



Verhoeven and Proofing, Cobots and Robots; made with open mind

There Is Always a Next Step

“Challenge ahead, captain!” With so many changes in society, we are all challenged to adapt to a new world, whatever that may look like. The bakery of the future will have to keep up with a changing environment and answer to what is desired, expected and enforced.

By Verhoeven Bakery Equipment Family

With the internal project “The Bakery of the Future” the Dutch Verhoeven Bakery Equipment Family (mother of the labels BVT, NewCap, Vacuum Cooling & Baking and Bakepack) is studying on the issues and working on solutions for their global customer base. The keywords in their strategy: Innovation, Automation and Flexibility. This has resulted in healthy growth on several specialties such as Vacuum Cooling and Baking, Proofing, Automation, Cobots and Robots.

FLEXIBLE MINDS, OPEN APPROACH

Innovation, Automation and Flexibility. With these words in mind, successful business can be optimized. Innovation and Automation are part of Verhoeven’s daily business while developing new solutions to produce bakery products. Looking at challenges, it is clear that boundaries and frameworks are the enemy of the best output, so there is a strong drive to approach the future with a flexible mind. Most of the company’s production is custom development manufacturing of bakery

machines and production lines. An open mind to non-standard solution is essential for the results and this is part of the Verhoeven DNA. Each product is developed, engineered, and produced under one and the same roof in the Dutch city of Oss. The upcoming IBA, Verhoeven Bakery Equipment Family will present itself under the theme: “the sky is not the limit”. Does this need any more explanation? Okay, let’s move on!

MULTIPLE, MUTUALLY REINFORCING CHALLENGES

Sustainability, consumerism, shortages, stricter regulations and legislation to name just a few of the issues we see in our modern post-covid society. “There is never a dull moment”, may be the positive answer to the developments the world is facing, but at the same time we are obliged to take them very seriously. Society is under great pressure and confused by all the stress resulting from the above. The situation in Ukraine has a reinforcing effect on shortages of our daily ingredients. And even in times of crisis, it is clear that there is insufficient labor available. At the same time, production in our own segment should be developed in a more consumer-oriented way. Better product quality, healthier products (fewer additives such as sugar and salt) with greater variety and delivery on demand are part of the expectations of modern consumers. The enormous food waste, wastage of raw materials and manufactured goods, especially in bakery production, must be tackled. Legislation will force the market, but at the same time there are enormous opportunities to create fascinating improvements. We will mention a few examples:

WATER CUTTING FOR ARTISAN BREAD

Production will undoubtedly become more and more complicated due to mentioned influences. At Verhoeven, creative minds and Wizkids in the field of automation are constantly working on handling and integration into the production line. Next to general handling solutions, there are constant improvements and innovations to be introduced. Recently Verhoeven introduced a unique cutting cobot concept that allows customers to create an artisanal look. The cutter

CAPSTEP AND MULTIPROOF; PERFECT PROOFING, ESSENTIAL FOR HIGH-QUALITY BREAD

Beside mixing and baking, proofing is the other essential step in the bread production process. With the product always in mind, Verhoeven’s label NewCap has over the years developed a high level of expertise regarding the proofing process. This has resulted in a range of designs for proofing systems that allow a gentle and controlled proofing process.

The top of the range in proofing technology is the CapStep. This is a very compact proofing system based on the so-called paternoster principle. Thanks to the compactness of the CapStep, the height of the production facility can be optimally utilized while the floor space is minimal. The CapStep has up-going and down-going sections. Each up-going section is equipped with horizontal carriers on which the baking forms or baking trays with product are loaded. In this way, the ascending sections are filled step by step. When all carriers of the up-going section are filled, the baking forms or trays on the upper carrier are transported to the equivalent carrier of the down-going section. Step-by-step, the descending section is also filled up while transporting the products downwards. Upon arrival at the bottom level of the down-going section, the baking forms / trays with product are removed from the CapStep proofer and transported to the oven. CapStep systems are also frequently used for the cooling and / or freezing of dough or bread products and storage of baking forms.

The second proofing system in the NewCap range is the MultiProof. The MultiProof consists of several conveyors on top of each other. By using an elevator each conveyor is filled up with baking forms / trays step-by-step. After the set proofing time has elapsed the conveyors are unloaded again according to the FIFO principle. The StepProof is mostly used for the proofing of dough products in long sized baking forms or onto large peelboards for free standing types of products.





uses a water-cutting technique to make a small, rustic cut on the surface of the product such as baguettes. The concept has a lower footprint than a robot and is easily accessible in production. No fences needed around this flexible co-worker.

UNIQUE ROBOTS AND COBOTS SOLUTIONS

With the serious shortages of production staff, robots are an integrated part of almost all production lines leaving Verhoeven's production site. Sometimes the robots are their own colleagues, as seen at a customer where 4 of them work together in the production of 3,600 pieces of bread per hour: depanning, depalletizing, palletizing and storage of the bread pans, all done by these ultra-reliable machines. They are fast, without complaints, holidays or lunchbreaks. Impressive results today where one robot handles more than 200 large or even 400 smaller sausages and brings them into the dough in just 1 minute. It is possible and sounds revolutionary, but is part of an ongoing development. New frontiers lie ahead, but will soon be broken. It just makes it clear that the sky is indeed just short of the limit.

AEROSPACE IS THE MOTOR

The Verhoeven Bakery Equipment Family is inspired by science,

aerospace and the recent increase in interest by leading world nations in studying other planets. After the U.S. and Russia have been active in discovering alien worlds for decades, China, and more recently India and Japan, have launched missions to go there and see what they can learn from the extraterrestrials. For more than 20 years, manned space stations have been active in experimenting and studying a variety of subjects. Human and robotic spaceflight, due to the nature of astronauts in space, contribute to a circular economy by improving energy efficiency, automation, robotics and artificial intelligence, as well as habitation, recycling, waste management and additive manufacturing. Aerospace is the motor, and it brings ingenuity that we benefit from in our daily lives on our own planet, with new knowledge, insights and visions. Lessons learned from conditions outside the atmosphere have been transferred in new technologies. We learn about ourselves, our bodies, health, sleep, immune systems, etc. Aerospace has taught us what ingredients like salt do to the breakdown of our bone structure. And, for direct use in our own bakery market, aerospace was the key to development, such as a new generation of 'space yeast'. Last but not least: Vacuum Cooling and Baking has its origin in space. •

THE SKY IS NOT THE LIMIT: VERHOEVEN AT IBA 2023

Verhoeven Family of Companies presents the Bakery Equipment Family with its brands at IBA 2023 with the theme *'The sky is not the limit'*. The company has built its diverse expertise and experience in the international bakery market by producing solutions for bakeries worldwide. The basis for the successful operation of the Dutch Family lies in an open-minded approach to the challenges customers have when setting up new production. This open approach leads to surprising and innovative solutions. The Verhoeven Bakery Equipment Family, part of Verhoeven Family of Companies, is the owner of the brands: BVT Dough Process Solutions, NewCap Industrial Handling Solutions, Vacuum Cooling and Baking Solutions and Bakepack End of Line Solutions. Since 2020, these 4 brands are united in one company. Each brand has its own specialty, but together it is one family living under one roof, a unique proposition. This makes Verhoeven Bakery Equipment Family the specialist in "Turnkey Solutions" in industrial bakeries worldwide.

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Come and visit the family at the upcoming IBA on booth C2.271.