handling as part of end-of-line operations, the very critical point is at the batch collation level. Gebo Cermex' 40 years of experience in serving the Home and Personal Care (HPC) industry proved key in this challenging project, as Unilever was looking to build two high speed lines (350 products/minute), able to handle eight different container formats with a large scope of sizes (from 100 to 900ml), yet targeting a maximum 10-minute line changeover with multiple changeovers per day.²

Jean-Philippe Beduneau, Strategic Key Account Director for Unilever at Gebo Cermex, explains why the company was particularly suited for the project: "We have a unique capability to propose complete end-of-line solutions for unstable bottles or bottles with complex shapes, not allowing mass flow accumulation. Our expertise answers the very demanding requirements of the Food, Home and Personal Care sectors, such as care handling of sophisticated containers, ultra-flexibility, and the high demand for line speed increases. Our existing portfolio is also able to respect the specifications typically linked to shaped, unstable bottles. Nevertheless, in the Unilever case, their expectations about line speed and maximum time for changeovers challenged our design department to stretch the boundaries of the current range and merge modules and technologies like we never did before."

Easy and fast changeovers thanks to robotic collation

Gebo Cermex accomplished this remarkable task by taking a robotic approach at the product collation stage: the designers removed many mechanical parts typically used. This ensured easy access to the heart of the machine and therefore a streamlined solution. Moreover, Unilever and the experts for robotics and shrink-wrapping opted for a product management through six robots, using FlowDesigner®, the Gebo Cermex flow management and product tracking in-

² Overspeed for equipment up to 385 products/min



telligence for gentle bottle handling and continuous batch preparation. This feature allows for precise product positioning on the shrink-wrapper infeed conveyor and fast changeovers. Changeovers were further simplified by integrating a single universal gripping head for all eight formats. In addition, the design experts developed a 3D-printed, light-weighted tooling solution, able to reduce energy consumption by optimising the robot size. Since simplicity in this highly complex line is a key factor, the changeovers can be orchestrated directly via the HMI without any need for manual intervention.

Large portfolio allows for next-level line architecture

Keeping with the spirit of high speed, easy changeovers, and improved operability, the rest of the line remains at the same "level", with some improvements applied to machines to catch up with the highly demanding overall specifications. For shrink-wrapping, this translates to a thermo-sealing solution for a high quality pack, a limited number of product transfers adapted to shaped or unstable bottles, and the possibility to process from one to three lanes of products – with a single film reel for improved operability.

For case erecting and packing as well as case sealing and palletising, changes were applied to fulfil the changeover needs with either universal systems without adjustments or simplified/adjustable tooling, or fully automatic/auto-adjustment processes. The packer is a secured Pick & Place solution with a gantry case packer that allows for fast and simple changeovers thanks to its quick release systems for tooling. Furthermore, the case erector and case sealer reliably work at a notable speed of 40 cases per minute. Lastly, the shock-free, electronic spacer infeed system secures a high product protection at the layer preparation of the high-level layer-by-layer palletiser.

Jean-Philippe Beduneau explains how the capabilities that Gebo Cermex has to offer in line architecture help global players, such as Unilever, find the best possible solutions for their end-of-line challenges: "From very complex projects to most cost-driven ones, we have a large port-folio of adapted handling/infeed modules, a wide robotic capability with an extensive gripping tooling design know-how, and a comprehensive approach to end-of-lines with packing, shrink-wrapping, palletising and AGV solutions."







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About Gebo Cermex

Gebo Cermex works in partnership with Sidel as part of The Sidel Group. The Sidel Group is formed by the union of two strong brands, Sidel and Gebo Cermex. Together, we are a leading provider of equipment and services for packaging liquid, food, home and personal care products in PET, can, glass and other materials.

With over 37,000 machines installed in more than 190 countries, we have nearly 170 years of proven experience, with a strong focus on advanced systems, line engineering and innovation. Our 5,000+ employees worldwide are passionate about providing complete solutions that fulfil customer needs and boost the **performance** of their lines, products and businesses.

Delivering this level of performance requires that we continuously **understand** our customers' challenges and commit to meeting their unique goals. We do this through dialogue, and by understanding the needs of their markets, production and value chains. We complement this by applying our strong technical knowledge and smart data analytics to support maximum lifetime productivity to its full potential.

We call it **Performance through Understanding**.

Find out more at http://www.gebocermex.com and connect with us



