

PREPRINT:

Faster, more flexible and more sustainable



Cetravac AG in Switzerland is regarded as the technology leader as far as the vacuum conditioning of baked goods is concerned. It is now revolutionising in-store baking with the UDO vacuum oven.

Empty shelves cost turnover, and too many goods thrown away harms a good reputation as a company that operates sustainably. Chain stores and retail baking stations are, therefore, faced with the question of how supply and demand can be made to coincide as closely as possible. Two problems need solutions: the baking process must already be started before demand arises, and chain stores and the retail trade both suffer due to a dire shortage of competent staff. The magic words to solve these problems are digitisation, automation and a vacuum oven that is also outstandingly suitable for integration into an automation solution.

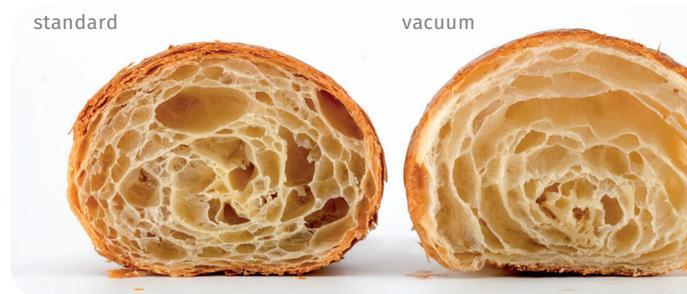
The specific characteristics of this new baking method are explained by Adolf Cermak, their inventor

1) Shape stability: The UDO bakes fully-finished goods, regardless of whether they go into the oven frozen, chilled or at room temperature. Afterwards, in just a few seconds, it cools the products down until their shape is stable. Everyone knows about fresh products coming from standard ovens that first of all drop into chutes, and are then squashed by the goods following them. The UDO ensures that their shape is retained for several hours.

2) Part-loading: Even if baking for restocking takes place frequently during the day, to ensure no customer is faced with an empty shelf, it is not always appropriate to fully load the oven. The more precise the data about actual and expected turnovers, the more exactly a vacuum oven can be controlled. Loaded either automatically or manually, the UDO also bakes individual trays, and even part-filled trays, in perfect quality. There is no transfer of heat from unfilled areas to the goods that are present.

3) Speed: The UDO uses vacuum to take the air out of the baked product's pores, and fills them with superheated steam. This penetrates into the structure of the dough, making it soft and juicy. Infrared and radiant heat supply heat and browning simultaneously. Both of these vary depending on the product, but always in next to no time.

4) No reduction in product weight: With every conventional baking process, the end product loses moisture. The UDO, in contrast, not only brings the moisture that is supplied onto the outside of the goods, but also forces it into every individual pore of the baked product, thus giving prolonged succulence to the baked goods.



5) Freshly-baked bread with slicing firmness: As a rule, baking-off part-baked bread in an in-store oven costs so much time that the capacity for all other products is short, and an additional oven is needed. The vacuum oven's principle functions just as well and quickly with bread as for any other baked product. Because the re-moisturising process reverses starch degeneration, ordinary mortals cannot distinguish the bread from a product baked for the first time. The oven cools the bread slightly, so it can be handled and sliced. It stabilises the structure internally and externally at the same time, to ensure that the slices do not smear or stick together when they are sliced.

6) Pizza & CO: Vacuum technology leavens the dough structure again, even with a heavy topping, and makes it crisp, which neither circulating ovens nor microwave ovens succeed in doing. In addition, a vacuum oven is fast, and delivers baked products cooled down to "eating temperature".



7) Click & Collect/ Food Service: Without an additional cooling phase, no other baking/cooling method can pack bread/baked products just out of the oven, and make them ready for dispatch five minutes later. Ultra-fast baking and vacuum cooling in the same equipment is the magic formula for optimum business success in this segment.

The UDO vacuum oven is available in different variants and sizes, depending on the requirements profile. With a view to digitising and automating the entire bakery process from warehouse to presentation for sale, care has been taken to ensure that the oven controller can be integrated directly into the overall process control. This increases efficiency, and avoids possible interface problems for users.