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Water is the new steam

Paul Grimberg: "Water is more sustainable, more cost-effective and more hygienic than oil or steam."

COMPANY INFORMATION | For generations, steam was the undisputed king of proofing cabinets and ovens. Until Jasca's founder, Paul Grimberg, came along with the message: "Water is more important than temperature." A statement that was met with disbelief by many bakers. Yet over the past 25 years, hundreds of bakeries have switched to cold-water atomisation. With remarkable results.

"Moisture is the key to quality," emphasises Paul Grimberg of Jasca regarding the atomisation technology. "If you use the correct moisture level, you suddenly see a much better result. In proving cabinets, during proving, when weighing out dough – wherever moisture plays a role – water offers advantages over steam or oil." But how do you convince an industry that has clung to the same methods for over a century?

Without a steam boiler?
"I was sceptical," admits Klaas Fuite of Brood- en Banketbakkerij H.B. de Paauw B.V. "I thought: that steam boiler could never be removed from our business. Steam is simply part of the process." But after a trial period, the opposite proved to be true. "The steam boiler was a real energy guzzler. Now it's gone. Our energy costs have fallen dramatically, and the quality of our product is better than ever." Ruud Geven, product process specialist at Goedhart Bakkerijen, also quickly recognised the benefits. "We were experiencing holes in our product due to excessive oil use in the hoppers. By chance, I saw at a fellow bakery that oil could be replaced with water. After an extensive trial period in collaboration with Jasca, it became clear: water is absorbed by the dough, no oil remains in the product, and the quality improved considerably." Paul Grimberg smiles when he hears these stories. "Bakers are, by nature, traditional in their approach. Change isn't easy, certainly not in a sector where every degree, every drop and every second counts. But once they see the benefits, they don't want to go back."

The technology behind the revolution
Known as cold-water atomisation or micro-atomisation, this technology makes it possible to achieve humidity levels in excess of 90 per cent without the drawbacks of steam. "With steam, you always get temperature fluctuations," explains Grimberg. "Every time you introduce steam, the temperature rises and then drops again. That's disastrous for consistency. With our atomisation technology, you can control temperature, humidity and ventilation separately. This creates constant conditions, which are essential for quality." Vincent Nollen of Ambachtelijke Bakkerij Nollen experienced this first-hand when he converted his proofing cabinet. "With steam, the temperature in the cabinet rises, and when the cabinet is empty, the first batches of dough don't get properly moistened. Now the temperature remains constant and the distribution of moisture is more even. That results in better products." But it's not just about quality. "Steam has to be generated by heating, which consumes a lot of energy," says Paul Grimberg. "We simply use tap water and compressed

air. Our system is eligible for the energy investment allowance because we save energy.” A win-win situation for both the environment and the wallet.

Combating flour dust allergies
The applications of cold-water misting appear to be endless. For example, Frank Lakerveld of Bakkerij Lakerveld used the system to combat a flour dust allergy. “I used to wear a face mask everywhere I went. Now that’s no longer necessary. The system is installed in the corner where we work most with flour dust. It creates a sort of curtain that traps and settles the dust. The air is fresher, and the working environment is better – not just for me, but for all the staff.”
Water also proves to be a godsend when weighing out dough. “Oil causes holes in the bread and isn’t hygienic,” explains Grimberg. “By using water, the dough slides down nicely, is absorbed, and no holes form.” Ruud Geven of Goedhart Bakkerijen agrees: “The advantage is that water forms a layer between the hopper and the dough, allowing the dough to sink smoothly. The excess water is absorbed – no more oil in the dough, no holes in the bread.”
And then there’s its use in decorations. “A thin layer of water on the dough before baking improves the colour and shine,” says Grimberg. “And it helps decorations such as sesame seeds stick better.” Ruud Geven recently tested this at their decoration stations: “The finer droplets give better results.”

Energy Investment Allowance (EIA)
For the Jasca misting system, you can apply for the Energy Investment Allowance (EIA), a tax scheme introduced by the Ministries of Finance and Economic Affairs and Climate Policy. Through the EIA, the government aims to encourage Dutch businesses to save energy and use renewable energy. In addition to the standard investment allowance, you may deduct a portion of the investment costs (including installation) from your taxable profit. The scheme yields an average benefit of 11 per cent. You also benefit from the usual depreciation allowance for the investment and a lower energy bill.

Why water wins
Hundreds of bakeries at home and abroad now use Jasca’s cold-water misting system. “Water is the future,” states Grimberg. “It’s more sustainable, more hygienic and more cost-effective than oil or steam. It’s a simple solution that improves quality and makes the baker’s job easier.”
Baker Vincent Nollen looks back on his experience with satisfaction: “It’s so simple and effective. I wonder why everyone isn’t already doing this.” Baker Klaas Fuite adds: “It’s a tried-and-tested technique. All risks have been eliminated. Anyone still in doubt is missing the boat. The bakery of the future uses water, because it’s better, more sustainable, and simply works.” Ruud Geven says: “Those open to innovation will reap the rewards. Quality comes first, but the savings and sustainability benefits make it even more attractive. Reducing oil use leads to cost savings.”
According to Paul Grimberg of Jasca, the bakery sector is on the cusp of a new standard. And that standard is water, delivered via atomisation technology.

Paul: “A thin layer of water on the dough before it goes into the oven improves the colour and shine.”

Jasca misting technology
Jasca develops innovative cold-water misting systems for the bakery sector. Unlike steam, this technology ensures an even distribution of moisture without temperature fluctuations. The system uses drinking water and compressed air, is energy-efficient and requires minimal maintenance. Ideal for proving cabinets, hoppers, de-doughing stations and production areas. Jasca also offers an exchange scheme for atomisers, ensuring trouble-free operation. Further information: www.jasca.nl.