



BREAD

Optimise your bread through mist

Humidity is one of the most decisive factors in the baking process directly affecting the quality of the bread. Contronics produces fine mist, which allows you to further improve the quality of your product, optimise your baking process and save on energy all at once.

Prompted by the European Commission's NanoBAK research project (www.nanobak2.eu), Contronics cooperated with several prominent associates from the baking industry to develop a unique form of technology to apply cold mist during the proofing and cooling process in bakeries.

Mist in the proofing process

Our ultrasonic humidifiers produce an extremely fine, cold mist, consisting of droplets between 1-2 μm in diameter. The aerosol is directed through the proofing chamber by an air current. Some of the droplets evaporate immediately, causing humidity to rise evenly and without condensation. The remaining droplets remain suspended and settle on the dough, forming a miniscule layer of moisture.

Advantages

The fine layer of moisture delays the forming of the crust in the oven, so heat transfer into the dough is improved; it is transmitted faster, deeper and more evenly through the bread.

- The increased humidity and the miniscule layer of moisture on the dough will prevent the bread from drying up and developing a crust prematurely.
- Subsequent processing is improved: the dough does not stick and has more stability, increasing the ease of handling.
- Our technology can be applied during any stage of the rising process and at any temperature.
- The relative humidity can be regulated closely, up to 100%.
- Our technology allows for baking and proofing at lower temperatures, or for shorter durations, which saves on energy.





Higher quality of bread

- A**
 - Weight increases as opposed to decreasing during proofing;
 - Optimal crust formation;
 - Longer shelf life: bread stays fresh and crust stays crispy for longer;
 - Less drying up beneath the crust;
 - More even colouration;
 - Greater volume.
- B**
 - More pores, divided more evenly.

Mist in the cooling process

The fine mist of tiny water droplets is injected into the air current of the cooling facility (whether artificially or naturally cooled). The droplets immediately evaporate, raising the relative humidity while at the same time contributing to refrigeration through the adiabatic process (evaporation causes expansion, which causes a drop in temperature). For the purpose of cooling, one litre of evaporated mist yields the same result as 0,7kW of energy.

Advantages

- Contributes to the cooling process: higher humidity, lower temperature and/or less energy consumption;
- Cooling time can be reduced;
- Bread is easier to process further (e.g. cutting), which reduces waste;
- This system can also be applied to thawing or freezing.

Higher quality of bread

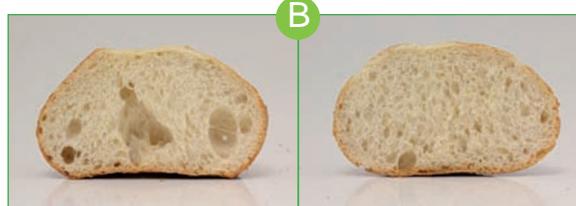
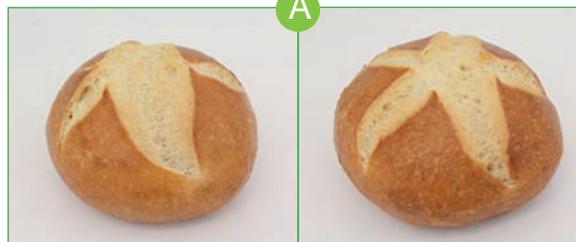
- Bread dries up less;
- Bread retains more weight;
- Bread appears fresher (crispier, fewer cracks in the crust).

Longer shelf life through mist

The mist can be enhanced with a natural acid extract. This kind of acidic aerosol delays mould and bacteria from settling on the surface of the bread, resulting in a longer shelf life.

Conventional

Contronics mist



For any bakery

Our technology is the best solution for both industrial and artisanal bakeries. It can easily be integrated into an existing baking process.

Contronics offers

- Consultation regarding application in your bakery, without obligation;
- Support through all stages, from planning to installation;
- Service and maintenance.

Visit the NanoBAK2 website for more information: www.nanobak2.eu.

Don't hesitate to contact us
Contronics Engineering B.V.
T: +31 413 487 000
E: info@contronics.nl
I: www.contronics.nl
Ambachtsweg 8, 5492 NJ
Sint-Oedenrode, The Netherlands